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A Quantitative Study Comparing Traditional High Schools and High Schools
Implementing Freshman Academies in the State of Tennessee

A dissertation

presented to

the faculty of the Department of Educational Leadership and Policy Analysis

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Doctor of Education

by

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May 2009

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Keywords: Freshman Academies, Small Learning Communities, High School Reform

Model

ABSTRACT

A Quantitative Study Comparing Traditional High Schools and High Schools Implementing Freshman Academies in the State of Tennessee

by

Kortney Michelle Thornton

The purpose of this study was to compare 9th grade student achievement in Tennessee schools the year before and after the schools implemented a freshman academy, as well as compare such schools with traditional Tennessee high schools. The factors in this study that impact student achievement and serve as the dependent variables were attendance rates, number of credits earned, and suspensions for 9th graders. Data were obtained by various software programs used by the schools to enter, maintain, and retrieve student data.

2 x 2 ANOVAs were conducted to determine if there were differences in the mean attendance rates and mean number of credits earned among 9th graders based on the type of institution, the academic years prior to and following the implementation of the freshman academy approach, and the 2-way interaction between the type of institution and the academic year. Crosstabulated tables and chi-square tests were used to determine if there was a relationship between suspensions prior to the academic year the Freshman Academy was implemented and the academic year following its implementation.

The 2 x 2 ANOVAs conducted using Freshman Academy A and Traditional High School C indicated there was a significant difference in mean attendance rates and mean number of credits earned. Mean attendance rates and mean number of credits earned were higher at Freshman Academy A once the academy approach was implemented. The 2 x 2 ANOVAs conducted using Freshman Academy B and Traditional High School D indicated there was no significant difference in mean attendance rates and mean number of credits earned once the academy approach was implemented. Two-by-two crosstabulated tables and chi-square tests were used to determine if there was a relationship between suspensions at the Freshman Academy high schools (A & B) for years prior to and following implementation of the academy approach. The analysis of the data indicated there was a significant difference in the number of students suspended following the implementation of the academy approach at Freshman Academy A but not at Freshman Academy B.

DEDICATION

This work is dedicated to my mother, Linda Thornton. Thank you for teaching me to set my goals high. Without your love, support, and encouragement, I would have never completed this task. You are the most devoted educator I have ever known.

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CHAPTER 1

INTRODUCTION

Background of the Problem

One of the most significant and stressful years in a student's education is the ninth grade. At that point, most students transition from a more structured middle school setting to a less structured, more independent high school setting. Too often, many ninth graders fail to meet the demands of high school and never graduate. In the report, *The Education Pipeline in the United States: 1970 to 2000*, published by Boston College in 2004, the authors reported that the rate at which 9th graders did not become 10th graders tripled during the previous 30 years. At the end of the 20th century, over 11% of 9th graders had not enrolled for the 10th grade. This report revealed that the major leakage in the education pipeline was the 9th grade year (Haney et al., 2004).

The transition from middle school to a large high school was especially difficult for many students. Schiller (1999) defined this academic transition as "a process during which institutional and social factors influence which students' educational careers are positively or negatively affected by this movement between organizations" (pp. 216-217). Students were faced with new challenges, personally, socially and academically. Too often, students entered high school ill-equipped to adapt to this new environment. Additionally, at this age, students were likely to experience new conflicts at home, including issues related to their use of time and money, their new friends, and the school's homework expectations (Adams & Laursen, 2001). According to Hertzog and Morgan (1999), many students entered high school with insecurities about their ability to succeed and with views about high school that were often inaccurate. Research noted

that, as a result of this difficult transition period, ninth graders often had the greatest number of discipline referrals and the lowest grade point averages in the secondary school setting (Walsh, 2002).

Since 1990, the debate on how to restructure high schools to meet the needs of young students intensified. The U.S Department of Education reported that 70% of high school students attended schools with a population exceeding 1000. Much of the research indicated that smaller schools had a number of advantages over large schools (*School Size*, para.1). Because many school districts do not have the capability of developing smaller high schools, smaller learning environments within large schools are at the forefront of high school reform. One such smaller learning environment is the freshman academy. Many school districts around the nation are developing freshman academies to meet the demands of high school reform.

Even though freshman academies differed somewhat in design, much of the research suggested those that experienced success incorporated four basic components. First, freshman students were placed on a team. Teaming allowed groups of teachers to work together throughout an academic school year to meet the needs of their students. Effective teams combined knowledge and skill. According to Kain (2006), well-designed teams of teachers could work together to raise important questions, analyze data, focus on a larger purpose, and communicate effectively with a group of students. Second, teachers in many successful freshman academies had a common planning period. A common planning period allowed teachers to meet on a regular basis in order to develop strategies for improving student achievement. Often, these planning periods were used to share instructional strategies, to find better ways to involve students in the high school

experience, to develop units, and to meet with students and parents. Third, most core classes were comprised only of first time ninth-grade students. Students were placed in core classes with other first-time freshmen, which did not include repeat ninth graders or upperclassmen. Finally, students were housed in a part of the building or a separate building with the goal of limiting contact with upperclassmen (George & McEwin, 1999; McPartland & Jordan, 2001; Reents, 2002).

Purpose of the Study

The main purposes of this study were to compare ninth grade student achievement in Tennessee schools the year before and the year following the schools' implementation of a freshman academy and to compare traditional Tennessee high schools with those that adopted freshman academies. Traditional high schools were generally those schools that served grades 9 through 12 without separating students by grade level. School data from four different high schools in the state of Tennessee were used to determine whether differences existed between the freshman academy approach versus the traditional high school approach in determining student achievement.

The participating schools for the study were identified as: 1) Freshman Academy A, 2) Freshman Academy B, 3) Traditional High School C, and 4) Traditional High School D. The schools implementing the freshman academy approach were chosen based on the design of the academies. The traditional schools used in this study were chosen based on student demographics comparable to the freshman academy schools. For the purpose of this study, the data retrieved from the four participating high schools included mean attendance rates, mean number of credits earned, and suspensions for each

participating freshman class. The data were used to determine if there were differences in mean attendance rates and mean number of credits earned based on the type of institution and the two-way interaction between the type of institution and the academic year.

Additional data were used to determine if there were a relationship between suspensions prior to the academic year the freshman academy approach was implemented and the year of data collection. The research provided in this study can not fix all the problems associated with the first year of high school. It does, however, provide a solution for educators seeking alternative ways to deal with the transition to high school and the new demands of the ninth grade year.

Research Questions

This study addressed the following research questions:

1. Are there differences in the mean attendance rates of ninth graders based on the type of institution (Freshman Academy A versus Traditional High School C), academic years prior to and following the implementation of the Freshman Academy and the two-way interaction between type of institution and academic year?
2. Are there differences in the mean attendance rates of ninth graders based on the type of institution (Freshman Academy B versus Traditional High School D), academic years prior to and following the implementation of the Freshman Academy and the two-way interaction between type of institution and academic year?

3. Are there differences in ninth graders' mean number of credits earned based on the type of institution (Freshman Academy A versus Traditional High School C), academic years prior to and following the implementation of the Freshman Academy and the two-way interaction between type of institution and academic year?
4. Are there differences in ninth graders' mean number of credits earned based on the type of institution (Freshman Academy B versus Traditional High School D), academic years prior to and following the implementation of the Freshman Academy and the two-way interaction between type of institution and academic year?
5. For Freshman Academy high schools (A & B), is there a relationship between suspensions prior to the academic year the Freshman Academy was implemented and the academic year following its implementation?

Limitations and Delimitations

One limitation to this study involved the years the data were collected. It was important to use data from each type of school for the same school years. As a result, both those schools with and without academies might have improved these programs since the time of the study. Schools adopting the academy approach, as well as participating traditional schools, might have developed alternative school policies dealing with attendance and discipline problems.

A delimitation of the study was the sample size. The study included four different schools within four different districts in the state of Tennessee. The sampling size decreased the generalizability of the study.

Definitions

For the purposes of this study, the following definitions were used:

At-Risk Students: Students exposed to some condition that negatively affected learning (Friend & Bursuck, 2002).

Grade Retention: The practice of requiring a student in a given grade level for a full school year to remain at the same grade level in the next school year (Jackson, 1975).

Large high school: For the purpose of this study, the following definition was operationalized. A large high school consisted of a population of 900-2000 students.

Transition plan: A plan to assist new ninth graders to feel a sense of belonging, support, and academic success (Butts & Cruzeiro, 2005).

Smaller learning community: A division of a larger school separated into clusters or houses in which teachers created a small, personalized learning environment (National Middle School Association, 2004).

Significance of the Study

The transition from middle school to high school is too often a negative experience for ninth grade students. Students frequently noted feeling overwhelmed and unprepared for this new experience. Their achievement tended to drop (Alsbaugh, 1998), along with positive self-perception (Hertzog & Morgan, 1998) and motivation

(Anderman, Maehr, & Midgley, 1999). This problem exists not only in Tennessee but in schools across the nation. Thus, the significance of this study may reach far beyond the state of Tennessee. Schools in the United States are seeking ways to reform large high schools to meet the needs of ninth grade students. The need to improve achievement and perceptions of ninth graders can impact an entire high school. If this were done, graduation rates may increase, dropout rates may decrease and school climate may improve. At the state level, this study plays a valuable role in districts working to restructure public high schools. Schools may use the data in this study to determine if a freshman academy approach is an appropriate school reform to use. School officials at the local level may use this research to change existing scheduling practices to meet the needs of freshman students. As research continues on how to reform high schools to improve student achievement, a study on the effects of freshman academies in Tennessee is one that is significant.

Overview of the Study

This quantitative study was organized as follows: Chapter 1 included a background of the problem, purpose of the study, research questions, limitations and delimitations, definitions, significance of the study, and an overview of the study. Chapter 2 presents a review of literature, including: (a) an overview of the move in American education from small community schools to large consolidated schools; (b) the background of school reform; (c) the impact school size has on student achievement; (d) the problems students face when transitioning from a middle school setting to a large, high school setting; (e) the concept of small learning communities; and (f) studies on

effective freshman academies. Chapter 3 contains a description of the research design, a description of participants in the study, and a discussion of data collection processes and data analysis. Chapter 4 describes the findings of the study. Chapter 5 contains a discussion of the results, findings compared to the literature, and recommendations for further practice and research.

CHAPTER 2

REVIEW OF RELATED LITERATURE

Introduction

Chapter 2 presents a review of literature organized into topics leading to the implementation of freshman academies. First, the review of literature focuses on the move in American education from small community schools to large consolidated schools. Next, the review of literature examines the background of school reform. The review of literature examines the impact school size has on student achievement and addresses the problems that many students face when transitioning from middle school to a larger high school. Smaller learning communities will be addressed as a type of reform often adopted by large high schools. Finally, the review of literature covers key components of a freshman academy as well as discussing successful components of extant freshman academies.

The Move from Small Community Schools to Large Consolidated High Schools

Enrollment in the public schools grew dramatically during the 20th century. More students were attending school and staying longer. The total number of students enrolled in public schools almost doubled between 1940 and 1990 (Johnson, Dupuis, Musial, Hall, & Gollnick, 1999). Schools consolidated to deal with the number of students enrolling in the public schools and the need to make schools more cost effective. As a result of that consolidation, the number of school districts dropped from 117,000 in 1940 to 16,000 in 1980 (Johnson et al.).

Prior to 1925, the common justifications for increasing school size were identified as administrative and instructional. The administrative motive was based on the idea that larger schools would use resources more efficiently. Instructional motives were produced by the theory that larger schools could educate the masses more effectively (Howley, 1996).

Similar arguments for school consolidation pushed school reform in the latter part of the 20th century. In the 1970s, Guthrie (1979), a professor of the Graduate School of Education at the University of California - Berkeley, predicted that schooling in the United States would continue to grow larger and more costly for decades. His paper entitled, *Organizational Scale and School Success*, explored the historical trend of consolidating schools, as well as a reviewing the evidence of the economic, instructional, and political effects.

Guthrie (1979) posited that the American public had varied reasons to justify major reforms in the size and form of public schools. First, many argued that student opportunities would increase if small schools were consolidated. Schools with larger class sizes would require hiring more specialized personnel. Also, increasing the size of schools and school districts would attract more highly qualified teachers. Thus, specialized personnel and highly qualified teachers would result in better instructional practices.

Guthrie (1979) continued that a second argument for consolidating schools was the elimination of costly positions including administrators, librarians, and custodians. Consolidating schools meant that these organizations would operate more efficiently and more cost effectively.

Bard, Gardener, and Wieland (2005) prepared *Rural School Consolidation Report: History, Research Summary, Conclusions, and Recommendations* for the National Rural Education Association. The report provided information on the role of private businesses, politics, and the economic decline in rural areas to encourage school consolidation. The authors wrote that many private businesses encouraged school consolidation because of the possible financial gains. For instance, White (1981) found that the Harvester Company encouraged school consolidation in the 1930s because the company was manufacturing school buses (as cited in Bard et al.).

Ravitch (1983) suggested that large schools would be more effective in educating the youth of the nation. Events such as *Sputnik* and the Cold War created public concern that small schools were incapable of developing the human capital needed to enhance national security (as cited in Bard et al., 2005).

As the decades of the 20th century passed, enrollment declined in rural public schools, which increased the financial strain of keeping schools open. Modern farming techniques meant that fewer farms were needed. As a result, many families were migrating to urban areas for jobs (Bard et al., 2005).

In the 21st century, the controversial question remains. Is bigger better? However, research indicated that consolidating schools did not have the positive effect intended. Purcell and Shackelford (2005) discussed the negative impact school consolidation had on many rural districts in the state of West Virginia. The authors noted that the state of West Virginia spent over one billion dollars during the course of 15 years reconsolidating schools, resulting in the closure of more than 300 schools. The goals of closing hundreds of schools included reducing operational costs and offering more advanced classes.

However, the reconsolidation efforts did not save taxpayers money. The state spent more money on maintenance and utilities and despite a 13% drop in student enrollment, the number of local school administrators actually increased by 16% (Purcell & Shackelford). Consequently, many school districts sought ways to make schools seem smaller again.

A Background of School Reform

From the 1960s onward, scholars intensely studied the effects of education. According to Madaus, Airasian, and Kellaghan (1980), concern over school effectiveness was not a new issue. Since public education existed, stakeholders questioned the efficacy of school practices. However, concerns with school effectiveness reached new heights in the 1960s and 1970s. Madaus et al. observed:

In the 1950s and early 1960s, the struggle against poverty, racial justice, and unequal educational opportunity became more intense. Starting just after 1960, the effort to deal with these problems dominated domestic legislative action. Although the focus has changed somewhat...efforts to define, monitor, and rectify perceived inequalities in society have continued to be a prime legislative and judicial focus. Attempts to document and remedy the problems of unequal educational opportunity, particularly as they related to minority-group children, provided the major impetus for school-effectiveness studies. (p. 11)

According to Marzano, Pickering, and Pollock (2001), the 1960s were marked by the belief that school made little difference in student achievement, which was reinforced by Coleman's (1966) report, *Equality of Educational Opportunity*. The document, commonly known as the Coleman Report, concluded that quality of schooling accounted for only about 10% of the variance in student achievement (Marzano et al.).

The Coleman Report was submitted in response to Section 402 of the Civil Rights Act of 1964 (Coleman et al., 1966). Coleman et al. surveyed teachers, principals,

superintendents, and students from 4,000 schools in all 50 states. Findings documented in the Coleman Report indicated a variation in achievement due to school characteristics. Coleman et al. posited that schools were similar in the ways they related to the achievement of their students when socioeconomic background was taken into account but differed in their relationship to varied racial and ethnic groups. Thus, variations in the facilities and curricula accounted for little disparity in student achievement. Teacher quality revealed a stronger relationship to pupil achievement and student achievement was strongly related to the educational background and aspirations of other students in the school (Coleman et al.).

The findings in the Coleman Report were corroborated by Jencks et al. (1972) in *Inequality: A Reassessment of the Effects of Family and Schools in America*. The eight coauthors summarized 3 years of research conducted at the Center for Educational Policy Research and their findings, like the Coleman Report, indicated that differences in schools had inconsequential long-term effects (Jencks et al.). According to Sergiovanni (2001), many educators accepted the ideas posed by Coleman and Jencks because “after all, they reasoned, the research shows clearly that poor student performance is linked to conditions beyond the control of the school” (p. 162). Johnson et al. (1999) theorized that findings from Coleman and Jencks offered educators a new direction for school reform. However, Marzano et al. objected:

The conclusions by Coleman and Jencks did not paint a very hopeful picture for educators and education...Fortunately, we now see some serious flaws in these conclusions. In fact, we now can look at the possible influence of schools and teachers with great hope. (p. 2)

Public education took another hard hit in the 1980s. The 1980s, according to Sergiovanni (2001), provided a different correlation between schooling and the quality of

learning for students compared to that of the 1960s and 1970s. On August 26, 1981, then-Secretary of Education T. H. Bell created the National Commission of Excellence in Education. The Commission was created to examine the quality of education in the United States, which subsequently led to a report, led by David Pierpont Gardner, entitled *A Nation at Risk* (National Commission of Excellence in Education, 1983). This report paid particular attention to the following areas:

1. Assessing the quality of teaching and learning in public and private schools, as well as colleges and universities.
2. Comparing schools in the United States with schools in other advanced nations.
3. The study of the relationship between college admission requirements and student achievement in the nation's high schools.
4. The degree to which major changes in society and education have affected student achievement.
5. Identifying the problems which must be identified and overcome if the nation's education system is to be more successful.

In the report, the National Commission on Excellence wrote:

Part of what is at risk is the promise first made on this continent: All, regardless of race or class or economic status, are entitled to a fair chance and to the tools for developing their individual powers of mind and spirit to the utmost. This promise means that all children by virtue of their own efforts, competently guided, can hope to attain the mature and informed judgment needed to secure gainful employment and to manage their own lives, thereby serving not only their own interests but also the progress of society itself. (p. 8)

According to Owens (2004), *A Nation At Risk* indicated that the poor quality of the activities and instruction in the American classroom posed a threat to the nation's security. The report made a number of allegations that schools were failing and that

student achievement in the United States was far behind that of other countries. Owens commented that *A Nation At Risk* indicated American schools were not well organized and educators were not very capable of doing their jobs. Glasser (1992) noted that *A Nation At Risk* focused on the need for longer school days and years, harder graduation requirements, and more homework. However, Glasser observed:

Since it failed to address the fact that longer hours and harder courses with the same teachers for whom students were not now doing quality work would change nothing, it is hardly surprising that this report has not led to any significant improvement in the schools. (p.8)

Rothstein (as cited in Owens) pointed out that *A Nation At Risk* did not rest on documented evidence but on generalizations that public schools in the United States were in need of reform. However, regardless of the controversies behind the report, it served to increase the role the federal government played in public education (Coeyman, 2003).

On January 8, 2002, President George W. Bush signed the *No Child Left Behind Act*. The act incorporated four major strategies: (a) increasing accountability for states, school districts, and schools; (b) providing more choices for parents and students; (c) providing more flexibility for the use of federal funding; (d) and an emphasis on using more educational programs and practices proven with thorough scientific research (U.S. Department of Education, 2004). Provisions in the *No Child Left Behind Act* required states to develop adequate yearly progress objectives for all students, including those in specific groups such as impoverished students, students with disabilities, those with limited English, and students from major ethnic and racial groups (Hoy & Hoy, 2006). According to Owens (2004), the *No Child Left Behind Act* introduced a period in public education in which school leadership was to be driven by data and instructional practices had to be backed up with statistical evidence.

In light of the *No Child Left Behind Act* and other reports focusing on the need for school reform, stakeholders in public education looked at the potential problems that existed in schools and sought solutions to improve public education. For the purpose of this study, the remaining review of literature focuses on some of the problems schools are facing and possible solutions to those problems.

School Size and Student Achievement

Many researchers investigated the relationship between the size of a school and the effects on student performance, attitudes, and behavior. For many years, educators argued that bigger was better. McComb (2000) noted that many researchers traced the trend of large schools to Bryant. Bryant, former president of Harvard University, posited that schools with populations exceeding 750 students could offer comprehensive instructional programs of a higher quality and at a lower cost as compared to schools with a population of fewer than 750 students (as cited in McComb).

Between 1940 and 1990, the nation experienced a 70% increase in population, while the number of elementary and high schools declined from approximately 200,000 to 62,037 (Cotton, 1999). The argument was that large schools and large school districts could operate more efficiently and provide more opportunities for students compared to smaller schools. However, since 1990, the argument for smaller schools has been making headway. This portion of the review of literature focuses on why many educators and researchers are gaining greater respect for education on a smaller scale.

The Rural School and Community Trust organization published *The Hobbit Effect: Why Small Works in Public Schools*. The author, Jimerson (2006), identified 10 research-based reasons to prove that small schools worked better, as follows:

1. There is higher participation in extracurricular activities.
2. Smaller schools tend to be safer.
3. Kids have a stronger sense of belonging in a small school.
4. Class sizes are smaller, allowing for more individualized instruction.
5. Effective teaching methods are easier to implement.
6. Teachers feel better about their jobs.
7. Mixed-ability classes do not condemn students to low expectations.
8. Classes are often multiage, which promotes positive social interactions.
9. Smaller school districts mean less bureaucracy.
10. More grades in one school lessens transitions to new schools.

Jimerson explained:

The ten attributes described above roughly fall into three categories: relationships, instructional strategies, and structural elements. Attributes such as students' sense of belonging, school safety and teacher morale are closely linked to the quality of interpersonal relationships found in small schools. (p. 16)

Participation in extracurricular activities was often associated with a stronger connection to school. Alva, Elmore, Nord, and Nicholas (2004) conducted a study using longitudinal data collected from the National Education Longitudinal Sample (NELS 88-2000). The research focused on the long-term effects of high school student participation in extracurricular activities. In a paper presented to the American Sociological

Association, the authors noted that involvement in extracurricular activities in high school produced long-term positive outcomes on individual lives.

Obviously, school safety was important to educators. McPartland and Jordan (2001) observed that the large size and departmentalization of many high schools were major barriers to the effective discipline and positive relationships needed to keep schools safe for learning. Staff and students in large schools are too often strangers, causing management of such large numbers of students to be an overwhelming task. Cotton (1996) found voluminous research that linked school size to classroom disruption, vandalism, aggressive behavior, gang violence, and substance abuse. Because order and safety were so difficult to maintain in large schools, many of the positive virtues of large schools were cancelled out (Stockard & Mayberry, 1992).

Many experts agreed that safer schools existed when students felt a sense of belonging to a school. Feelings of alienation led to discouragement about schooling and eventually caused many students to drop out (Jimerson, 2006). Different schools could have the same socioeconomics, similar funding, and population statistics, but students who had a stronger sense of belonging and felt safe in their school often achieved higher academic standards. This was especially true for students considered at-risk (Oregon Department of Education, 2000).

Maintaining small class sizes is a difficult task in large high schools. However, research demonstrated that students had greater achievement gains when placed in smaller classes (Jimerson, 2006). Berliner and Biddle (2002) noted that students who struggled with concepts could interact with teachers on a one-to-one basis more often

when class sizes were smaller, teachers in smaller classes create an environment conducive to higher morale, and students learned to cope better in school.

According to Achilles and Finn (2000), more than 2 decades passed before class size was considered a major factor in education. The authors posited that teachers taught better in smaller classes, parents get more involved in school, and small classes provided more individualized instruction because the teachers had a manageable number of students. Achilles and Finn note that small classes also offered three socially desirable benefits, quality, equality, and equity, as follows:

1. The quality of class size is evident through higher achievement in academics, behavior, and citizenship.
2. Participants in smaller classes get the same treatment. No group gets less or more than the others.
3. At-risk students and ethnic minorities benefit in positive ways from smaller classes.

Teacher morale plays a significant role in student achievement. Boss (2001) indicated that teachers often felt better about their role and reported higher levels of peer and parent involvement at smaller schools. Teachers had the opportunity to know each other better and develop stronger relationships that increased communication and collegiality (Breunlin et al., 2005). Jimerson (2006) reported that teachers in small schools had fewer absences and professional development was more focused on the priorities of the school. *High Schools for a New Millennium*, published by the Bill and Melinda Gates Foundation (n.d.), revealed that small schools have small faculties, which

offered more opportunities to collaborate in evaluating student work and to share instructional strategies and tips on successful classroom management.

Transition from Middle School to High School

For many students, the move from middle school to high school is especially difficult. Berliner (1993) acknowledged, "The transition from elementary to secondary school represents for many students a stressful move from the nest of the protective, familiar environment with considerable individual attention into an often impersonal, intimidating atmosphere" (p. 2). Elias, Gara, and Ubriaco (as cited in Berliner) revealed that school transition was a source of stress that created challenges for many coping skills such as: (a) redefining expected roles and behaviors; (b) shifting membership within social networks; (c) reorganizing cognitive appraisal; and (d) managing the stress associated with unclear expectations and the abilities to use the aforementioned skills.

Students entering high school were both excited and concerned about this transition (Mizelle & Irvin, 2000). During this transition year, many students decided to continue their education or drop out of school (Hertzog & Morgan, 1999; Roderick, 1993). According to *The Education Pipeline in the United States: 1970-2000*, the declining number of students between grades 9 and 10 accelerated beginning in the mid-1980s. This study reported that 3.86 million students were enrolled in the 9th grade during the 1998-1999 school year. However, the number of 10th graders enrolled in the 1999-2000 school year declined to 3.42 million students (Haney, 2004).

Phillips (1978) indicated there were two types of stressful schools situations. One involved achievement stressors and the other involved social stressors. Achievement

stressors were indicated when students feel a lack of appropriate communication existed among the teacher and the students, competitiveness was high among students, recitation was required, and students were graded lower on work than expected. Phillips also noted that social stressors included the discrepancy of parental involvement among students, unfriendly peers, and obvious differences in class status.

Researchers were concerned with the achievement loss associated with the transition from middle school to high school. In *Adolescence, School Transitions, and Prevention: A Research-Based Primer*, Berliner (1993) discussed the Timing and Discontinuity Theory that suggested two hypotheses associated with adolescents coping with transition. The first hypothesis posited that adolescents experienced difficulties with change. When other life events take place in conjunction with school change, they resulted in difficulties with adjustment and problems with behavior. Berliner hypothesized that because students transitioned from child-focused schooling to performance-focused schooling, stress factors were heightened.

Ninth grade students who failed their classes might begin to question their ability to graduate, lose interest in school and, consequently, drop out (Wagner, 1989). Most ninth graders moved into a larger school setting where they were expected to adapt to a variety of new instructional strategies, school policies, and tougher grading standards (Chmelynski, 2004). In a study that explored the nature of achievement loss associated with school transitions, Alspaugh (1998) found that negative educational outcomes were closely associated with school transitions. According to Ascher (1987), students who were unsuccessful during their ninth grade year were more likely to drop out before graduation.

Weiss (2005) studied the role of student engagement in the transition to public high schools in Philadelphia. The study used longitudinal data from a representative sample to examine the level of student engagement of ninth graders. His findings concluded that students who were more engaged academically were significantly less likely to fail courses, face suspension, and skip classes.

De Mesquita, Courtney, and Woods (1992) researched the effects of transitioning from a middle school to a large high school located in an urban and county metropolitan area. The school's population exceeded 1850 students with 82% of the students Caucasian and 18% classified as minorities. The study reported that, at the close of the 1991-1992 school year, 26% of the ninth grade students were failing at least 50% of their classes. The authors created their study around a cohort group of 67 students who had been identified as at-risk. Students identified in the cohort group showed a drop in attendance and grade point average from their eighth grade year to their ninth grade year. De Mesquita et al. noted that, without intervention programs put into place, students identified in the at-risk cohort were less likely to succeed and more likely to drop out of high school.

This first year of high school might be a negative experience for students for several reasons. For many students, the shift from middle school to high school was aligned with physical and emotional changes. These adolescents often began to experience growth spurts and mood swings, fixate on their physical appearance, and question their self-worth (*Balancing the Middle School*, 2004). Many were unsuccessful academically because their focus was elsewhere. According to Berliner (1993), the transition into adolescence was marked by changes in height, weight, and other pubertal

maturation. Adolescent experienced cognitive expansion, which included the ability to think hypothetically and reason abstractly. Yet, Berliner cautioned, this period of growth was also a time that many adolescents engaged in risky behavior and challenged emotional ties to their parents. Akos (2002) found that many students experienced a developmental crisis due to the stress of adjusting to a new, unfamiliar environment. During the spring of their eighth grade year, students were seniors in their school and their overall appearance and attitudes reflected this level of seniority. However, by the fall of the same year, many of these same students transformed into shy, self-conscious beings as, once again, they filled the lowest rung on the seniority ladder (Hertzog & Morgan, 1998). Thus, the focus for many ninth graders tended to be on fitting in, not on academic achievement. Dedmond (2008) penned:

If today's trend persists, 75 percent of entering high school students will not finish the post secondary education needed to thrive in our global world. Whether or not students leave high school with a diploma and plans for postsecondary education or training often hinges on the attitudes they develop in the eighth and ninth grade about themselves and their education. Can they envision a future that is economically self-sufficient? Are they able to articulate a plan that will get them to that point? Do they understand the consequences of their life if they don't follow through with their plans? (p. 14)

Frequently, ninth graders did not transition well due to lack of preparation.

According to Bushaw (2007), three well-respected organizations, the National Association of Secondary School Principals (NASSP), Phi Delta Kappa (PDK) International, and the Lumina Foundation for Education, determined to find middle schools students views about how well they had been prepared for high school. Using a poll created by Harris Interactive, 1,814 middle school students, both seventh and eighth graders, were surveyed between February and March of 2007. A copy of the survey was mailed to every high school and middle school principal in the United States. The survey

reported that 3% of the students did not feel at all prepared for high school; 12% expressed not being very prepared; and 60% felt somewhat prepared. Only 24% of the middle school students surveyed felt very prepared (Bushaw).

Changes in teaching styles, scheduling practices, and academic standards can lead to poor academic performance (Weiss, 2005). Mizelle (2005) discovered that many students recognized the need to manage their time and perfect their study habits but struggled to do so. Many public high schools, as well as public middle schools, lacked a transition plan to aid students. During the fall of 1996, Hertzog and Morgan (1999) designed a survey to address the need for information concerning the transition from middle school to high school. Data were collected from 97 middle schools and 56 high schools in the states of Georgia and Florida. The surveys determined the effectiveness of transition programs and questioned what components were missing from an effective transition program. Analysis of the data revealed that schools used fewer transition practices had a significantly higher dropout rate compared to schools that implemented three or more transition practices (Hertzog & Morgan, 1999). Also, many schools that developed transition programs did so with little input from the students who were supposed to benefit (Morgan & Hertzog, 2001).

Students need help from well-trained, caring teachers and administrators to ease the transition. Donegan (2008) noted teachers who lacked experience in classroom management and effective teaching strategies should not be placed with students with the greatest needs. On the other hand, teachers concluded that widespread failure rates in the ninth grade were inevitable if a school-wide intervention program was not in place (Neild, Stoner-Eby, & Furstenberg, n.d.). Butts and Cruzeiro (2005) remarked that the

comfort of elementary and middle school no longer existed for many high school students. As a result, first-time ninth graders needed school-wide, research-based intervention programs and teachers who cared about students.

Smaller Learning Communities

Size alone did not make a successful school; however, it appeared to be an important factor when creating more effective schools (Wasley & Lear, 2001). The majority of students in the United States attend large high schools. According to Cleary and English (2005), approximately 70% of the nation's high school students are enrolled in a high school that houses 1000 or more students, while almost 50% of American high school students attend high schools with a population of more than 1500. Students faced with the daunting task of fitting into a large high school too often fall between the cracks.

The U.S. Department of Education reported that current research indicated large high schools had lower achievement, higher incidences of misconduct, higher dropout rates, and a tendency to be less safe when compared to smaller schools serving similar student populations (*School Size*, para. 4). Unfortunately, many school districts are not reducing their high school student population. In fact, high school populations continue to increase. As a result, many public high schools are adopting the concept of smaller learning communities.

Smaller learning communities are commonly developed by dividing large schools into smaller, more personalized learning environments. McPartland and Jordan (2001) noted that creating self-contained units within a school could result in more positive contacts and relationships between students and staff members. At Patterson High School

in Baltimore, Maryland, a Ninth Grade Success Academy was developed with students and teachers working together in small teams. The classes followed a block-schedule, which allowed teachers on the same team to have the same planning period (McPartland, Jordan, Legters, & Balfanz, 1997). Weiss (2005) posited that, when children feel connected and see investment in their education, they learned more. Recently, there has been a movement in education for more schools to create smaller learning communities.

Legters and Kerr (2001) studied reform practices to promote ninth grade success in Maryland public schools. The researchers surveyed 174 schools and reported a 79% response rate. The purpose of the study was to determine what practices schools were using to ease transition into Maryland public high schools. Legters and Kerr (2001) reported contextual information provided by the Maryland School Performance Report, as well as annual enrollment data to measure ninth grade promotion rates. The researchers found that a quarter of the high schools in Maryland adopted a school-within-a-school concept, an academy or some other type of small learning community for ninth graders. Those schools implementing a school-within-a-school concept with high poverty and high minority rates showed higher ninth grade promotion rates compared to schools with similar characteristics that did not implement the school-within-a-school concept (Legters & Kerr, 2001).

Connolly (2001) conducted a study of the Wachusett Regional High School in Massachusetts. The purpose of the research was to determine whether a small learning community would produce better achievement results, higher attendance rates, fewer discipline referrals, and a stronger sense of belonging among the freshman class after only 1 year of implementation. During the pilot year of the program, freshman students

were placed with four academy teachers during the school day. The teachers had a common planning period, which was used to discuss concerns regarding the needs of their freshmen. Connolly compared the freshman class of the 1997-1998 school year with students who took similar classes outside the small learning community during the same year. The results noted that the small learning community showed significant improvement in the areas of discipline and number of credits earned by freshmen and a stronger sense of belonging when compared to those students in the more traditional setting (Connolly).

Porter (2004) examined the effects of a freshman academy approach implemented in Memphis, Tennessee. The purpose of this study was to use both quantitative and qualitative data to explore the perceptions and experiences of principals, teachers, and students in a ninth-grade high school program. Porter queried her subjects on the following questions:

1. What are teacher's and administrators' overall experiences with the ninth grade in general this year and last year as well as the Ninth Grade Academy this year?
2. How does school climate for Academy teachers compare to that of teachers at the main high schools in grades 10-12?
3. How do students' perceptions of their ninth grade year compare to from last spring to this spring?
4. What were student's expectations of grade nine, and how did these translate into the reality of their experiences?

Porter (2004) found that students in the small learning community had more opportunities for class participation, greater success on statewide tests, and stronger bonding with peers compared to ninth graders in a traditional setting. Additionally, Porter found that academy students had a closer relationship with their administrator than did preacademy students.

Various researchers, educators, and philanthropists were involved in the move toward learning communities within schools. One of the leading pioneers of reforming large schools was Deborah Meier, founder of Central High School in East Harlem. Her success led to the Bill and Melinda Gates Foundation, which poured over one billion dollars into breaking up large schools and creating smaller schools (Arfstom, 1999).

In 1996, the National Association of Secondary School Principals, along with the Carnegie Foundation, published *Breaking the Ranks: Changing the American Institution*. The report emphasized creating more personalized, supportive high schools by developing smaller learning communities. This approach could be used to reduce class sizes and provide students with more individual attention.

An Overview of Smaller Learning Communities in High School, produced under the U.S. Department of Education, Office of Elementary and Secondary Education and Office of Vocational and Adult Education (2001), emphasized the need for more effective schools. The report identified a variety of smaller learning community structures schools were encouraged to adopt. If implemented appropriately, the report indicated that even large high schools could gain some of the advantages a small school offered.

The Freshman Academy

Even though it might be difficult to decrease the population of large high schools, researchers were finding ways to restructure these schools to make them *feel* smaller. This restructuring was frequently accomplished by using new scheduling practices, organizing students into teams, using more flexible approaches to instructional groupings and creating schools-within-schools (George & McEwin, 1999). Effective transition programs developed for ninth graders incorporated the concepts. The ninth grade freshman academy was developed by many schools across the nation to improve academic performance and a sense of belonging for ninth graders. McPartland and Jordan (2001) noted that a successful transition program made the difference between a student who developed good school habits to earn enough credits to be promoted to the 10th grade and a student who failed core academic courses, had poor attendance, and eventually dropped out.

Even though freshman academies differed in name and educational practices, several key components were identified and implemented in the following examples. First, administration played a key role in each freshman academy. According to Sergiovanni (2001), school administrators at effective schools use leadership styles appropriate for professionals, know the staff, collaborate with all stakeholders when making decisions, and build cohesiveness. Designing and implementing a freshman academy requires leaders to collaborate with all stakeholders. Also, ninth grade students were placed in a separate part of the school or in a separate building. According to Chmelynski (2004), an academy was implemented using this approach in Houston County High School in Georgia. Chmelynski revealed that, since the program was

implemented, discipline incidents dropped by 55% and grade retentions decreased by 46%.

School officials separated the ninth graders in the Aldine Independent School District in Houston, Texas. After they were separated from other high school students, the ninth grade dropout rate decreased dramatically, while the number of credits earned increased (Reents, 2002).

Two other key components of a successful academy were interdisciplinary teaming and a common planning period for academy teachers. Interdisciplinary teaming was an organizational strategy used to improve student success by empowering teachers (George & McEwin, 1999). Oxley (2005) noted that academic teaming was fundamental for schools in the 21st century. Interdisciplinary teams allowed teachers to share a common group of students. Sharing students gave teachers more opportunity to communicate and exchange knowledge, develop closer relationships with students, and facilitate more authentic learning (Oxley). McPartland and Jordan (2001) posited that teaming improved attendance, discipline, and academic problems among ninth graders. Teachers who are teamed were able to work together to monitor student attendance and classroom data.

According to Mansberger (2005), organizing teachers into teams was a successful strategy in school reform. Principals must be ready to provide training and support when teams were newly formed. Mansberger added that principals should keep certain factors in mind when teaming teachers including the nature of teaming, the stages of team development, and team composition. Newly formed teams needed information and resources for planning and meeting and providing professional development only during

the initial development of a team might not be sufficient. The overall effectiveness of the team might depend on the sustainability of quality professional development. The first years were critical for support. Principals must keep mind the role each teacher should play when putting teams together (Mansberger).

Schools across the country are reforming. One midwestern high school in Illinois attempted to increase the academic achievement of its ninth graders by implementing a freshman academy (Fulk, 2003). The academy was pilot-tested during summer orientation and consisted of miniteams of teachers with a common planning period, which was used to collaborate about students, design lessons, and address student needs. As a result of the pilot-test, the school reported a decrease in ninth-grade failures, fewer discipline problems, higher grade point averages, and an increase in attendance (Fulk).

Wheaton High School Montgomery County, Maryland received negative attention for years based on poor student performance (Rourke & Mero, 2008). However, the school experienced a major turn around that included the implementation of a Freshman Academy broken into houses. Students worked under a flexible modified block schedule that allowed teachers to provide academic support, study skills instruction, and guidance in small groups. Rourke and Mero reported that the academy benefited the instructional staff at Wheaton High School by providing a common planning period, smaller class loads, reduction in teacher isolation, and powerful learning through various teaching methods. The authors also noted academy benefits to the students including increased academic achievement, a reduction in the discrepancies among various student groups, a reduction of violence, stronger student-teacher relationships, and application of real-life skills.

Nathan Hale High School in Seattle, Washington created academies for ninth graders in the 1998-1999 school year (Boss, 2001). The academies enabled the school to lower student-teacher ratios and decreased the number of students teachers saw each day. According to Boss, Nathan Hale High School experienced an increase in student attendance and academic success as a result of the academies.

John Hopkins University and Patterson High School in Baltimore, Maryland developed a successful comprehensive reform initiative that included a Freshman Academy (Kemple & Herlihy, 2005). This reform initiative, known as the Talent Development High School (TDHS), was initiated in 1994 and spread to 33 high schools in 12 states across the nation. Kemple and Herlihy revealed some of the essential elements of the TDHS model as follows:

1. Schools are reorganized into smaller learning communities, including a ninth-grade academy, career academies for 10-12 grades, and a Twilight School.
2. Schools institute a research-based curriculum to move all students toward advanced high school coursework.
3. Schools offer recovery opportunities and extra help for students.
4. Schools provide professional development opportunities for teachers and administrators to help implement recommended school reforms.

According to Balfanz et al. (2004), the TDHS ninth-grade instructional program was designed to accelerate the learning of poorly prepared students. This program included components of a well-developed Freshman Academy. Those components included teaming, a common planning time, and a separate location for ninth graders.

Summary

This review of literature reveals many of the problems ninth grade students face when transitioning from a middle school setting to a larger high school setting. Many schools are facing the challenges that exist by creating small learning communities such as freshman academies. These schools are providing opportunities for teachers to work together more closely than ever before to meet the needs of ninth graders.

The remaining chapters focus on the data collected for this study. Chapter 4 discusses the research design, participants for the study, the data collection processes, and data analysis. Chapter 5 includes a discussion of the results, findings compared to this review of literature, and recommendations for further practice and research.

CHAPTER 3

METHODOLOGY

Introduction

The purpose of this section is to provide an overview of the research methodology used in this study. Chapter 3 includes a description of the study, selection of population and participants, the research questions, null hypotheses, the process of data collection, data analysis procedure, and a summary of the chapter.

Description of the Study

Throughout the United States, high schools seek ways to improve student achievement for ninth graders. One major reform many schools are adopting is the freshman academy model. The freshman academy model is implemented to create small learning communities in large high schools. The purpose of this study was to examine ninth grade student achievement at two Tennessee high schools, both before and after the freshman academy model was adopted, and to compare those data to two traditional high schools that followed a standard approach.

The factors in this study that impacted student achievement and served as dependent variables were attendance rates, number of credits earned, and suspension rates for ninth graders. Researchers identified these factors as having a direct impact on whether a student was likely to drop out or finish high school (Shannon & Bylsma, 2003).

The review of literature exposed the problems faced by ninth grade students in large high schools, especially the problems with transitioning. The review of literature supported the need for implementing a reform model such as a freshman academy.

Selection of Participating Schools

A purposeful sample of four high schools was selected for this study. The participants in this study included ninth grade students enrolled at four different public high schools in four different districts in the state of Tennessee. Two of the schools selected to participate were identified as large high schools that had implemented a freshman academy. Even though various types of academies existed across the nation, the selected schools included the four major components of a successful freshman academy as defined in the review of literature. Those components included teaming, a common planning period for teachers on the same team, housing freshmen in a separate building or separate location from the main building, and allowing only first year ninth graders to participate in core classes (George & McEwin, 1999; McPartland & Jordan, 2001; Reents, 2002). The two traditional high schools were chosen for this study based on student demographics comparable to the freshman academy schools.

Each participating school was a public high school in the state of Tennessee serving grades 9 through 12. At each, freshman students were able to earn up to eight academic credits. Each traditional high school used in the study was demographically comparable to a participating school implementing a freshman academy. The overall student population, as well as the breakdown of varied ethnic groups, was similar at the participating schools.

The participating high schools for this study were identified as: 1) Freshman Academy A, 2) Freshman Academy B, 3) Traditional High School C, and 4) Traditional High School D. Comparisons were made between Freshman Academy A and Traditional High School C for the academic year prior to the implementation of Freshman Academy A (1999-2000) and after its implementation in 2000-2001. In addition, comparisons were made between Freshman Academy B and Traditional High School D for the academic year prior to implementation of Freshman Academy B (2005-2006) and following the academic year 2006-2007. The years were used to indicate when the freshman class was enrolled.

Research Design

A quantitative research design was employed for this study to determine if there were differences in ninth grade attendance, number of credits earned, and suspensions between high schools that had implemented the freshman academy model, both prior to and subsequent to implementation, and traditional high schools. Both descriptive and inferential statistics were used to answer the research questions that guided this study as follows:

1. Are there differences in the mean attendance rates of ninth graders based on the type of institution (Freshman Academy A versus Traditional High School C), academic years prior to and following the implementation of the Freshman Academy and the two-way interaction between type of institution and academic year?

A 2 x 2 ANOVA model was used to answer this research question. The ANOVA model compared the attendance means of Freshman Academy A and Traditional High School C for the baseline year prior to the implementation of Freshman Academy A (1999-2000) and for the year following its implementation (2000-2001).

2. Are there differences in the mean attendance rates of ninth graders based on the type of institution (Freshman Academy B versus Traditional High School D), academic years prior to and following the implementation of the Freshman Academy and the two-way interaction between type of institution and academic year?

A 2 x 2 ANOVA model was used to answer this research question. The ANOVA model compared the attendance means of Freshman Academy B and Traditional High School D for the baseline year prior to the implementation of Freshman Academy B (2005-2006) and for the year following its implementation (2006-2007).

3. Are there differences in ninth graders' mean number of credits earned based on the type of institution (Freshman Academy A versus Traditional High School C), academic years prior to and following the implementation of the Freshman Academy and the two-way interaction between type of institution and academic year?

A 2 x 2 ANOVA model was used to answer this research question. The ANOVA model compared the mean number of credits earned at Freshman Academy A and Traditional High School C for the baseline year prior to the

implementation of Freshman Academy A (1999-2000) and for the year following its implementation (2000-2001).

4. Are there differences in ninth graders' mean number of credits earned based on the type of institution (Freshman Academy B versus Traditional High School D), academic years prior to and following the implementation of the Freshman Academy and the two-way interaction between type of institution and academic year?

A 2 x 2 ANOVA model was used to answer this research question. The ANOVA model compared the mean number of credits earned for Freshman Academy B and Traditional High School D for the baseline year prior to the implementation of Freshman Academy B (2005-2006) and for the year after its implementation (2006-2007).

5. For Freshman Academy high schools (A & B), is there a relationship between suspensions prior to the academic year the Freshman Academy was implemented and the academic year following its implementation?

Two crosstabulated tables and chi-square tests were used to answer this research question. The first crosstabulated table and chi-square test compared Freshman Academy A's suspensions prior to the implementation of the Freshman Academy in 1999-2000 and following its implementation in 2000-2001. The second crosstabulated table and chi-square test compared Freshman Academy B's suspensions prior to the implementation of the Freshman Academy in 2005-2006 and following its implementation in 2006-2007.

Null Hypotheses for Research Question 1

- Ho1₁: There is no difference in the attendance means between students enrolled in Freshman Academy A and Traditional High School C.
- Ho1₂: There is no difference in the attendance means between the baseline year the Freshman Academy was implemented at Freshman Academy A (1999-2000) and the year following its implementation (2000-2001).
- Ho1₃: For Freshman Academy A and Traditional High School C, there is no difference in the mean attendance between type of institution as a function of the year.

Null Hypotheses for Research Question 2

- Ho2₁: There is no difference in the attendance means between students enrolled in Freshman Academy B and Traditional High School D.
- Ho2₂: There is no difference in the attendance means between the baseline year the Freshman Academy was implemented at Freshman Academy B (2005-2006) and the year following its implementation (2006-2007).
- Ho2₃: For Freshman Academy B and Traditional High School D, there is no difference in the mean attendance between type of institution as a function of the year.

Null Hypotheses for Research Question 3

- Ho3₁: There is no difference in the mean number of credits earned between students enrolled in Freshman Academy A and Traditional High School C.

Ho3₂: There is no difference in the mean number of credits earned between the baseline year the Freshman Academy was implemented at Freshman Academy A (1999-2000) and the year following its implementation (2000-2001).

Ho3₃: For Freshman Academy A and Traditional High School C, there is no difference in the mean number of credits earned between type of institution as a function of the year.

Null Hypotheses for Research Question 4

Ho4₁: There is no difference in the mean number of credits earned between students enrolled in Freshman Academy B and Traditional High School D.

Ho4₂: There is no difference in the mean number of credits earned between the baseline year the Freshman Academy was implemented at Freshman Academy B (2005-2006) and the year following its implementation (2006-2007).

Ho4₃: For Freshman Academy B and Traditional High School D, there is no difference in the mean number of credits earned between type of institution as a function of the year.

Null Hypotheses for Research Question 5

Ho5₁: For Freshman Academy A, there is no relationship between the suspensions the year the Freshman Academy was implemented (1999-2000) and the year after its implementation (2000-2001).

Ho5₂: For Freshman Academy B, there is no relationship between the suspensions the year the Freshman Academy was implemented (2005-2006) and the year after its implementation (2006-2007).

Process for Data Collection

The data in this study were obtained from three different software programs used to enter, maintain, and retrieve student data. The schools identified as Freshman Academy A and Traditional High School C use the Horizon Student Data Information System. Freshman Academy B use Pearson School Systems (SASI) Student Information Systems, and Traditional High School D uses SSMS (StarStudent and EasyIEPS). The following information was obtained:

1. The number of freshmen attending Freshman Academy A during the 1999-2000 school year.
2. The number of freshmen attending Freshman Academy A during the 2000-2001 school year.
3. The number of freshmen attending Freshman Academy B during the 2005-2006 school year.
4. The number of freshmen attending Freshman Academy B during the 2006-2007 school year.
5. The number of freshmen attending Traditional High School C during the 1999-2000 school year.
6. The number of freshmen attending Traditional High School C during the 2000-2001 school year.

7. The number of freshmen attending Traditional High School D during the 2005-2006 school year.
8. The number of freshmen attending Traditional High School D during the 2006-2007 school year.
9. The number of days each freshman attended Freshman Academy A during the 1999-2000 school year.
10. The number of freshman attending Freshman Academy A during the 2000-2001 school year.
11. The number of days each freshman attended Freshman Academy B during the 2005-2006 school year.
12. The number of days each freshman attended Freshman Academy B during the 2006-2007 school year.
13. The number of days each freshman attended Traditional High School C during the 1999-2000 school year.
14. The number of days each freshman attended Traditional High School C during the 2000-2001 school year.
15. The number of days each freshman attended Traditional High School D during the 2005-2006 school year.
16. The number of days each freshman attended Traditional High School D during the 2006-2007 school year.
17. The number of credits each freshman earned in Freshman Academy A during the 1999-2000 school year.

18. The number of credits each freshman earned in Freshman Academy A during the 2000-2001 school year.
19. The number of credits each freshman earned in Freshman Academy B during the 2005-2006 school year.
20. The number of credits each freshman earned in Freshman Academy B during the 2006-2007 school year.
21. The number of credits each freshman earned at Traditional High School C during the 1999-2000 school year.
22. The number of credits each freshman earned at Traditional High School C during the 2000-2001 school year.
23. The number of credits each freshman earned at Traditional High School D during the 2005-2006 school year.
24. The number of credits each freshman earned at Traditional High School D during the 2006-2007 school year.
25. The number of days each freshman was suspended at Freshman Academy A during the 1999-2000 school year.
26. The number of days each freshman was suspended at Freshman Academy A during the 2000-2001 school year.
27. The number of days each freshman was suspended at Freshman Academy B during the 2005-2006 school year.
28. The number of days each freshman was suspended at Freshman Academy B during the 2006-2007 school year.

29. The number of days each freshman was suspended at Traditional High School C during the 1999-2000 school year.
30. The number of days each freshman was suspended at Traditional High School C during the 2000-2001 school year.
31. The number of days each freshman was suspended at Traditional High School D during the 2005-2006 school year.
32. The number of days each freshman was suspended at Traditional High School D during the 2006-2007 school year.

Measurement of the Dependent Variables

Attendance was measured as the percentage of days freshman students attended during the school year. The denominator for calculating the percentage was the total number of days school was in session during each high school's academic year.

Suspension was measured as whether or not students were suspended during the school year. Students were assigned a code of "0" if they had not been suspended during the academic year and a code of "1" if they had been suspended 1 or more days during the academic year.

Credits earned was measured as the number of credits freshmen earned during the school year. For each of the four high schools included in this study the maximum number of potential credits earned was eight.

Data Analysis Procedure

According to Green and Salkind (2005), a 2 x 2 ANOVA has two independent variables. If the interaction effect is not significant, the focus then switches to the main effects. 2 x 2 ANOVAs were conducted to test the null hypotheses associated with research questions 1 through 4. According to Witte and Witte (2004), the chi-square test focuses on any discrepancies between observed frequencies and corresponding sets of expected frequencies derived from null hypotheses. Crosstabulated tables and chi-square were used to test the null hypotheses associated with research question 5.

Summary

Chapter 3 presented a description of the study, selection of population and participants, the research questions, null hypotheses, the process of data collection, and data analysis procedure. This study used quantitative procedures to analyze student achievement indicators including mean attendance, mean number of credits earned, and suspensions, comparing ninth grade student achievement before and after the freshman academy approach was implemented at two Tennessee high schools. Quantitative procedures were also used to analyze student achievement indicators comparing ninth grade student achievement at two high schools implementing the freshman academy approach and two traditional high schools in the state of Tennessee following the standard process. Chapter 4 provides an analysis of the data and Chapter 5 includes a discussion of the results, findings compared to the review of literature presented in Chapter 2, and recommendations for further practice and research.

CHAPTER 4

PRESENTATION AND ANALYSIS OF THE DATA

Introduction

The importance of the ninth grade year cannot be overestimated. Because too many students fail to meet the demands of high school during their 1st year, a study of how to meet the needs of ninth graders in the state of Tennessee is relevant. The purpose of this study was to determine if ninth graders showed greater achievement with the implementation of a freshman academy approach.

Five research questions guided the study and 14 hypotheses were tested. 2 x 2 analyses of variances (ANOVAs) were conducted to determine if there were differences in mean attendance rates and mean number of credits earned based on the type of institution (Freshman Academy versus Traditional High School), the academic years prior to and following the implementation of a freshman academy approach, and the two-way interaction between the type of institution and academic year. The ANOVAs were conducted using two Freshman Academies (A & B) and two Traditional Schools (C & D). Crosstabulated tables and chi-square tests were used to determine if there were a relationship between suspensions prior to the academic year the Freshman Academy was implemented and the academic year following its implementation. Tests were conducted for Freshman Academy A and Freshman Academy B. Data were obtained for the study from various software programs used by the schools to enter, maintain, and retrieve student data. In the text that follows, each research question and null hypothesis is presented, followed by the associated analyses.

Research Question 1

Are there differences in the mean attendance rates of ninth graders based on the type of institution (Freshman Academy A versus Traditional High School C), academic years prior to and following the implementation of the Freshman Academy and the two-way interaction between type of institution and academic year?

To answer this research question, a 2 x 2 ANOVA was conducted. The ANOVA compared the attendance means of Freshman Academy A and Traditional High School C for the baseline academic year the Freshman Academy was implemented (1999- 2000) and the year following its implementation at Freshman Academy A (2000-2001). The null hypotheses for this ANOVA model were:

- Ho1₁: There is no difference in the attendance means between students enrolled in Freshman Academy A and Traditional High School C.
- Ho1₂: There is no difference in the attendance means between the baseline year the Freshman Academy was implemented at Freshman Academy A (1999-2000) and the year following its implementation (2000-2001).
- Ho1₃: For Freshman Academy A and Traditional High School C, there is no difference in the mean attendance between type of institution as a function of the year.

A 2 x 2 ANOVA was conducted to evaluate the differences in percent of days attended based on the type of institution (Freshman Academy A versus Traditional High School C) and academic year (1999-2000 baseline year prior to the implementation of Freshman Academy A versus 2000-2001 after the implementation of Freshman Academy

A). The main effect of type of institution was not significant, $F, (1, 1746) = 2.89, p = .09$, partial η^2 , was small ($< .01$). The main effect of academic year was significant, $F (1, 1746) = 4.56, p = .03$, partial η^2 , was small ($< .01$). The two-way interaction for type of institution by academic year was significant, $F (1, 1746) = 9.87, p = .002$. When there was significant interaction, the main effects could not be addressed in isolation. Therefore, the tests of the null hypotheses for the main effects of type of institution and academic year were not evaluated. Instead, the two-way interaction was explored.

As shown in Table 1, the percent of days attended by students in Freshman Academy A for the year prior to the implementation of the Freshman Academy (1999-2000) was lower ($M = 93.55, SD = 7.92$) than the percentage of days students attended in Traditional High School C ($M = 95.00, SD = 5.37$). However, the percent of days attended by students in Freshman Academy A for the year the Freshman Academy was implemented (2000-2001) was higher ($M = 95.13, SD = 4.8$) than the mean for students in Traditional High School C ($M = 94.69, SD = 5.90$). The means and standard deviations for the percent of days attended by type of institution and academic year are shown in Table 1. Figure 1 shows the line graph of the data.

Table 1

Means and Standard Deviations for Percent of Days Attended by Type of Institution and Academic Year

Type of Institution	Academic Year	<i>N</i>	<i>M</i>	<i>SD</i>
Freshman Academy A	1999 – 2000	421	93.55	7.92
	2000 – 2001	321	95.13	4.80
	Freshman Academy A Total	742	94.23	6.79
Traditional High School C	1999 – 2000	502	95.00	5.39
	2000 – 2001	506	94.69	5.90
	Traditional High School C Total	1008	94.84	5.65

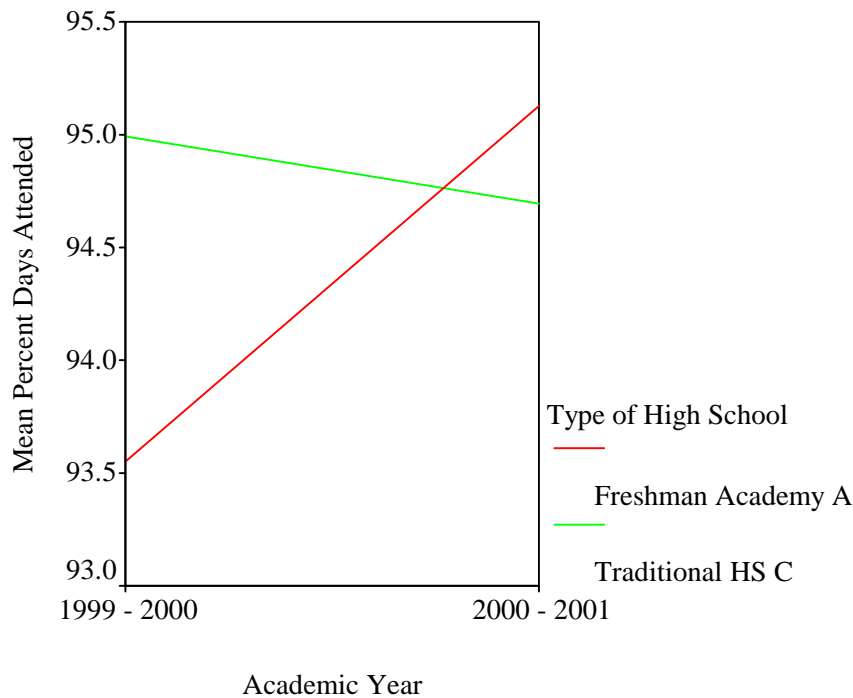


Figure 1. Line Graph for Percent of Days Attended by Type of Institution (Freshman Academy A versus Traditional High School C) and Academic Year (1999-2000 and 2000-2001).

Research Question 2

Are there differences in the mean attendance rates of ninth graders based on the type of institution (Freshman Academy B versus Traditional High School D), academic years prior to and following the implementation of the Freshman Academy and the two-way interaction between type of institution and academic year?

To answer this question, a 2 x 2 ANOVA was conducted. The ANOVA compared the attendance means of Freshman Academy B and Traditional High School D for the baseline academic year the Freshman Academy was implemented (2005-2006) and the year following its implementation at Freshman Academy B (2006-2007). The null hypotheses for this ANOVA model were:

Ho2₁: There is no difference in the attendance means between students enrolled in Freshman Academy B and Traditional High School D.

Ho2₂: There is no difference in the attendance means between the baseline year the Freshman Academy was implemented at Freshman Academy B (2005-2006) and the year following its implementation (2006-2007).

Ho2₃: For Freshman Academy B and Traditional High School D, there is no difference in the mean attendance between type of institution as a function of the year.

A 2 x 2 ANOVA was conducted to evaluate the differences in the percent of days attended based on the type of institution (Freshman Academy B versus Traditional High School D) and academic year (2005-2006 baseline year prior to the implementation of Freshman Academy B versus 2006-2007 after the implementation of Freshman Academy B). The two-way interaction for type of institution by academic year was not significant, $F(1, 1537) = 1.07, p = .30$. There was no significant difference in attendance between Freshman Academy B and Traditional High School D, $F(1, 1537) = .77, p = .38$. Therefore, the null hypothesis was retained. The effect size, as measured by partial η^2 , was small ($< .01$). As shown in Table 2, the mean percent of days attended for Freshman Academy B was only slightly higher ($M = 95.22, SD = 4.86$) than the mean for Traditional High School D ($M = 94.96, SD = 6.22$). There was also no significant difference in attendance between the 2005-2006 and 2006-2007 academic years, $F(1, 1537) = 2.31, p = .13$. Therefore, the null hypothesis was retained. The effect size was small ($< .01$). The mean percent of attendance for the academic year prior to the implementation of Freshman Academy B in the academic year 2005-2006 was only

slightly higher ($M = 95.31$, $SD = 5.23$) than the mean percent of attendance after its implementation in the academic year 2006-2007. ($M = 94.87$, $SD = 5.85$.) The means and standard deviations for the percent of days attended by type of school and academic year are shown in Table 2, while Figure 2 shows the line graph.

Table 2

Means and Standard Deviations for Percent Days Attended by Type of Institution (Freshman Academy B versus Traditional High School D) and Academic Year

Type of Institution	Academic Year	<i>N</i>	<i>M</i>	<i>SD</i>
Freshman Academy B	2005 – 2006	424	95.57	4.93
	2006 – 2007	395	94.85	4.77
	Freshman Academy B Total	819	95.22	4.86
Traditional High School D	2005 – 2006	378	95.03	5.54
	2006 – 2007	344	94.89	6.90
	Traditional High School D Total	722	94.96	6.22

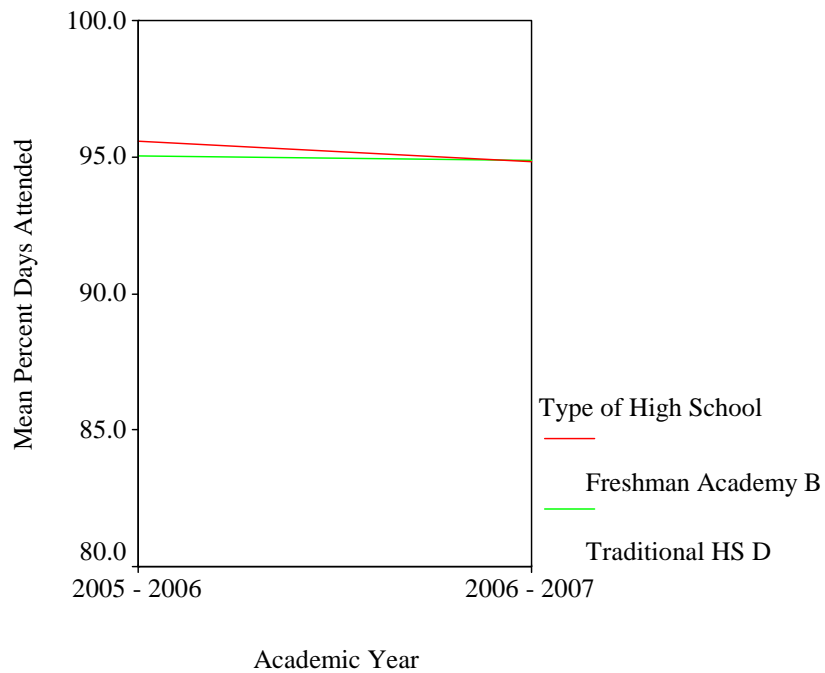


Figure 2. Line graph for percent of days attended by type of institution (Freshman Academy B versus Traditional High School D) and academic year (2005-2006 and 2006-2007).

Research Question 3

Are there differences in ninth graders' mean number of credits earned based on the type of institution (Freshman Academy A versus Traditional High School C), academic years prior to and following the implementation of the Freshman Academy and the two-way interaction between type of institution and academic year?

To answer this research question, a 2 x 2 ANOVA was conducted. The ANOVA compared the mean number of credits earned for students enrolled in Freshman Academy A and Traditional High School C for the academic year prior to (1999-2000) and following (2000-2001) the implementation of Freshman Academy A. The null hypotheses for this ANOVA model were:

Ho3₁: There is no difference in the mean number of credits earned between students enrolled in Freshman Academy A and Traditional High School C.

Ho3₂: There is no difference in the mean number of credits earned between the baseline year the Freshman Academy was implemented at Freshman Academy A (1999-2000) and the year following its implementation (2000-2001).

Ho3₃: For Freshman Academy A and Traditional High School C, there is no difference in the mean number of credits earned between type of institution as a function of the year.

A 2 x 2 ANOVA evaluated the differences between the number of credits earned based on the type of institution (Freshman Academy A versus Traditional High School C) and academic year (1999-2000 baseline year prior to the implementation of Freshman Academy A versus 2000-2001 after implementation of Freshman Academy A). The main effect of type of institution was not significant, $F(1, 1746) = .18, p = .67$, partial η^2 , was small ($< .01$). The main effect of academic year was not significant, $F(1, 1746) = 1.90, p = .17$, partial η^2 , was small ($< .01$). The two-way interaction for type of institution by academic year was significant, $F(1, 1746) = 11.66, p = .001$. When there was significant interaction, the main effects could not be addressed in isolation. Therefore, the tests of the null hypotheses for the main effects of type of institution and academic year were not evaluated. Instead, the two-way interaction was explored.

As shown in Table 3, the mean number of credits earned by students in Freshman Academy A for the year prior to the implementation of Freshman Academy A (1999-2000) was lower ($M = 6.97, SD = 1.74$) than the mean number of credits earned by

students in Traditional High School C ($M = 7.22$, $SD = 1.63$). However, the mean number of credits earned by students in Freshman Academy A for the year of implementation (2000-2001) was higher ($M = 7.37$, $SD = 1.48$) than the mean for students in Traditional High School C ($M = 7.05$, $SD = 1.86$). The means and standard deviations for the number of credits earned by type of institution and academic year are shown in Table 3, while Figure 3 presents the data in a line graph.

Table 3

Means and Standard Deviations for Number of Credits Earned by Type of Institution and Academic Year

Type of Institution	Academic Year	<i>N</i>	<i>M</i>	<i>SD</i>
Freshman Academy A	1999 – 2000	421	6.97	1.74
	2000 – 2001	321	7.37	1.48
	Freshman Academy A Total	742	7.15	1.64
Traditional High School C	1999 – 2000	502	7.22	1.63
	2000 – 2001	506	7.05	1.86
	Traditional High School C Total	1008	7.14	1.75

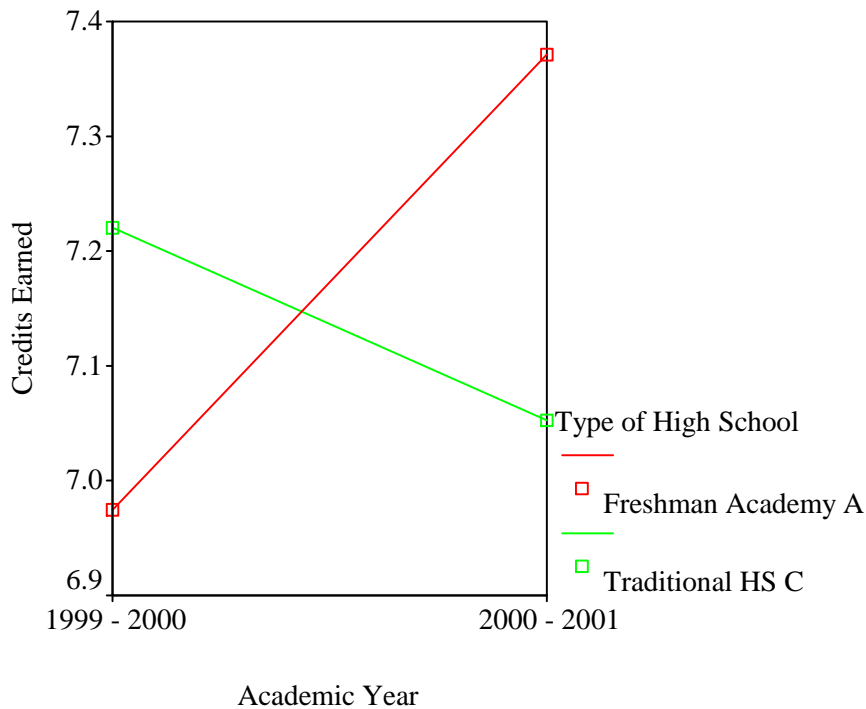


Figure 3. Line Graph for Number of Credits Earned by Type of Institution (Freshman Academy A versus Traditional High School C) and Academic Year (1999-2000 versus 2000-2001).

Research Question 4

Are there differences in ninth graders' mean number of credits earned based on the type of institution (Freshman Academy B versus Traditional High School D), academic years prior to and following the implementation of the Freshman Academy and the two-way interaction between type of institution and academic year?

To answer this research question, a 2 x 2 ANOVA was conducted. The ANOVA compared the mean number of credits earned for students enrolled in Freshman Academy B and Traditional High School D for the academic year prior to (2005-2006) and

following (2006-2007) the implementation of Freshman Academy B. The null hypotheses for this ANOVA model were:

Ho4₁: There is no difference in the mean number of credits earned between students enrolled in Freshman Academy B and Traditional High School D.

Ho4₂: There is no difference in the mean number of credits earned between the baseline year the Freshman Academy was implemented at Freshman Academy B (2005-2006) and the year following its implementation (2006-2007).

Ho4₃: For Freshman Academy B and Traditional High School D, there is no difference in the mean number of credits earned between type of institution as a function of the year.

A 2 x 2 ANOVA evaluated the differences between the number of credits earned based on the type of institution (Freshman Academy B versus Traditional High School D) and the academic year (2005-2006 baseline year prior to the implementation of Freshman Academy B versus 2006-2007 after implementation of Freshman Academy B). The two-way interaction for the type of institution by academic year was not significant, $F(1, 1537) = .96, p = .33$. However, there was a significant difference between the mean number of credits for Freshman Academy B and Traditional High School D, $F(1, 1537) = 54.66, p < .01$. Therefore, the null hypothesis was rejected. The effect size, as measured by partial η^2 was small (.03). As shown in Table 4, the mean number of credits earned for students at Freshman Academy B was higher ($M = 7.30, SD = 1.47$) than the mean number of credits earned by students at Traditional High School D ($M = 6.61, SD = 2.15$). There was also a significant difference in the mean number of credits earned by

students in the year prior to the implementation of Freshman Academy B and the year following its implementation, $F(1, 1537) = 4.43, p = .04$. Therefore, the null hypothesis was rejected. However, the effect size was so small that it was negligible ($< .01$). Clearly, the statistical significance of this finding was directly related to the very large sample size. Figure 4 graphically shows that the mean number of credits for Freshman Academy B was higher than Traditional High School D for both the baseline year and the year following the implementation of Freshman Academy B. However, both high schools showed a decrease in the mean number of credits earned from the baseline year to the year following implementation of Freshman Academy B.

Table 4

Means and Standard Deviations for Number of Credits Earned by Type of Institution (Freshman Academy B versus Traditional High School D) and Academic Year

Type of Institution	Academic Year	<i>N</i>	<i>M</i>	<i>SD</i>
Freshman Academy B	2005 – 2006	424	7.49	1.27
	2006 – 2007	395	7.15	1.65
	Freshman Academy B Total	819	7.30	1.47
Traditional High School D	2005 – 2006	378	6.66	2.01
	2006 – 2007	344	6.56	2.30
	Traditional High School D Total	722	6.61	2.15

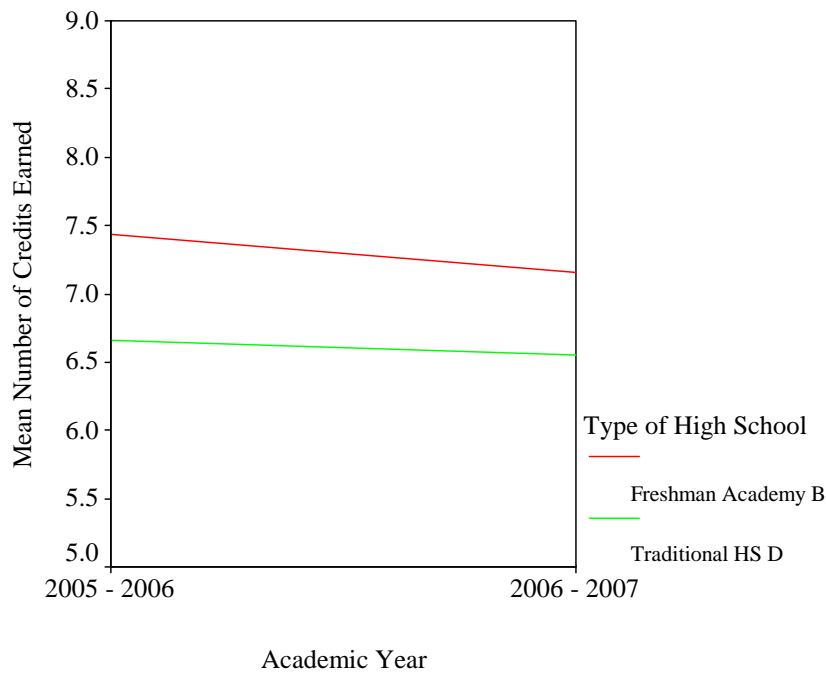


Figure 4. Graph for Credit Hours Earned by Type of Institution and Academic Year.

Research Question 5

For Freshman Academy high schools (A & B), is there a relationship between suspensions prior to the academic year the Freshman Academy was implemented and the academic year following its implementation?

To answer this research question, two crosstabulated tables and the chi-square test was used to consider the following null hypotheses:

Ho5₁: For Freshman Academy A, there is no relationship between the suspensions the year the Freshman Academy was implemented (1999-2000) and the year after its implementation (2000-2001).

Ho5₂: For Freshman Academy B, there is no relationship between the suspensions the year the Freshman Academy was implemented (2005-2006) and the year after its implementation (2006-2007).

A two-by-two crosstabulated table was used to determine if there were a difference between the suspensions at Freshman Academy A for the years prior to and following the implementation of the Freshman Academy. The chi-square test showed there was a significant difference, $\chi^2 (1) = 4.73, p = .03$. Therefore, the null hypothesis was rejected. As shown in Table 5, prior to the 1999-2000 implementation of the Freshman Academy, 8.8% of the students in Freshman Academy A were suspended compared to only 4.7% when Freshman Academy A was implemented the following year.

Table 5

Freshman Academy A: Crosstabulated Table for Academic Year by Suspension

	Freshman Academy A Prior to Implementation 1999 – 2000		Freshman Academy A Following Implementation 2000 – 2001	
Suspended	<i>N</i>	%	<i>N</i>	%
No	384	91.2	306	95.3
Yes	37	8.8	15	4.7
Total	421	100.0	321	100.0

A two-by-two crosstabulated table determined if there were a difference between the suspensions at Freshman Academy B for the years prior to and following the

implementation of Freshman Academy B. The chi-square test showed there was no significant difference, $\chi^2(1) = .27, p = .60$. Therefore, the null hypothesis was retained. The strength of the relationship, as measured by Φ , was very weak (.02). As shown in Table 6, during the 2005-2006 academic year, 25 of the 424 (5.9%) Freshman Academy B students were suspended at least once, while 20 of the 395 (5.1%) students in the 2006-2007 academic year were suspended at least once.

Table 6

Freshman Academy B: Crosstabulated Table for Academic Year by Suspension

	Freshman Academy B Prior to Implementation 1999 – 2000		Freshman Academy B Following Implementation 2000 – 2001	
Suspended?	<i>N</i>	%	<i>N</i>	%
No	399	94.1	375	94.9
Yes	25	5.9	20	5.5
Total	424	100.0	395	100.0

Summary

Chapter 4 presented and analyzed the data. Chapter 5 includes the summary of findings, conclusions, and recommendations for further consideration.

CHAPTER 5
FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS FOR FURTHER
PRACTICE AND RESEARCH

Summary

The ninth grade year is a time of excitement and concern for many students. Chapter 2 indicated that this transition year was when many students made the decision to continue their education or drop out of school (Hertzog & Morgan, 1999; Roderick, 1993). The primary goal of this study was to determine if there were differences in student achievement when schools adopted a freshman academy approach. The focus of the analysis was on mean attendance rates, mean number of credits earned, and suspensions among ninth graders. Researchers identified these factors as having a direct impact on whether a student was likely to drop out or finish high school (Shannon & Bylsma, 2003).

Four schools in four different districts in the state of Tennessee agreed to participate in the study. Two of those schools had adopted an academy approach for ninth graders. The study focused on achievement factors for each freshman class. Data were collected the year prior to and the year of implementation of the freshman academy approach. In addition, two traditional schools participated to determine if there were differences in student achievement factors based on the type of institution the freshmen attended.

Four 2 x 2 ANOVA models were used to answer research questions 1 through 4. The focus of these research questions included attendance rates and mean number of credits earned by the freshmen at each participating school. Research question 5

investigated the number of suspensions based on year the freshman academy approach was implemented at Freshman Academy A and Freshman Academy B. Crosstabulated tables and chi-square tests were used to answer these research questions.

Findings

Research Question #1

Are there differences in the mean attendance rates of ninth graders based on the type of institution (Freshman Academy A versus Traditional High School C), academic years prior to and following the implementation of the Freshman Academy and the two-way interaction between type of institution and academic year?

A 2 x 2 ANOVA was conducted to determine if there were differences in the mean attendance rates of ninth graders based on the type of institution (Freshman Academy A versus Traditional High School C), academic year prior to the implementation of Freshman Academy A (1999-2000) and for the year following its implementation (2000-2001). The test was significant. Because there was significant interaction, the main effects could not be addressed in isolation. As a result, the two-way interaction was explored. The findings showed that the mean percent of days attended at Freshman Academy A were lower than Traditional High School C during the 1999-2000 school year. This is the year prior to implementing Freshman Academy A. However, during the 2000-2001 school year (the year of implementation), the mean percent of days attended for ninth graders at Freshman Academy A was higher than the mean percent of days attended at Traditional High School C. These findings were congruent with research in Chapter 2. For example, McPartland and Jordan (2001) noted that a successful

transition program could make the difference between a student who developed good school habits to earn enough credits to be promoted to the 10th grade and a student who failed core academic classes, had poor attendance, and eventually dropped out.

Research Question #2

Are there differences in the mean attendance rates of ninth graders based on the type of institution (Freshman Academy B versus Traditional High School D), academic years prior to and following the implementation of the Freshman Academy and the two-way interaction between type of institution and academic year?

Another 2 x 2 ANOVA was conducted using two additional schools, Freshman Academy B and Traditional High School D. The ANOVA compared the attendance means for Freshman Academy B and Traditional High School D for the baseline year prior to the implementation of Freshman Academy B (2005-2006) and for the year following its implementation (2006-2007). This test was not significant. The mean percent of days attended at Freshman Academy B were only slightly higher than the mean percentage of days attended at Traditional High School D. There was no significant difference in the mean attendance.

Research Question #3

Are there differences in ninth graders' mean number of credits earned based on the type of institution (Freshman Academy A versus Traditional High School C), academic years prior to and following the implementation of the Freshman Academy and the two-way interaction between type of institution and academic year?

A 2 x 2 ANOVA was conducted to evaluate the differences in the number of credits earned based on the type of institution (Freshman Academy A versus Traditional

High School C), academic year prior to the implementation of Freshman Academy A (1999-2000) and for the year following its implementation (2000-2001). The test was significant. Because there was significant interaction, the main effects could not be addressed in isolation. As a result, the two-way interaction was explored. In the academic year 1999-2000, the mean number of credits earned was lower for Freshman Academy A compared to Traditional High School C. However, after the Freshman Academy was implemented in the 2000-2001 school year, the mean number of credits earned for Freshman Academy A was higher than Traditional High School C.

Research Questions #4

Are there differences in ninth graders' mean number of credits earned based on the type of institution (Freshman Academy B versus Traditional High School D), academic years prior to and following the implementation of the Freshman Academy and the two-way interaction between type of institution and academic year?

Another 2 x 2 ANOVA was conducted for two additional schools, Freshman Academy B and Traditional High School D. The two-way interaction for type of institution by academic year was not significant. However, there was a significant difference between the mean number of credits earned for Freshman Academy B and Traditional High School D. There was also a significant difference in the mean number of credits earned at Freshman Academy B prior to implementation of Freshman Academy B (2006-2007) and the year following implementation. However, the statistical significance was directly related to the large sample size. The mean number of credits for Freshman Academy B was higher than Traditional High School D for both the baseline year and the year following implementation. Both high schools showed a decrease in mean number of

credits earned from the baseline year (2005-2006) to the year following implementation (2005-2007).

Research Question #5

For Freshman Academy high schools (A & B), is there a relationship between suspensions prior to the academic year the Freshman Academy was implemented and the academic year following its implementation?

Two two-by-two crosstabulated tables were used to determine if there were a relationship between the suspensions in the Freshman Academy schools for the years prior to and after the implementation of the Freshman Academy. For Freshman Academy A, the chi-square test showed there was a statistical difference. Prior to implementation of Freshman Academy A, 8.8% of the students were suspended. After Freshman Academy A was implemented, only 4.7% of the freshmen were suspended.

When the two-by-two crosstabulated table was used to determine if there were a relationship between the suspensions at Freshman Academy B for the years prior to and after the implementation of Freshman Academy B, the test was not significant. The chi-square test showed there was no significant difference; 5.9% of the students were suspended before the implementation of Freshman Academy B, while 5.1% were suspended after implementation.

Findings Compared to the Literature

The findings in Chapter 2 suggested that if smaller learning communities were implemented properly in large schools, those schools could gain some advantages over small schools (U.S. Department of Education, Office of Elementary and Secondary

Education and Office of Vocational and Adult Education, 2001). In this study, Freshman Academy A showed significant improvement in mean attendance rates, mean number of credits earned, and suspensions. Freshman Academy B did not show the same gains in student achievement compared to Freshman Academy A. Even though Freshman Academy B did show some improvements, most were not significant. Perhaps other factors such as responsibilities of leaders, teacher morale, and lack of experience may need to be explored.

According to Chapter 2, administrators at effective schools use leadership styles that allow for collaboration among stakeholders (Sergiovanni, 2001). Freshman Academy B may have experienced less success because of leadership practices. Those teachers assigned to Freshman Academy A were asked to participate. Many teachers had years of experience and volunteered to participate in more professional development. If teachers chose not to participate in implementing the program at Freshman Academy A, they were not forced. However, according to several teachers at Freshman Academy B, they were assigned to teach in the academy. These teachers were chosen by administration and not given the choice to opt out of the program.

As discussed in Chapter 2, teachers who lack experience in classroom management and effective teaching strategies should not be placed with students with the greatest needs (Donegan, 2008). Several teachers indicated they had not been trained on the freshman academy model at Freshman Academy B. Less professional development opportunities were made available to Freshman Academy B teachers. This may have led to some resentful feelings about the implementation of Freshman Academy B.

Freshman Academy B did however show significant improvement in suspensions. Therefore, the research concluded that implementing Freshman Academy B did have a positive impact on one area of student achievement, which might lead to more important developments. *Breaking the Ranks: Changing the American Institution*, published by the National Association of Secondary School Principals and the Carnegie Foundation (1996) emphasized that small learning communities could create a more personalized, supportive high school.

Recommendations for Practice

1. Administration should examine the process of identifying those teachers chosen to participate in the freshman academy. Highly qualified, enthusiastic educators should be encouraged to teach ninth grade students.
2. The value of advisory programs should be investigated by administration to help ninth graders deal with new demands and expectations of high school.
3. Positive interventions need to be examined to increase student attendance. Days missed have a negative impact on student achievement.
4. All freshmen need multiple opportunities to participate in high school activities. Finding ways to encourage a strong sense of belonging would help students transition more smoothly from middle school to high school.
5. The value of peer mentoring should be examined to help ninth graders deal with time management, organizational, and study skills.

Recommendations for Research

1. Many schools across Tennessee are examining the possibility of implementing the freshman academy approach. Clearly, more studies on the effects freshman academies have on student achievement factors, including test scores, is needed.
2. A study on leadership best practices would be beneficial for schools examining the freshman academy model.
3. Further studies involving Freshman Academy A and Freshman Academy B should be conducted.
 - a. It would be particularly interesting for a longitudinal study to track students to graduation to see if the dropout rates decreased while the graduation rates increased.
 - b. A qualitative study could be conducted to analyze student and teacher perceptions of the freshman academy approach.
 - c. Research on the impact implementing the freshman academy approach had on the climate and culture of the schools as a whole is needed.
4. The effects of freshman academies on a variety of students such as students with learning disabilities, gifted students, athletes, and students from various social economic backgrounds would be an important study.

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APPENDICES

APPENDIX A

LETTERS TO SUPERINTENDENTS

EAST TENNESSEE STATE UNIVERSITY
Department of Educational Leadership and Policy Analysis
Freshman Academies in the State of Tennessee
January 2008

Dear Superintendent:

Please allow me to introduce myself. I am Kortney Thornton Gillespie, a doctoral student in the Department of Educational Leadership and Policy Analysis at East Tennessee State University. I am presently working on my dissertation as partial requirement for the Ed.D. degree. As part of my dissertation requirements, I will be conducting a study, researching the effects freshman academies have on large high schools in the state of Tennessee.

The study will look at four different high schools within the state of Tennessee. Two high schools will have implemented freshman academies. Two other high schools, with similar demographics, were also chosen as control groups.

This letter is to request your permission to use 9th grade student data from one high school within your school district. The data necessary for this study will include the number of credits earned, the number of suspension and expulsions, and number of days attended by each freshman over the course of one school year. The information provided will remain completely confidential. At no time will the name of the system, school, or students appear in the dissertation.

Based on the criteria set for the study, I am requesting permission to contact the principal in order to obtain the necessary student data from the following high school:

Please feel free to phone me at XXX.XXX.XXXX or XXX.XXX.XXXX, or email me XXXXXXXXXXXXXXXXXXXX with any questions or concerns.

Sincerely,
Kortney Thornton Gillespie
Doctoral Student

Louise Mackay,
Dissertation Chair

APPENDIX B

LETTERS TO PRINCIPALS

EAST TENNESSEE STATE UNIVERSITY
Department of Educational Leadership and Policy Analysis
Freshman Academies in the State of Tennessee
January 2008

Dear Principal:

Please allow me to introduce myself. I am Kortney Thornton Gillespie, a doctoral student in the Department of Educational Leadership and Policy Analysis at East Tennessee State University. I am presently working on my dissertation as partial requirement for the Ed.D. degree. As part of my dissertation requirements, I will be conducting a study, researching the effects freshman academies have on large high schools in the state of Tennessee.

The study will look at four different high schools within the state of Tennessee. Two high schools will have implemented freshman academies. Two other high schools, with similar demographics, were also chosen as control groups.

This letter is to request your permission to use 9th grade student data from your high school. The data necessary for this study will include the number of credits earned, the number of suspension and expulsions, and number of days attended by each freshman over the course of one school year. The information provided will remain completely confidential. At no time will the name of the system, school, or students appear in the dissertation.

I have requested from and been granted permission by your Director of Schools to conduct this research. I am requesting your permission to obtain the data necessary to complete my study. I hope that a study of freshman academies will prove to be an important step in providing options for reforming large high schools to meet the needs of 9th grade students.

Please feel free to phone me at XXX.XXX.XXXX or XXX.XXX.XXXX, or email me XXXXXXXXXXXXXXXXXXXX with any questions or concerns.

Sincerely,
Kortney Thornton Gillespie
Doctoral Student

Louise Mackay,
Dissertation Chair

VITA

KORTNEY MICHELLE THORNTON

Personal Data: Date of Birth: December 30, 1976
Place of Birth: Knoxville, Tennessee
Marital Status: Engaged

Education: Lincoln Memorial University, Harrogate, Tennessee;
History with emphasis in secondary education, B.A.
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East Tennessee State University, Johnson City, Tennessee;
Undergraduate specialist, geography endorsement
2001
Cumberland University, Lebanon, Tennessee
M.A. in Education
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East Tennessee State University, Johnson City, Tennessee;
Educational Leadership and Policy Analysis, Ed.D.
2008

Professional
Experience: 9th-12th Social Studies Teacher, Sevier County High School
Sevierville, Tennessee;
1999-2007
Assistant Administrator, Sevier County High School
Sevierville, Tennessee;
2007-present