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Factors Predicting Academic Success for Impoverished Urban High School Freshmen

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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

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by

Jonathan W. Rysewyk

May 2008

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Keywords: At-Risk Students, High School Dropout Rate, Freshman Year, Low Socioeconomic Status, Extracurricular Activities, Suspension

## ABSTRACT

### Factors Predicting Academic Success for Impoverished Urban High School Freshmen

by

Jonathan W. Rysewyk

The purpose of the study was to identify which factors are most closely related to academic success during the freshman year for low socioeconomic students in one urban high school. This was an ex post facto study conducted in one urban high school in East Tennessee. The subjects were students enrolled in the 9<sup>th</sup> grade during the 2005-2006 and 2006-2007 academic school years. Low socioeconomic students were divided into 2 groups based on academic performance during their freshman year of high school. Students with GPAs of 2.5 or higher were classified as higher performing, low socioeconomic status (HLSES). Students with GPAs of 2.4 or lower were considered lower performing, low socioeconomic status (LLSES). The higher achieving group contained 85 students; the lower achieving group had 292 students. Relationships between 9 predictor variables (ethnicity, gender, involvement in extra curricular activities, scores on 7<sup>th</sup> grade TCAP reading-language arts and mathematics tests, number of out of school suspension days, literacy scores, mobility rates, and attendance) were examined across the 2 groups. Chi-square tests were conducted to compare the 2 groups with regard to involvement in extracurricular activities, gender, and ethnicity. All remaining quantitative predictor variables were compared using independent *t* tests. Two sets of multiple regressions were conducted, 1 for the higher performing group and 1 for the lower performing group, to determine which of the predictor variables had the strongest relationship to students' GPAs. From the higher performing group, 10 students were interviewed to uncover the factors they credited as having the biggest impact on their academic success during their freshman year.

Significance was found for 8 of the 9 predictor variables. Student mobility was the only non-significant factor between the groups. None of the variables had a significant relationship to the higher performing groups' GPA. Four variables, gender, number of suspension days, number of days absent, and involvement in extracurricular activities were significantly related to students' GPA in the lower performing group. Self-discipline, determination, and guidance from an adult to help them stay focused were the main factors cited for academic success by students during their freshman year.

## DEDICATION

To the students for whom I am called to work every day: You constantly confront obstacles I may never experience in this world and yet you overcome.

*Isaiah 61:1-4*

## ACKNOWLEDGMENTS

My Lord and Savior, Jesus Christ: I will continue to walk down the paths You have chosen for me and give You the glory You deserve all along the way.

My wife, Rebecca Rysewyk: You are my love, my hero, and my reason I press on to do everything I do. I am truly blessed to call you my wife. I will love you forever.

My daughters, Alexandra and Emerson: All of the darkness and struggles of this world are forgotten when I look into your eyes and hear your uninhibited laughter. Thank you for displaying life in its loveliest form. I will always be here for you.

Administrators at Fulton High School: Ara, Kitty, Jody, and Willie: I could not work with a better set of professionals who have taught me numerous lessons about life as well as become true friends in the process.

The staff at Fulton High School: I've never met a more dedicated, unselfish group of people who are committed to doing thankless work for a higher cause than they do themselves.

John Beckett: A man who can do more statistically with a calculator than I ever could do with SPSS and a user's manual.

Dr. Mike Winstead: The data man I admire. You can take a spreadsheet of numbers and explain it like it is a child's novel.

Debby Bryan: A master of language and format--two areas as foreign to me as Latin and French.

Dr. James Lampley: A man whose work is also his passion. Thanks for guiding me through this process from 2 hours away.

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## CHAPTER 1

### INTRODUCTION

The most recent projections of high school graduates are that roughly one out of three public high school students will drop out of school and fail to graduate (Thornburgh, 2006). Others have suggested this percentage could be inflated because of the variety of ways that states define graduates (Barton, 2005). Regardless of the most accurate number, many of today's educational researchers have stated that dropping out of school is an epidemic in the United States. A large portion of dropouts might experience financial instability that could place a heavier burden on tomorrow's taxpayers. With minority students from impoverished backgrounds leading the dropout epidemic, one might wonder if today's public schools are offering an equal opportunity to an education for all students.

High school dropouts place a financial strain on themselves and society. The price of educating the undereducated could cost society large sums of resources. Although high, this cost is still smaller than the long-term cost of not educating these students at all. In our changing world, individuals without a minimum of a high school education might not be able to compete in the ever changing global market, provide support for their own families, or be able to contribute to society.

The job market for high school dropouts in today's economy is limited. The demand for education in entry level jobs has increased in the past few decades (Daggett, 2005). In 1971, a high school dropout working full time could earn \$35,087 (in constant dollars). In 2002, a high school dropout working fulltime could earn only \$22,093, a decline of 35% (Barton, 2006). Bridgeland (2006) pointed out that high school dropouts were twice as likely to slip into poverty as high school graduates, that many of the jobs dropouts did a decade ago have gone to cheaper foreign markets, and that there is no longer a high demand for uneducated workers in the United States. Bridgeland (2006) reported that 4 out of 10 young adults (ages 16-24) lacking a high

school diploma received some type of government assistance in 2001. Unfortunately, these same individuals also have a higher incident rate of being incarcerated (2006).

Research has consistently shown that impoverished conditions have a negative effect on students' academic performance. According to Wong (2004), since 1966 when the Coleman Report was released, Americans have known that poverty and the world surrounding students in poverty have impacted their academic achievement. Children living in poverty conditions are not prepared to succeed in our middle-class school environments (Buckner, 2001). Payne (2005) described some of the barriers that impoverished children face:

Children living in generational poverty often have lost their sense of pride. They no longer struggle against their surroundings in an attempt to rise above them. In many ways this lifestyle has become comfortable and the only way they know to live. This world is characterized by matriarchic leadership. The conversations and word choices in the home are in a casual registry. This is a very limited vocabulary of noncomplex words usually only 400-800 words used mostly in conversation between friends. Sentences and syntax are usually incomplete. (p. 27)

Impoverished students tend to live every day and every minute in the present. Often, life is about survival so impulsive feelings often win out over calculated thought and planning. This can contribute to a variety of problems in school ranging from loss of focus in class to discipline problems. These students often respond differently to discipline because of the social structure of their home environments. Many of these students do not view discipline as a means to correct their behavior; rather, to them, it is about penance instead of change. These students tend to focus more on material goods and temporal items rather than long-term planning and patience. In order for them to succeed after high school, the challenges of bringing impoverished students into a middle class set of rules and expectations is a critical part of today's education. Reaching impoverished students might be the most difficult challenge facing educators today (Sum, 2003).

In a country where graduation requirements are becoming more rigorous, the freshman year has become a vitally important time for academic success. According to Bridgeland (2006), it is during the freshman year that many students lose their desire for school. Students fail courses in the 9th grade then they must repeat these core academic courses again in the 10th

grade. The “fun” part of school, such as elective courses and extracurricular eligibility, is no longer an option. The vicious cycle continues with more failure, failure to meet proficiency standards, summer school, night school, and recovery credit programs (Fields, 2005). Most educators have agreed that the freshman year is the foundation to all education that follows for an individual. Academic success during the freshman year provides a quality foundation and often means continued success throughout high school. Factors such as the number of suspensions, gender, reading ability, attendance, mobility, and participation in extra curricular activities have demonstrated a strong relationship with dropping out (Carevale, 2001; Ferguson, 2005; Pribesh & Downey, 1999; Tilleczek, 2006).

#### *Statement of the Problem*

Educational researchers over the last 40 years have documented that students from low socioeconomic backgrounds experienced academic success in high school at a much lower rate than did other students (Palardy & Rumberger, 2005). Other researchers (Fields, 2005; Hertzog, 1998; Walsh, 2002) suggested that academic success during a student’s freshman year of high school was the most important factor in determining whether that student would graduate. The relative importance of a student’s ethnicity, gender, mobility rate, number of days suspended from school, reading levels, previous scores on standardized achievement tests, and whether or not he or she was involved in extracurricular activities in school has been studied to determine the extent to which they contributed to low socioeconomic students' academic success during the freshman year.

The purpose of the study was to identify which factors are most closely related to academic success during the freshman year (9th grade) of low socioeconomic students in one urban high school. The researcher also interviewed low socioeconomic students who did experience academic success during their freshman year to determine their opinions of why they experienced success.

### *Research Questions*

Research Question #1: Is there a relationship between higher achieving, low socioeconomic status (HLSES) and lower achieving, low socioeconomic status (LLSES) students during their freshman year in an urban high school in East Tennessee in regard to the following characteristics: (a) ethnicity, (b) gender, and (c) involvement in extracurricular activities?

Research Question #2: Are there differences between (HLSES) and (LLSES) students during their freshman year in an urban high school in East Tennessee with regard to the following characteristics: (a) seventh-grade TCAP scores in reading-language arts and mathematics, (b) number of days of out-of-school suspension, (c) student's literacy grade level equivalency in reading, (d) student's mobility rate, and (e) student's attendance?

Research Question # 3: Which of the eight predictor variables (a) ethnicity, (b) students' seventh-grade achievement test scores, (c) gender, (d) number of days suspended, (e) student's individual literacy score, (f) student mobility rate, (g) attendance, and (h) involvement in extracurricular activities are most influential in predicting GPAs in low socioeconomic status, higher achieving (HLSES) freshmen in an urban high school in East Tennessee?

Research Question # 4: Which of the eight predictor variables (a) ethnicity, (b) student's seventh-grade achievement test scores, (c) gender, (d) number of days suspended, (e) student's individual literacy score, (f) student mobility rate, (g) attendance, and (h) involvement in extracurricular activities are most influential in predicting GPAs in impoverished, lower achieving (LLSES) freshmen in an urban high school in East Tennessee?

Research Question # 5: To what characteristic(s) do higher achieving, low socioeconomic status freshmen from an urban high school in East Tennessee attribute their academic success?

Research question #1 concerns only nominal variables (ethnicity, gender, and involvement in extracurricular activities); therefore, chi-square tests were used to test for

significance. The remaining factors were interval and therefore could be analyzed using independent  $t$  tests.

### *Significance of the Study*

The findings of this study should provide valuable information to teachers, administrators, and guidance counselors of at-risk students in trying to identify those students prior to their freshman year who are of greatest risk of failing. The federal government and media have jumped on the bandwagon by publicizing schools that are trying hard not to be placed on the dreaded “list,” thus receiving negative attention because of graduation rates and being labeled a failing school. In an age of education associated with rising requirements for high school graduation, educators understand every year is critical for each student’s success. Often, it is too late to intervene once a student is failing. The additional assistance must be in place to practice prevention instead of reaction to a student’s academic shortcomings. A strategically planned intervention could have the potential to raise freshman academic performance, reduce freshman absenteeism, and decrease freshman discipline problems.

Getting students off to a positive start in high school should improve the likelihood that they will become productive and contributing members of society. Many of these at-risk students come from families that have been plagued with generational poverty and do not have the resources or knowledge to end the cycle. For these students, a quality education might be their only hope.

A large volume of research has been conducted on predicting factors that affect school performance and it appeared that a relatively small number of students were able to overcome the devastating influence of these socioeconomic factors. This study goes beyond the impact of poverty by examining only those students living in impoverished conditions. Why do some students emerge from the negative environments of the poor and succeed in school? What are the factors most closely associated with academic success in low socioeconomic students in an urban school environment?

### *Definitions of Terms*

1. *Low socioeconomic status student*: any public school student meeting the requirements for free- or reduced-price meals (United States Department of Agriculture, 2007).
2. *TCAP test (Tennessee Comprehensive Assessment Program)*: A series of achievement tests that are administered each spring to every third to eighth grader enrolled in the state of Tennessee. The tests are multiple choice in format and timed. The five areas tested are reading, language arts, mathematics, science, and social studies. The test is criterion referenced as required by the *No Child Left Behind Act*. This means students are tested based on how well they know the Tennessee state curriculum. They are not tested against a national group. For each test, students can score in one of three areas: advanced, proficient, or below proficient (State of Tennessee, 2006).
3. *Mobility rate*: The number of schools a student has attended from the time he or she entered kindergarten to the end of his or her freshman year of high school (Rice, 2001).
4. *Absence*: This is considered as any student not attending school for 3 hours and 15 minutes (Knox County Schools, 2007).
5. *Literacy score*: This is based on the Renaissance Learning Company's STAR Reading, norm-referenced, computerized reading test. The Grade Equivalency (GE) score ranges from 0.0 to 12.9. This score represents how a student's score compares with that of other students' scores nationally. The number equates to the grade year; the decimal number equates to the month. For instance 10.6 means sophomore year of high school, 6th month (Renaissance Learning, 2000).
6. *Grade Point Average*: In this study, the letter grade "A" equals four points, and the scale progresses down to zero points for the letter "F." This four-point scale is used

by the High School Transcript Study (HSTS) to compute each student's GPA (National Center for Educational Statistics, 2000).

7. *Suspension from school*: This is the removal of and suspension of a student from school attendance at school or any school-related activity off campus (Knox County Schools, 2000). This does not include in-school suspension.
8. *Students receiving free- or reduced-price meals*: The state of Tennessee's eligibility guidelines require that any students who receive food stamps or are eligible for "Families First" are eligible to receive free- or reduced-price meals. Children from families whose total income is within the free limits on the Federal Income Eligibility Guidelines (see Appendix A) and most foster children are eligible (United States Department of Agriculture).
9. *Educational resilience*: This is the term for the ability to graduate on time regardless of the negative influences along the way (Bassett, 2002).

#### *Limitations and Delimitations*

1. This was a quantitative study conducted with a limited number of participants. The study was limited to students enrolled at an urban high school in East Tennessee; therefore, the results may not be generalized to other urban high schools.
2. The participants in the study were limited to ninth-grade students of one high school, for the 2005-2006 and 2006-2007 academic years.

#### *Overview of the Study*

This study is organized into five chapters. Chapter 1 includes the statement of the problem, definition of terms, research questions, significance of the study, limitations and delimitations, and an overview of the study. Chapter 2 provides a review of the literature that addresses the issues of academic success as it relates to impoverished students during their freshman year of high school. Chapter 3 describes the research methodology and procedures that

were used in completing this quantitative study. Chapter 4 provides statistical results of the study. Chapter 5 contains an expanded data analysis summary, conclusions, and recommendations for practice and further research.

## CHAPTER 2

### LITERATURE REVIEW

This chapter provides a review of literature related to the factors that are associated with low socioeconomic students' academic success during their freshman year. Previous research has shown that the low socioeconomic population is at greatest risk for failure in today's high schools (Bridgeland, 2006). Additional research has stated that the freshman year of high school is the most pivotal of all years for academic success (Dedmond, 2005; Schiller, 1999; Walsh, 2002). The first section examines the current state of graduation in the United States. The second section outlines the effects of a low graduation rate. The third section addresses conditions unique to low socioeconomic students. The importance of the freshman year is examined in the fourth section. The fifth section addresses the factors that influence academic success during the freshman year.

#### *The State of Graduation in High Schools*

Recently, Thornburgh (2006) predicted that one out of three public high school students would not graduate. A number of researchers supported this number setting the national graduation rate from 66% to 71% (Dedmond, 2005; Greene, Winters, & Swanson, 2006; Mortenson, 2000; Schiller, 1999; Sum, 2003). According to Bridgeland (2006), a report released in March of 2006 by the Bill and Melinda Gates Foundation called *Silent Epidemic* proclaimed, "There is a high school dropout epidemic in America. Each year almost one third of all public high school students –and nearly one half of all Blacks, Hispanics, and Native Americans –fail to graduate from public high school with their class" (*preface*). These numbers viewed alongside a report from the National Center for Education Statistics (2005b) confirmed a recent decline in the national graduation rate. These data further supported the idea that the graduation rate has been in a steady decline annually after a 77.1% graduation rate in 1969. Since 1969, the graduation rate has dropped as low as 69.9%. At the state level, all but seven states have seen

their graduation rates decline between 1990 and 2000 (Barton, 2006). According to Bridgeland (2006), students who dropped out were much more likely than their graduating peers were to be unemployed, living in poverty, receiving public assistance, in prison, unhealthy, divorced, or single parents with children who dropped out of high school themselves.

Thornburgh (2006) suggested that Americans were concerned with the growing dropout epidemic because 64% of Americans surveyed stated that not enough money was spent on public schools. Of those polled, 59% claimed they would pay higher taxes to improve public schools, whereas 89% of Americans said they were concerned and felt the dropout rate in the U.S. was serious (Thornburgh). Even with the most recent national emphasis on improving the graduation rate, little progress has been made. In 2000, the national dropout rate in the U.S. for students aged 16-24 was 10.9% per year. More recently, in 2005, the rate had improved slightly to 9.4% per year (National Center for Educational Statistic, 2005b). Currently each state submits to the federal government its graduation rate. *No Child Left Behind* has set certain standards that must be met by each state; however, without a standardized system of reporting, the criteria vary among states. For example, in Florida those holding general education diplomas and special education diplomas would count as regular graduates; in Tennessee, students with those types of diplomas would be considered dropouts and not included in the graduation rate. The graduation rate is based on each state's reporting methods as well as its criteria for a graduate.

On January 8, 2002, President George W. Bush signed the *No Child Left Behind Act of 2001* into federal law. This law is the federal government's attempt to hold schools accountable for preparing students to compete in today's workforce. Although the lofty goal of 100% graduation for every student by 2013-2014 might be unattainable, schools must make progress toward the mark or be punished by a series of corrective actions. Regardless of one's personal feelings about the means of attaining the goals or how the goals were thrust upon all public educators in America largely without any additional funding, one thing almost all educators can agree on is the opening line of the law that reads, "An act to close the achievement gap with accountability, flexibility, and choice, so that no child is left behind" (U. S. Department of

Education, 2004, n. p.). According to Rothstein (2004), most Americans believe all people should have an equal opportunity regardless of race, gender, economic status, or national origin. In today's world, equal opportunity means possessing an education. Rothstein explained, "Americans believe in the idea of equal opportunity, and they also believe that the best way to ensure that opportunity is to enable all children, regardless of their parent's status, to leave school with skills that position them to compete fairly and productively in the nation's democratic governance and occupational structure" (p. 105). The current state of education in America has become an important issue as educators try to prepare the next generation to tackle the unique and challenging demands of competing in a global market.

### *The Effects of a Low Graduation Rate*

Although factors such as different standards among states make comparing data on graduation rates and dropout rates less than precise, approximately one fourth to one third of American students are not graduating from high school. This means that every year a large number of students enter the workforce with below par skills and are unprepared to take on the challenges of life. American communities could suffer from this dropout epidemic because of the loss of productive workers and the higher costs associated with increased incarceration, health care, and social services (Bridgeland, 2006). The effects of this epidemic can already be felt in the areas of global competition, insufficient employment, and the financial drain on society's working class.

Friedman (2006) broke the globalization of the world into three eras. During the first era, which Friedman called Globalization 1.0, the world went from large to medium. This era began in 1492 with Columbus's discovery of the new world and lasted until the early 1800s. This era of global integration was driven by brawn. One's impact on the world depended on how much muscle his or her country possessed. The primary questions of this era were: "Where does my country fit into global competition and opportunities?" and "How can I go global and collaborate with others? (n. p.).

During Globalization 2.0, a period that Friedman (2006) suggested lasted from 1800 to 2000, the world shrank from medium to small. Multinational companies were the driving force behind global integration. Technology allowed many of these companies to go global for markets and a labor force. Early inventions such as the steam engine, telegraph, and telephones began the change; these were followed by faster more efficient technology such as personal computers, satellites, and the early version of the World Wide Web. This was the era of a true global economy. The questions that defined this era were: "Where does my company fit into the global economy?" "How does it take advantage of the opportunities?" and "How can I go global and collaborate with others through my company?" (n. p.). Many real and figurative walls fell around the world (Friedman).

Then, according to Friedman (2006), the era of Globalization 3.0 arrived shrinking the world from small to flat and leveling the playing field for everyone. Friedman pointed out this is the era in which students currently live. The dynamic forces of this era have not been countries or companies but individuals; individuals who strive to compete and collaborate globally. The phenomena enabling this era is the flat-world platform. According to Friedman, it seems as though people woke up around the year 2000 and realized they had the power to go global as individuals. They could now see themselves as individuals competing and collaborating globally. This era has differed in origin from the previous 2 eras that were driven by the United States and Europe. The current era has been truly global and less influenced by Western thought. We cannot expect high school dropouts to compete in the world market as described by Friedman.

Presently, the United States faces its stiffest competition from China and India. These countries are impressive because of their size and human resources. Both countries are attractive to business because they offer a large, well-educated workforce that will work for low wages (Daggett, 2005). China's massive population has allowed it to become the world's leader in manufactured goods. In 2006, the U.S. imported \$203.9 billion in goods from China compared to China's import of \$55.2 billion in goods from the United States (Thottam, 2007). China's

economic surplus has also allowed it to nurture its brightest students to become world-class business managers, scientists, and engineers. The Chinese have also positioned themselves to become the world's leader in biotechnology and computer manufacturing. India has been competing effectively in information technology and software design; these two areas were based solely in the United States until recent years. China and India have been producing numbers of highly trained workers. Many of India's graduates are fluent in English. In engineering, China graduated 600,000 students, India graduated 350,000, and the United States had 70,000 (Daggett, 2005, p. 4). The U.S. today is in a truly global environment, and according to Daggett (2005), those competitor countries "are not only wide awake, they are running a marathon while we are running sprints" (p. 4). This troubling fact helps to explain why the U.S. currently has slipped to 10<sup>th</sup> place in the world with regard to high school completion rates (Barton, 2005). The argument has been made that an educational comparison of China and India to the United States is not fair because America offers education to every child and the others are selective about whom they educate. Even with the education of only their elite, China and India out produce the United States in number of graduates. In 2005, China produced 3.3 million college graduates, India produced 3.1 million, and 1.3 million graduated in the United States (Daggett, 2005).

Not only are the jobs that high school dropouts get few in number they also are of such low quality that they are insufficient to sustain their lives. According to Barton (2006):

In 2003, 1.1 million 16-19 year-olds did not have a high school diploma and were not enrolled in school. In the landscape of the economy, these dropouts are often lost travelers without a map. Only 4 in 10 of the 16-19 year-olds are employed, as are fewer than 6 in 10 of 20 – to -24-year-old dropouts. Black and Latino youth are doing considerably less well than others are. What about the earning power of those dropouts who have jobs? Do they make enough money to support a household? For 25-to-34 year-old dropouts who manage to work full-time, the average annual salary of males dropped from \$35,087(in constant dollars) in 1971 to \$22,903 in 2002, a decline of 35%. The comparable annual earnings for females without a diploma were \$19,888 in 1971, declining to \$17,114 in 2002. Even when they work full-time, the average earnings of this age group of dropouts are not far above the poverty line for a family with children – and most dropouts do not even reach this level of earnings. (p. 16)

The difference in wages earned for a high school graduate versus a dropout can greatly impact the quality of his or her life. Bridgeland (2006) stated that high school dropouts, on average, earned \$9,200 less per year than did high school graduates and about \$1 million less over a lifetime than did college graduates. Students who dropped out of high school often were unable to support themselves. High school dropouts were over three times more likely to be unemployed in 2004. They are twice as likely as high school graduates are to slip into poverty. According to Campbell (2003), high school graduation becomes a mechanism of sorting and contributes to a wide array of economic and political divisions within the current social structure. A high dropout rate exacerbates inequalities between high-income and low-income children. In a global, technology-based economy, medium income jobs are more and more scarce. School dropouts cannot compete and are trapped in poverty and unemployment. According to Campbell, the average yearly income of a high school dropout is \$12,400, compared to \$21,000 for a high school graduate, and \$41,000 for a college graduate. Four out of every 10 young adults (ages 16-24) lacking a high school diploma received some type of government assistance in 2001, and a dropout is more than eight times as likely to be in jail or prison as is a person with at least a high school diploma (Bridgeland, p. 2).

Because of a lack of employable skills, dropouts are more likely to resort to a life of crime. Studies have shown that the lifetime cost to the nation for each youth who drops out of school and later moves into a life of crime or drug abuse ranges from \$1.7 to \$2.3 million (Bridgeland, 2006). Sum (2003) cited the results of a 1996 U.S. Bureau of Justice Statistics survey of jail inmates that found only 54% of jail inmates held a high school diploma or a GED certificate. After further analysis of unpublished data from the 1996 *Survey of Jail Inmates* and the 1997 *Survey of Federal and State Prison Inmates*, Sum revealed that there were 372,665 jail and prison inmates under the age of 25. Of this group, 298,700 or 80% lacked a regular high school diploma.

Many high school dropouts live on America's streets among the homeless. Without a good paying job, individuals cannot afford to buy a house or pay rent on a monthly basis.

According to Sum (2003), the 1996 *National Survey of Homeless Assistance Providers and Clients* estimated 45% of the homeless under age 25 did not possess a regular high school diploma.

Education also appeared to have had a positive impact on an individual's health. Bridgeland (2006) suggested that at every age range, the more education, the healthier was the individual. Among Americans over 45, college graduates were twice as likely as dropouts were to report being in excellent or very good health (Bridgeland). On average, lower-class children had poorer vision than did middle-class children, partly because of prenatal conditions and partly because of how their eyes were trained as infants. They had poorer oral hygiene, more lead poisoning, more asthma, poorer nutrition, less adequate pediatric care, more exposure to smoke, and a host of other problems. Each of these well-documented social-class differences would likely have a palpable effect on academic achievement, and the combined influence of all these differences would be undoubtedly a major deterrent for their life options (Rothstein, 2004, p. 106).

#### *Conditions for the Low Socioeconomic Student*

Equality in education means everyone gets an equal opportunity to attain an education. This has not always been the case in America. Prior to the Civil War, most states had laws against educating African Americans. Even after the Civil War, Blacks were not given an opportunity to pursue an education because there were fewer schools for African American children. Separate schools for Black and White students were established. The courts upheld the concept of "separate but equal" in 1896 in *Plessy v. Ferguson*. In this ruling, the Supreme Court ruled in favor of the State of Louisiana stating that Plessy's constitutional rights were not violated as long as the company supplied "separate" facilities for Blacks and Whites as long as the facilities were equal. This became known as the "separate but equal doctrine" (Cozzens, 1999, n. p.). This doctrine ruled the land for the next 58 years until it was overturned in the 1954 case *Brown v. the Board of Education of Topeka*. At this time, the Supreme Court ruled in favor

of Brown stating,” In the field of education, the doctrine of separate but equal has no place” (Cozzens, n. p.).

With a national graduation rate between 68% and 71%, the question becomes, “Are we providing an equal education opportunity to all?” (Bridgeland, 2006) and "What is the cause of the drop in graduation rate?" According to Barton (2005), 58% of these drops in graduation rates are because of a combination of three factors: (a) socioeconomic characteristics, (b) the number of parents living in the home, and (c) students’ history of changing schools (Barton, 2005). Demands on school guidance counselors further complicate the issue. Counselors were originally the school personnel assigned to deal with students facing these challenges, but because of an increase in administrative assignments such as administering standardized tests, counselors have found they have little time for one-on-one counseling for these at-risk students. On average, in high schools, there has been 1 counselor for every 285 students (Barton, 2005, p. 4) and this ratio has increased in schools where fewer than 50% of the students were college bound or in schools with a high percentage of minority students. The schools where quality intervention was most needed.

Green (1995) quoted statistics from a National Educational Longitudinal Study conducted in 1988 that reported statistics on at-risk eighth graders. This report followed up on these students in 1992 to determine if they overcame their challenges and graduated from high school. Six factors were used to classify eighth graders as at-risk: (a) Did they live in single-parent families? (b) Were their family’s incomes less than \$15,000? (c) Did they have an older sibling who had dropped out of school? (d) Did they have a parent who had dropped out of school? (e) Was their family limited in English proficiency? and (f) Were they unsupervised at home without an adult for 3 hours or more per day? Of the eighth graders, 46% shared two or more of these characteristics. The research reflected that the incident of dropping out was eight times more likely for students with two or more factors compared with students possessing none of these factors. At the end of the study in 1992, 90% of the students with no risk factors graduated on time with a regular diploma whereas only 60% of the students with two or more risk factors

graduated. Percentages of students below proficient in the three areas of basic skills: reading, math, and science were also reported. Nearly 16% of the at-risk students were below proficiency in reading, compared to less than 6% of the not at-risk students. Over 14% of high-risk students were below proficiency in math compared to 4.9 % of students not at risk. Over 32% of high-risk students were below proficiency in science compared with 12.2% of students not at risk.

Students with multiple risks also reported having more trouble following school rules. Nearly 7% of students not at risk were suspended while in high school compared with 16.9% of their high-risk classmates. Approximately 6% of female students not at risk got pregnant during high school compared with 18.9% of female high-risk students. Over 53% of students who received their diplomas reported having parents who failed to earn their high school diplomas, whereas 84.5% of students whose parents had received their high school diploma also got theirs. Only 72.4% of students from single-parent families received an on-time diploma compared with 83.2% of students from a household with two parents. Low socioeconomic students coming from homes with incomes less than \$15,000 graduated at 63.3 % compared with students from higher earning homes who graduated at 85.3 % (Green, 1995, p. 8).

Peters (2006) quoted Martha Haakmat, a middle school health coordinator from Packer Collegiate School in New York City, who said:

We've talked about the notion of education being the great equalizer in society, but I'm not sure this is true. I mean we want it to be the great equalizer, but, in independent schools, we preach a very different message, placing a value judgment on where one is educated. (p. 67)

Peters (2006) reported that Haakmat considered the impoverished had become the 21<sup>st</sup> century's target of discrimination--the group with no voice--the current political minority. However, the ideals and freedoms of *Brown v. Board of Education*, 1954, still apply to these American citizens. We live in an age where resource disparity from affluent neighborhoods to the public housing neighborhoods is considered by some to be segregation with regard to education. Some have had opinions that the rich are privy to better schools staffed with more experienced teachers with skills to better equip today's youth. According to Green (1995), "A

growing number of educators feel our schools are separate but equal with regard to the haves and have-nots” (p. 67).

In the 20<sup>th</sup> century, the first major hint of poverty affecting school success came in 1966 when the U.S. Commissioner of Education released a report known as the “Coleman Report.” The purpose of this report was to investigate the availability of equal educational opportunities for individuals based on religion, race, color, or national origin in all public institutions in the United States. The report included data from 600,000 students, 60,000 teachers, and 3,100 schools across the nation (Wong, 2004, p. 128). One major finding was that the background characteristics of students in the school had a large statistically significant effect on students’ academic achievement. The Coleman Report made it clear that the socioeconomic composition of a school impacted student achievement through the student body’s educational background and aspirations rather than racial composition. Because of the racial issues surrounding the 1960s, the results of the Coleman Report were misinterpreted to equate racial integration with equal educational opportunities while ignoring the more significant influence of socioeconomic class (Wong, p. 131).

Okpala’s (2001) study focused on student achievement in a North Carolina school district over a 3-year period. Student achievement was measured by students’ scores on state end-of-the-course tests in reading and math. The percentage of students who mastered the two subjects improved tremendously as one moved from low-wealth to high-wealth schools. The percentage of teachers with 10 or more years experience varied directly with student performance and school wealth. Middle- and high-wealth schools consistently performed at higher levels than did their low-wealth counterparts. During all 3 years, students who were on the free- and reduced-price meals program showed a statistically negative correlation in both math and reading scores (Okpala, 2001, p.113).

A meta-analysis on socioeconomic status and academic achievement in journal articles published between 1990 and 2000 with a sample of 101,157 students, 6,871 schools, and 128 school districts revealed a moderate to strong relationship between socioeconomic status and

academic achievement. This relationship was contingent on grade level, minority status, and school location (Sirin, 2005, p. 432). D'Angiulli (2004) reported data garnered in 1999 from the *National Longitudinal Survey of Children and Youth in Canada* that showed children from low socioeconomic neighborhoods tended to produce fewer highly competent children. This study addressed the relationship of socioeconomic characteristics to reading and math competencies among students in kindergarten, fourth, and seventh grades. The relationship was weak for kindergarten but strong for fourth- and seventh-grade students. Three reasons suggested for this relationship were: highly competent students from low socioeconomic schools were held back by the academic pace of their zoned schools; better qualified teachers were attracted to higher economic schools, and teachers in low socioeconomic schools burned out quickly and left the teaching profession from trying to reach the students with multiple challenges (D'Angiulli, p. 113). Buckner (2001) wrote that children growing up in impoverished circumstances in the United States increasingly faced homelessness, residential instability, violence, and other stressors in their lives.

Payne (2005) defined two types of poverty in the world today: generational and situational poverty. Generational poverty was defined as "being in poverty for two generations or longer"(p. 47). Situational poverty was defined as being "a shorter time period and unexpectedly caused by an unforeseen circumstance such as death, illness, or divorce" (p. 47). Although a lack of income was the same in both cases, the attitudes of the individuals in poverty were quite different in the two types. According to Payne, those in situational poverty conveyed an attitude of pride often followed by a refusal to accept charity. Often, these individuals brought more resources with them into poverty to use as they tried to work their way back to where they were before their mishap. The majority of individuals caught up in generational poverty had accepted their impoverished state as a fact of life. Many of the failing, economically disadvantaged students in schools today have come from a generational poverty background (Payne).

An important reason for schools to be conducted differently is because the number of middle-class students has been dwindling and the number of impoverished students is on the rise. Over 11% of people in the U.S. lived below the poverty line in 2000. This percentage has increased every year since 2000 and is still on the rise up to 12.7% in 2004 (National Center for Education Statistics, 2005d).

Rothstein (2004) stated that efforts to close the achievement gap with a focus solely on academic factors, while ignoring the socioeconomic characteristics that influence student learning would likely fail. Rothstein suggested that the influence of social-class characteristics is so powerful that schools cannot overcome it, no matter how well trained their teachers and no matter how well designed their instructional programs and climates. It is for this reason that educators in select systems across the country such as Raleigh-Durham, North Carolina; Hartford, Connecticut; Cambridge, Massachusetts; and San Francisco, California have decided to desegregate their student population based on socioeconomic status instead of race (Kahlenberg, 2006).

This model has placed students who currently live in urban low economic neighborhoods into middle-class neighborhoods where they are exposed to middle-class expectations and advantages. The results of this model have been mixed. Some studies have shown test scores of disadvantaged students improving in middle-class schools, for, perhaps, self-evident reasons: better teachers, stronger discipline, more college prep courses, and peers who believe from an early age they are destined for college (Hardy, 2006). Kahlenberg (2004) maintained that allowing student segregation by income would condemn low-income students to substandard schooling. He claimed that middle-income schools have higher percentages of parental involvement. For example, parents in low-income schools are four times less likely to be members of the PTA than were parents in middle-class schools.

According to Kahlenberg (2006), adoption of socioeconomic integration has been associated with rising test scores in LaCrosse, Wisconsin. In addition, Wake County public schools in North Carolina have had an integration policy where no school has more than 40% of

its students eligible for free- or reduced-price lunches nor could more than 25% of its students perform below grade level. Since this policy has been implemented, nearly 90% of the integrated students performed at or above grade level in reading and math. The low socioeconomic students have been doing substantially better than have low socioeconomic students in other urban North Carolina districts with concentrated poverty. This model has met many political challenges in the communities where it has been implemented. The major resistance has been from the more affluent communities with the most political power.

Schools with high concentrations of poverty often have presented a difficult environment for learning. According to Sum (2003), low-income schools are 24 times less likely than middle-class schools to be consistently high performing. Although isolated high-poverty schools with charismatic principals and extraordinarily dedicated teachers have achieved success, the overwhelming majority of high-poverty schools have struggled. This has occurred because individual low-income students are often generally less likely to come from family environments that support academic achievement. Problems have arisen when students from low-income families are concentrated in schools. According to Sum, those schools tend to have higher rates of teacher turn-over, low parental involvement, high student mobility, and peers who are more likely to misbehave and disparage academic achievement. Wells and Crain (2005) found that city-to-suburb transferred students in Hartford, Connecticut, were more likely to graduate from high school, attend college, and go on to well-paying jobs. Middle-class students appeared to do well in economically integrated schools as long as concentrations did not exceed 50% because, according to Kalhenberg (2006), the majority sets the tone in a school.

### *The Importance of the Freshman Year*

Fields (2005) described a brainstorm session where representatives from across the country used the following terms to describe freshman-year students: (a) disorganized, (b) embarrassed easily, (c) emotionally explosive, (d) experimenting, (e) focused on sexuality, (f) impressionable, (g) intimidated, (h) living for today, (i) looking for direction, (j) media

influenced, (k) moldable, (l) peer dependent, (m) seeking independence, (n) self-centered, (o) talkative, and (p) testing the limits (p. 19). Perhaps these adjectives explain the recent trend in dropouts across the United States. Much of the dropping out of school has shifted from the last 2 years of high school, which was typical 3 decades ago, to between the 9<sup>th</sup> and 10<sup>th</sup> grades. Compared with past years, an increasing number of ninth graders have failed to be promoted to the 10<sup>th</sup> grade. This failure to advance has forced high schools to increase the number of freshman courses they offer; this, in turn, has created a “bulge” of freshman classes within each high school’s master schedule. Barton (2005) cited a study conducted by Haney in 2001, where he studied ninth-grade retention rates across the United States and discovered there were 440,000 more students enrolled in the ninth grade than in the eighth grade the previous year demonstrating an increase in ninth-grade retention rates from the previous year. Other researchers suggested that among high school students, ninth graders have had the lowest grade point average and the greatest number of discipline referrals, (Walsh, 2002). Focus on academic success in the freshman year is critical because this is when the,”domino effect of failures” is initiated. Students who fail courses in the 9th grade must repeat these core academic courses again in the 10<sup>th</sup> grade and beyond. The “fun” part of high school--elective courses and extracurricular activities--are no longer available to them. The vicious cycle continues with more course failures, more failures to meet proficiency standards, summer school, night school, and recovery credit programs (Fields, 2005).

Rice (2001) reported that the main issue in determining whether or not students have success during their freshman year is whether or not they have experienced a successful transition. A transition was defined by Rice as a point at which students moved from one segment of the education process to another. Hertzog (1998) found that high schools with minimal or no transition programs (two or fewer transition practices) reported a ninth-grade retention-failure rate as high as 40%. Drop out rates for schools having an organized transition program lowered their retention-failure rates (Hertzog, 1998). Alspaugh’s 1998 study on school to school transition compared 48 school districts on academic performance based on the number

of transitions students made from kindergarden to 12<sup>th</sup> grade. In each case, the study reported that students experienced achievement loss at every transition. The highest losses were in science and reading. This study also identified the main issues of school-to-school transitions as students struggled with identity issues, independence, uncertainty about high school expectations, and a lack of academic preparedness. Hertzog (1998) explained:

The transition to high school comes at an inopportune time for new teenagers developmentally. They are no longer mentally and physiologically children and their minds and bodies have become awakened to new stimuli. Even their social status changes drastically upon entering high school. In the spring of students' eighth-grade year, they have been transformed into the seniors of their school. Their actions, speech, and overall air are similar to those of their 12th-grade counterparts. These same students, however, attempt to be unseen during the fall of their entry year at the high school. (p. 94)

In a separate study conducted on eighth graders in Georgia in 1996, Hertzog (1999) examined the self-perception of students moving from middle schools to high schools. These students participated in a self-perception survey. The results showed students reported a drop in five areas as they moved from the eighth grade to the ninth grade: physical appearance, job competence, romantic appeal, behavioral conduct, and global self-worth. When asked what was most important to them, the only significant finding was an increased focus on developing close friendships. This study confirmed the strong influence that peers have on transitioning freshmen (Hertzog, 1999, p. 94).

Middle schools have often been characterized by constant supervision and excessive rules put in place to maintain order in the school. It is not uncommon for teachers to escort entire classes down the hall and to take group restroom breaks. Middle schools, for the most part, have been designed to be student-centered. High schools on the other hand have been more teacher-centered. Entire hallways have been designated for departments of study. Students move freely throughout the school to arrive at their next location with only self-accountability to get them there. For some students, this level of freedom can be overwhelming and can lead to increased discipline problems.

The transition from middle school to high school can also be an overwhelming turning point in a student's social and academic life. During the ninth-grade year, students can face tremendous anxiety and struggle with academics. If students have been somewhat disenchanted with school thus far, their experiences in the ninth grade might be a determining factor in whether they graduate from high school (Walsh, 2002). Many high school teachers have reported incoming freshmen as being unprepared for the rigors of high school subjects. Zyoch (2006) conducted a study in a large school district in the southwestern United States that focused on 25 years of freshman dropout patterns. He disclosed that 48.4% of the dropouts were attributed to a student's academic background based on the individual's retention rate and standardized test scores. Students who had been retained one grade prior to their freshman year had a 50% chance of graduating, whereas those being retained twice had only a 25 % chance of graduating from high school (Hertzog, 1998).

According to Reents (2002), the greatest difference in the K-12 organizational culture existed in the gap between middle school and high school. He detailed, "Preschool feels like kindergarten; fifth grade feels like sixth grade, the senior year of high school is similar to the college freshman year; but, the 8<sup>th</sup> grade is middle school and nothing like the 9<sup>th</sup> grade in high school" (p. 16). Effective educators must understand and address the unique transition from middle school to high school. Failure to do so could mean a failure to educate many students because the freshman year might be the last chance some students have at being educated.

### *Factors That Influence Academic Success*

Eight factors that might affect a student's GPA in high school have been prior academic challenges, ethnicity, gender, discipline records, the literacy rate of the student, the attendance rate of the student, the student's mobility rate, and the student's involvement in extracurricular activities (Blackledge, 1997; Bridgeland, 2006; Caldwell, 2007; Sum, 2003).

### *Prior Academic Challenges*

Many students entering high school today are academically unprepared for the challenges that await them. For some students, high school is the first time they think school is for “real.” Many students have never faced an educational experience where they must earn a set amount of credits to graduate, course content knowledge is assessed based on a state or local standardized end of course exam, and national knowledge assessments like SAT and ACT govern the college a student will attend. In many cases, the first time a student hears the letters GPA is during his or her freshman year of high school. In schools prior to high school, a student will usually be successful if he or she does not misbehave, attends school regularly, and completes all class work. Middle schools and junior high schools are not under the same accountability scrutiny as are high schools.

A report released in March 2006 called “The Silent Epidemic” was presented by Civic Enterprises in association with Peter D. Hart Research Associates for the Bill and Melinda Gates Foundation. According to Bridgeland (2006), the report discovered academic unpreparedness when the researchers interviewed thousands of high school dropouts between the ages of 16 and 24 in 25 locations across the United States. According to the report, 35% of the self-reported high school dropouts said failing in school was their reason for dropping out (Bridgeland). A similar study conducted by Rumberger (2003) reflected 39% of dropouts involved in the National Education Longitudinal Study in 1988 reported “failing school” as their reason for dropping out. This percentage made failing in school one of the top five reasons dropouts cited for leaving school early. Thirty percent of those surveyed said they could not keep up with the high school work. Nearly 57% of the dropouts polled reported it was difficult to pass from one grade to the next because the requirements for passing were too difficult in high school. When asked what made these requirements too difficult, participants reported tests were too difficult and teachers were not able to give them the extra help they needed to succeed. Thirty-two percent of those responding to the survey had been retained a grade in school prior to dropping

out. Approximately 29% stated they did not feel they would have graduated even if they had tried harder (Bridgeland).

### *Ethnicity*

Fields (2005) quoted Rod Paige, Secretary of Education, as saying, “ If you want to search for weapons of mass destruction, go to districts with minority graduation rates at 30% and 40%--you can find them all across the country” (p. 21). There is reason to believe there is a high school dropout epidemic in America. Each year, almost one third of all public high school students, and nearly one half of all Blacks, Hispanics, and Native Americans fail to graduate from public high school with their classes. Many of these students abandon school with fewer than 2 years of high school education (Bridgeland, 2006). Race has been an issue in public education for the past 150 years.

An analysis conducted by the National Center for Education Statistics (2005b) examined the existing gap in dropout percentages across ethnic groups. Since 2000, 6.9% of White students aged 16-24 had dropped out of school. Nearly 13.1% of Black students had dropped out and 27.8% of Hispanic students had dropped out. Although all three groups have made some progress toward lowering the percentage of dropouts since 2000, the gap has remained about the same in 2005 with 6.0% of White students, 10.4% of Black students, and 22.4% of Hispanic students still dropping out of school (National Center for Education Statistics (2005b).

In an analysis of SAT scores for college bound seniors conducted by the National Center for Education Statistics (2005a), the achievement gap between races was again demonstrated. These percentages were gathered over an 8-year period. Scores were averaged by race for the verbal and math portions of the test. During the 1986-87 school year, White students scored an average of 524 on the verbal portion of the test, Hispanic students averaged 464, and Black students averaged 428. By 2004-05, two of the three groups had improved their average scores; however, a large gap remained between the White students (532), Black students (433), and Hispanic students (463). The 8-year trend for the math portion of the exam reflected the same

findings. White students averaged 514 in 1986-87, followed by Hispanic students at 462, and Black students at 411. Even though all groups improved over the 8-year stretch, an achievement gap remained. In 2004-05, the White students' average score was 536, followed by Hispanic students at 469, and Black students at 431.

A 2005 study conducted by Sirin on low socioeconomic students reported that minority students lagged behind White students in academic achievement for four reasons: minority students were more likely to live in low-income housing, more likely to be raised by single parents, their parents were likely to have a lower level of education, and they often attended underfunded schools. The higher poverty rate was confirmed by Okpala's 2002 study of school districts in North Carolina. This study focused on the effects of socioeconomic status on academic success but the researcher stumbled onto the fact that as schools were grouped by low, middle, and high wealth, the percentage of African American students decreased from low-wealth to high-wealth schools. A report from the U.S. Census Bureau (DeNavas-Walt, Proctor, & Hill, 2005) also confirmed a greater number of Black students living in poverty: The report revealed 17.6% of all children in the United States live in poverty. Of this group, 14.3% were Caucasians, 29.7% were Hispanics, 34.1% were African Americans, and 21.9% were undisclosed or other.

### *Gender*

Sum (2003) found that in 1990, the estimated number of dropouts based on gender was nearly identical, at 1.69 million for each. Over the next decade this gap widened, especially in the final 5 years of the study with 120 males dropping out for 100 females from 1996-2000. Sum's study suggested the number of males dropping out was actually higher because the survey from which the data were drawn did not include students who were institutionalized because males were institutionalized (jails, prisons, long-stay hospitalization) at a rate five times higher than were females (2003).

According to dropout rates from 2005 in an analysis conducted by the National Center for Education Statistics (2005b), male dropouts from school have been on the decline since 2000. In 2000, 12.2 % of the males from 16 to 24 had dropped out of school. This percentage has been decreasing every year and was down to 10.8% in 2005. Females have experienced a similar decline since 2000 lowering the percentage of dropouts from 9.9% of the total female population between 16 and 24 years old to 8% in 2005. The data for this analysis go back to 1972. During that year, 14.1% of males and 15.1% of females were dropouts between the ages of 16 to 24. The National Center for Education Statistics (2005a) examined SAT scores for college-bound seniors and analyzed the scores based on the verbal portion of the test and the mathematics portion by gender. Scores were recorded over a 38-year span, from 1966-67 to 2004-05. On the verbal portion of the test, males still had a narrow margin of eight points. Males have scored higher than females since 1971-72. Scores in math showed an even larger gap between the sexes with males' average scores 34 points higher than females in 2004-2005. Since 1966-67, males have had scores higher on average than females on the math portion of the SAT (National Center for Education Statistics, 2005a).

### *Discipline Records*

According to research conducted by Rausch (n.d.), a paradox has existed in the use of discipline in United States high schools. One belief has been that certain unruly students must be removed from school in order to maintain an orderly school climate. However, removing these students from high risk groups has often put them at a greater risk for dropping out of school. Rausch found an association between discipline and achievement records of high school students in a mid-western state. The researcher concluded that students removed from school for discipline (suspension) were more likely to be suspended again and that the suspension did not contribute to their improved learning.

### *Literacy Rates*

Ferguson (2005) revealed that almost 7,000 students drop out of high school every day. One of the most commonly cited reasons for this is that students simply do not have the literacy skills to keep up with the high school curriculum. Ferguson estimated that there are eight million struggling readers in grades 4-12 in schools across our nation. Seventy percent of students entering 5<sup>th</sup> and 9<sup>th</sup> grades in 2006 were reading below grade level. Sixty percent of 12<sup>th</sup> graders were reading below grade level in 2006. In urban areas, it is estimated only 20% of students are reading at grade level and are prepared to master high school–level content. Literacy demands have increased and changed as the technological capabilities of our society have expanded and been made widely available (Ferguson).

In recent years a great emphasis on literacy has been focused on the elementary level and high school students seem to have been neglected. Some studies report that reading achievement of fourth graders in the U.S. rank among the best in the world. As the students progress their reading levels drop until the 12<sup>th</sup> grade when average levels drop below international levels, (Daggett, 2003).

Daggett (2003) asserted that American high schools are failing to teach reading and reading strategies to today's high school students. Students in the same classroom have different levels of reading proficiency, yet many times students are reading the same materials. The result is a mismatch for many students, who cannot comprehend textbooks they cannot read. For them, this means lower comprehension, which result in lower test scores. Therefore, these students make less progress, not just in reading, but also across the curriculum in math, science, social studies, and all other subjects. During high school when reading becomes the primary method for learning the strategies to use for reading change. Unfortunately when the reading load increases, students shift from learning to read to reading to learn during a critical time when reading is no longer a focal subject. In the United States, reading is taught primarily in elementary and middle school grades. The National Center for Education Statistics (2005c) conducted an observation of students at or above their selected reading score levels based on age,

gender, and ethnicity. The results were examined for the following ages, 9, 13, and 17.

Participants were scored in one of four categories: (a) Level 150: students were able to follow brief written directions and carry out simple, discrete reading tasks; (b) Level 200: students were able to understand, combine ideas, and make some inferences based on short, uncomplicated passages about specific or sequentially related information; (c) Level 250: students were able to search for specific information, to interrelate ideas, and make generalizations about literature, science, and social studies materials; and (d) Level 300: students were able to find, understand, summarize, and explain relatively complicated literary and informational material (National Center for Education Statistics, 2005c).

Among the nine year-olds tested, 20% performed at the 250 level, the highest level attainable for this age. Approximately 19% of the males performed at this level along with 21% of the females. A great disparity existed between different ethnic groups. The White group showed 25% performing at the 250 level followed by 8% of Blacks and 9% of Hispanics. This trend continued with the 13 year-olds. At this time, only 13% of all the students tested performed at level 300, the highest level possible. The gender gap had widened slightly with 11% of males and 15% of females scoring in the 300 level. The racial gap continued with 17% of whites scoring in level 300 but only 5% of blacks and 4% of Hispanics. Finally, for 17 year-olds, 38% were at the 300 level. The gender gap continued to widen with only 33% of males and 42% of females scoring at the 300 level. The racial gap also widened among 17-year-olds. Whites again led the way with 45% scoring 300, followed by Blacks with only 17% and Hispanics with 20%. These numbers appear to have been consistent since 1971, the year the data were collected (National Center for Education Statistics, 2005c). Although Daggett's (2003) findings were more optimistic than were Ferguson's (2005), the percentage of 17-year-old students not reading on grade level is a concern.

On average, low socioeconomic students had access to only 6 books compared to high-socioeconomic students who had 414 books in their homes. In the school classroom, low socioeconomic students had access to 51.10 books compared to high-socioeconomic students

who had 658.5 books per classroom. Finally, low socioeconomic students' school libraries had on average 1,714 books compared to 11,360 books in high-socioeconomic students' libraries. School libraries did not make up the difference for exposure to books for children in the low socioeconomic students' communities (Constantino, 2005, p. 24).

### *Attendance Rates*

Poor attendance has been one of the most evident causes for students experiencing academic failure during high school. According to Bridgeland (2006), it is obvious that no matter how effective teachers are, if students are not attending school they have no chance to learn. Bridgeland reported that 59% to 65% of respondents were chronic absentees the year before dropping out. In the study, students described a pattern of refusing to wake up, skipping class, and taking 3-hour lunches. Each absence made them less willing to go back to school. These students had long periods of absences and were sometimes referred to the truant officer, only to be brought back to the same environment that led them to become disengaged. Of these students, 43% said they missed too many days of school and could not catch up. Students who dropped out during their freshman year had an average absenteeism rate of 65%. Sophomore dropouts had a freshman absentee rate of 36%; this increased to 61% their sophomore year by the time they dropped out. Juniors who dropped out their 11<sup>th</sup> grade year had an absenteeism rate of 59%; this was preceded by their sophomore year with a 33% rate. Seniors who dropped out had an absentee rate their junior year of 45% followed by 63% the year they dropped out.

### *Mobility Rates*

Student mobility has been another factor linked to academic performance in school. As defined by Rumberger (1999), "Student mobility is the practice of students making nonpromotional school changes, often during the school year" (p. 6). Rumberger (1999) reported that more American eighth-grade students changed schools for reasons other than

promotion during their elementary and secondary school careers than did students who remained in one stable pattern of attending a single elementary, middle, and high school.

According to Rumberger (2003), the NAEP reported in 1998 that 34% of 4th graders, 21% of 8th graders, and 10% of 12th graders changed schools at least once in the previous 2 years. The highest mobility rate was for African American students at 45%, followed by Hispanic students at 41%, Asian students at 33%, and White students at 27% (Rumberger, 2003, p. 6).

Students receiving free- or reduced-price lunches had changed schools at least once in 2 years at a rate of 43% compared to 26% for students who did not receive the service. This was supported by Rothstein's (2004) report on the Black-White achievement gap. The growing lack of affordable housing for low-income families has been another social-class characteristic that had a demonstrable effect on student achievement. Children whose families have difficulty finding stable housing are more likely to be mobile, and student mobility is an important cause of low student achievement. Urban rents have risen faster than working-class incomes. Even families in which parents' employment is stable have been more likely to move when they fall behind in rent payments. In some schools, particularly in minority neighborhoods, this need to move has boosted mobility rates to more than 100%; indeed, for every seat in the school, more than two children were enrolled at some time during the year. According to Rothstein, it is hard to imagine how teachers, no matter how well trained, can be as effective for children who move in and out of their classrooms as they can be for children whose attendance is regular. Mobility was found to be the highest in large, urban, primarily minority high schools (Ligon & Paredes, 1992).

Mobility can harm both the student and the classroom he or she enters. Incoming students can suffer socially, psychologically, and academically from mobility. On a social level, students must adjust to new peers and social expectations. Each time students move, they must rediscover where they fit into the social environment and once again prove themselves. Peer groups are very close in high schools and students are not often open to accepting new

individuals into their preformed social groups. In a report by Rumberger (2003) students reported feeling as though their personalities were shattered after moving. They said their lives lacked grounding and they were in a constant state of disorientation. With every move, students reported feeling less important. The 1999 Pribesh and Downey study stated students with high rates of mobility were less likely to participate in extracurricular activities. This could allow further progression of student disengagement from school. Ellickson and McGuigan's 2000 study reported that students who had experienced multiple moves during elementary school had a 20% greater likelihood of exhibiting violent behavior in high school. The research with regard to mobility and academic success has not been as clear. Although some studies showed a direct link that high mobility negatively affected student academics, other studies that controlled for students' background characteristics showed contrary evidence. The report, "1998 Reading Assessments" released by the NAEP in 2002 stated that students with two or more school changes over a 2-year period were half as likely to be proficient in reading as students with no changes. Other studies that controlled for students' background characteristics showed that mobility did not have a significant effect on students' academic performances; this could suggest that mobility might be a symptom of lower achieving students' demographics rather than the cause for their failure. This idea was supported by Buckner (2001) in his report, *Predictors of Academic Achievement among Homeless and Low-Income Housed Children*. America is becoming an increasingly mobile society, with approximately one in five individuals changing their primary residence each year. Some poor families, because of the exhaustion of personal or family resources, end up living in a family shelter for weeks or months before regaining housing (Buckner).

High mobility rates also have adverse effects on non-mobile students. Rumberger (1999) found in California that average test scores for non-mobile students were significantly lower in high schools that had high student mobility rates. In this study school personnel reported the high rate of mobility caused a constant environment of chaos. It affected classroom learning activities such as group projects.

### *Extracurricular Activities*

Current research in student productivity in school has centered on the idea of student engagement. According to Tilleczek (2006), many of today's students must be kept engaged by the education process or they will give up and become at-risk. Getting students involved in extracurricular activities has been an effective way to connect students to their school and keep them interested academically. A broad evaluation conducted by Feldman (2005) on available research examining student engagement revealed that extracurricular activities allowed students to experience four things that they did not always get from academics. These settings become arenas for students to develop and express themselves. They could explore their identity and face personal challenges outside of academics. Students could forge a network of friends and build social capital through these events. Students experienced a crossover effect where they can become engaged in school and embrace the academic challenges as well as extra curricular ones. These activities allow students who do not experience academic progress the chance to taste success.

School sponsored extracurricular activities have been a vital part of high school and high school memories since their onset. An analysis of involvement in school-sponsored extracurricular activities of high school sophomores was conducted in 2003 by the National Center of Education Statistics in 2003 (2005e). The study compared the rate of participation of various groups from the year 1990 with the rate of participation in 2002. Extracurricular events for this study were divided into six categories: academic clubs and organizations, sports, cheerleading, hobby and special interest clubs, music activities such as band and chorus, and vocational clubs. The following groups of students were examined: males, females, White students, Black students, Hispanic students, lowest to highest test performance quartiles, and socioeconomic status--low, middle, and high.

The results of this study (National Center of Education Statistics, 2005e) revealed a decrease in involvement in academic and vocational clubs for all groups since 1990 with the exception of the highest quartile test performers showing an increase in involvement in

vocational clubs. All groups showed an increase in sports, cheerleading, and hobby clubs. Music interest increased for males, Whites, those students testing in the highest quartile, and high socioeconomic students. All other categories showed a decrease in music involvement.

### *Factors of Academic Resilience in At-Risk Students*

Many studies have been conducted to determine the factors that influenced academic resilience in at-risk students. According to Bassett (2002), educationally resilient students are defined as seniors who were classified as at-risk students during their high school years because of adversity such as failing grades, low-test scores, absenteeism, discipline referrals, and emotional problems yet still graduated on time with their class. These seniors were subjected to exit interviews as part of their graduation process. They attributed their resilience to four main factors: (a) support from at least one family member, (b) the fear of dropping out and becoming like others they knew who had dropped out, (c) taking advantage of special programs from within the school that encouraged them to stay in school, and (d) their own determination to graduate.

Werner and Smith's most recent update of an ongoing study took place in 2001. They monitored 698 individuals born on the Hawaiian island of Kauai in 1955. Approximately one third of these individuals were born to families undergoing prenatal trauma, poverty, and adverse living conditions unfavorable to individuals developing skills that would make them adaptive to life. In the study, one third of the individuals born in adverse conditions became competent and caring adults. The researchers were able to identify three major qualities in these resilient individuals: (a) an easy temperament, (b) acceptance by one person in their lives, and (c) confidence that odds can be surmounted. Werner and Smith maintained that experiences in early childhood did not determine adult outcomes.

Long and Vaillant (1988) cited a study conducted by Gleuck and Gleuck. This study was conducted with 456 White males born in the early 1930s in high crime neighborhoods of Boston. The researchers matched these individuals with other White males who did not grow up in bad

neighborhoods. There were no definable differences between successful students from either group. The at-risk individuals were doing as well as the individuals from stable homes. Two thirds of the males from disadvantaged backgrounds had moved from working class jobs to middle class jobs.

Garg (2002) conducted a study involving 4,034 Canadian students in grades 8-13 from across the country. The participants completed a questionnaire to determine the driving force behind their educational aspirations. From the questionnaire, three factors that influenced educational aspirations were constructed. These factors were (a) background factor--comprised of parental occupation and education, (b) family involvement--comprised of parental personal and school-based involvement with their adolescents, and (c) personal factors--comprised of student grades, extracurricular reading, and parental expectations. The results showed personal factors had a strong direct influence on educational aspirations accounting for 76% of the variance (Garg).

Waxman's (1996) study of 150 middle school students in an large urban public school in the south central United States revealed that academically resilient students held higher perceptions of involvement, were more task oriented, and better understood rule clarity, satisfaction, pacing, and feedback. Resilient students also held a higher social self-concept and motivation level for achievement. Waxman defined student's motivation level as the extent to which students felt their performance was a direct result of their own effort and planning. Waxman further defined social self-concept as the extent to which students' exhibited pride in their schoolwork.

Wang (1997) focused on support systems of resilient students, "Parents or mentors of such children make the child feel worthwhile and valued. They exhibit competence that children can emulate, and provide guidance and constructive feedback "about the child's progress" (p. 19). Changes in American families such as more teen mothers, divorce, separation, and "latch-key" children have made resilience building more difficult. In some areas, the stabilizing

influences of religious and social institutions have also declined. According to Wang, four competencies have been identified as the keys to resilient children:

1. social competence – children have mild temperaments and can adapt readily to different situations;
2. intellectual competence – resilient children score higher on intelligence tests and show the ability to think of novel solutions to problems;
3. planning – Resilient children can think about their problems, set high but realistic goals for themselves and monitor their own progress; and
4. resourcefulness – although most resilient children possess good social skills, they also have the ability to stand apart by themselves, especially in abusive situations. (p. 19)

Wasonga, Christman, and Kilmer (2003) looked at ethnicity, gender, and age and how they influenced 11 protective factors predicting resilience and academic achievement. They looked at self-reported responses from 480 students 9<sup>th</sup> -12<sup>th</sup> grade. Ethnicity and gender both produced statistically significant results (differences?). In this study, age was not a significant factor. Wasonga et al. addressed ethnicity, gender, and age and how they influenced 11 protective factors predicting resilience and academic achievement. They looked at self-reported responses from 480 students from grades 9 through 12. Ethnicity and gender both produced statistically significant results. In this study, age was not a significant factor.

With regard to resilience and ethnicity, the Wasonga et al. (2003) study showed Asian and Black students cited meaningful home participation as the top factor influencing their resilience. White students named high peer expectations as the most influential factor. Hispanic students reported a caring school environment as the factor having the greatest influence on their resilience. Each ethnic group credited a different factor for influencing its academic achievement. Asian students self-reported meaningful community participation; Black students cited caring peer relations; Hispanic students reported high peer expectations, and White students credited high home expectations. For gender, females credited meaningful home relationships for their resilience. Males reported caring school relationships for their resilience. Both genders reported caring peer relationships as one of the top three factors for resilience. With regard to academic achievement, both genders cited caring community relationships as one of their top two factors. Only high peer expectations ranked higher for females (Wasonga et al.).

Von Secker's 2004 study focused on the effects of four protective factors and their influence on science academic resilience for at-risk students. These factors were identified as: (a) level of parental education, (b) home environment, (c) attitude and beliefs about science, and (d) the quality of students' instructional opportunities. For this study, at-risk students were identified based on socioeconomic status, minority status, and gender. Von Secker found the only protective factor that had a statistically significant effect on low socioeconomic students was the education level of their parents. If a student had at least one parent with a college degree, he or she stood a better chance to display resilience. Attitude and beliefs about science had little to do with socioeconomic status. Students, regardless of economics, did better if they showed an interest in science. At the fourth and eighth grade levels, quality of instruction did not seem to affect the academic resilience of low socioeconomic students. A difference was detected only at the 12<sup>th</sup> grade. Von Secker credited the use of more extensive labs to the increase in academic resilience in the 12<sup>th</sup> grade. The effects of home environment were small after the other factors were controlled for in the study.

Hoy (2006) conducted a study on high school students from 96 schools across a Midwestern state. He stated four factors that influenced student achievement in high school: (a) students' socioeconomic status, (b) students' previous academic achievement, (c) whether or not a student attended an urban school, as defined by the state, and (d) a variable they called academic optimism. Academic optimism for each school was determined by a series of questions that determined the school staff's emphasis on academic excellence, their collective efficacy, and a faculty's trust in its students and parents. In this study, 67% of the variability in student achievement was accounted for by these four factors. In this study, socioeconomic status, academic optimism, and prior student achievement were all statistically significant factors influencing student achievement. Hoy suggested that not all factors that determine academic success were set. According to Hoy, academic optimism suggests that a school staff can be empowered to affect significantly students' academic achievement.

Anderson and Keith's 1997 study surveyed over 8,100 at-risk students across the United States. In order to be classified as at-risk, students had to be non-Asian minority students and had to fall into the bottom quartile of the socioeconomic status range. Four factors were tested to see which had the greatest influence on the academic success of these students. These factors were: (a) a student's academic ability, (b) the quality of a student's schooling, (c) student motivation, and (d) academic coursework completed by each student. A student's academic ability was the strongest predictor of academic success for minority-disadvantaged students followed by a student's academic course work. This study found that for every additional course taken by these students, they would increase their test scores. A student's motivational level had a moderate effect on academic success. Quality of schooling showed little direct effect on academic success; however, it did indirectly influence a student's motivation.

### *Summary*

Children of poverty have remained the population with the greatest risk of failure in today's public schools. The literature supported that this fact has remained constant throughout the history of public education in the United States. Several studies (Fields, 2005; Hertzog, 1998; Hertzog, 1999; Reents, 2002; Walsh, 2002; Zyoch, 2006) have addressed the link between ninth grade success and high school graduation. Most educators have agreed that a student's ninth-grade year is the most pivotal in terms of success or failure in school. Early intervention with at-risk students is the key to academic success. Schools cannot prevent failure if they are unaware of its causes. Identification of the factors with the greatest influence on failure should allow schools to address those factors that have the greatest influence on success. Uncovering the factors cited by higher achieving at-risk students might provide additional data.

## CHAPTER 3

### RESEARCH METHODOLOGY

#### *Introduction*

The purpose of the study was to identify which factors are most closely related to academic success during the freshman year (9th grade) of low socioeconomic students in one urban high school. Chapter 3 describes the subjects, the data collection procedure, and the data analysis of this study.

#### *Research Design*

This study was an ex post facto study. The majority of the data were obtained from a digital database from the district office. The literacy level scores were obtained from the Renaissance Learning STAR Reading Test administered on computer during each student's English class during the fall of his or her freshman year of high school. Students' involvement in school-sponsored extracurricular activities during their freshman year was obtained from school records of clubs and sports teams in the school's guidance office. Parents' permission to ask open-ended questions of higher achieving, low socioeconomic students was obtained in written form (See Appendix B).

#### *Population*

This ex post facto study was conducted in one urban high school located in East Tennessee. The subjects were students enrolled in the ninth grade during the 2005-2006 and 2006-2007 academic school years. The subjects were selected based on their low socioeconomic status. The criterion for low socioeconomic classification was a student's family income allowing him or her to qualify for free- and reduced-price meals. These impoverished students were then divided into two groups based on their academic performance during their freshman year of high school. Academic performance was determined by student's grade point average at

the end of his or her freshman year. Those students with GPAs of 2.5 or higher were classified as higher achieving, low socioeconomic status (HLSES) students. Students with GPAs of 2.4 or lower were considered lower achieving, low socioeconomic status (LLSES) students. The higher achieving group contained 85 students and the lower achieving group had 292 students.

The urban high school attended by the subjects had an enrollment of 1,193 students for the 2005-2006 school year. In 2006, the school had an attendance average of 88.5%, which was lower than the state's goal of 93.0%. The school's graduation rate was 53.8%, some 36 percentage points lower than the state's goal of 90%. Over 74%, or approximately 884 students, qualified for free- and reduced-price meals and were thus considered low socioeconomic students in this study.

#### *Data Collection*

Archival data for the students in this study were obtained by the researcher from the computer program STAR. The following data were collected for each ninth grade student: (a) ninth grade GPA, (b) ethnicity, (c) gender, (d) number of out-of-school suspension days, (e) number of days each student was absent from school, (f) number of K-9 schools attended, and (g) the student's seventh grade scores for reading-language arts and mathematics as measured by the TCAP achievement tests.

Data were gathered for freshmen in the study to determine their literacy grade level equivalency in reading. The Renaissance Learning's norm-referenced, STAR Reading test was administered by computer. This reading test considers three factors that determine grade equivalency: number of words per sentence, the number of characters per word, and the average grade level of the words in the book. During the first semester of the freshman year, each student was administered the reading test in English class. Each student's grade equivalency score, (range 0.0 to 12.9) was calculated by computer. The whole number of the score represents the grade level and the decimal month of that grade level. Data for student involvement in

school sponsored extracurricular activities associated with the school were collected from records kept by the school in the school's guidance office.

A purposeful sample of 10 higher achieving freshman students was chosen to answer an open-ended question about academic success during their freshman year of high school. Responses were recorded and are presented in Chapter 4 (see Appendix B).

### *Data Analysis*

The following research questions guided the study:

Research Question #1: Is there a relationship between higher achieving, low-socioeconomic status (HLSES) and lower achieving, low socioeconomic status (LLSES) students during their freshman year in an urban high school in East Tennessee in regard to the following characteristics: (a) ethnicity, (b) gender, and (c) involvement in extracurricular activities?

Chi-square tests were run to evaluate whether a statistical relationship exists between the two groups (HLSES and LLSES) and each of the three demographic variables (students' ethnicity, gender, and involvement in extracurricular activities). Three null hypotheses were evaluated:

Ho<sub>1</sub>: There is no relationship between HLSES and LLSES status with regard to ethnicity.

Ho<sub>2</sub>: There is no relationship between HLSES and LLSES status with regard to gender.

Ho<sub>3</sub>: There is no relationship between HLSES and LLSES status with regard to involvement in extracurricular activities.

Research Question #2: Are there differences between (HLSES) and (LLSES) students during their freshman year in an urban high school in East Tennessee with regard to the following characteristics: (a) seventh-grade TCAP scores in reading-language arts and mathematics, (b) number of days of out-of-school suspension, (c) students' literacy grade level equivalency in reading, (d) students' mobility rate, and (e) students' attendance?

To answer this research question, each criterion variable was measured and the differences between the two groups were calculated. Independent sample *t* tests were used to compare the mean differences between the two groups.

The following null hypotheses were evaluated:

Ho2<sub>1</sub>: There is no difference in seventh-grade reading-language arts TCAP scores between the HLSES and LLESSES groups.

Ho2<sub>2</sub>: There is no difference in seventh-grade mathematics TCAP scores between the HLSES and LLESSES groups.

Ho2<sub>3</sub>: There is no difference in the number of days suspended between the HLSES and LLESSES groups.

Ho2<sub>4</sub>: There is no difference in students' grade level literacy scores between the HLSES and LLESSES groups.

Ho2<sub>5</sub>: There is no difference in students' attendance rates between HLSES and LLESSES groups.

Ho2<sub>6</sub>: There is no difference in the mobility rates of students between HLSES and LLESSES groups.

Research Question # 3: Which of the eight predictor variables (a) ethnicity, (b) students' seventh-grade achievement test scores, (c) gender, (d) number of days suspended, (e) students' individual literacy score, (f) students' mobility rate, (g) attendance, and (h) involvement in extracurricular activities are most influential in predicting GPAs in low socioeconomic status, higher achieving (HLSES) freshmen in an urban high school in East Tennessee?

To answer this question, a series of multiple regressions were conducted regarding the following hypothesis:

Ho3<sub>1</sub>: There is no significant relationship between the criterion variable of HLSES's freshman GPA and the composite variable of students' ethnicity, students' seventh-grade reading-language arts TCAP test scores, students' seventh-grade mathematics TCAP test scores, students' gender, the number of days each student

was suspended, the students' literacy score, the students' mobility rate, the students' attendance, and the students' involvement in extracurricular activities.

Research Question # 4: Which of the eight predictor variables (a) ethnicity, (b) students' seventh-grade achievement test scores, (c) gender, (d) number of days suspended, (e) students' individual literacy score, (f) students' mobility rate, (g) attendance, and (h) involvement in extracurricular activities are most influential in predicting GPAs in impoverished lower achieving (LLSES) freshmen in an urban high school in East Tennessee?

To answer this questions a series of multiple regressions were conducted. The following null hypothesis was evaluated:

Ho4: There is no significant relationship between the criterion variable of HLSES's freshman GPA and the composite variable of students' ethnicity, students' seventh-grade reading-language arts TCAP test scores, students' seventh-grade mathematics TCAP test scores, students' gender, the number of days each student was suspended, the students' literacy score, the students' mobility rate, the students' attendance, and the students' involvement in extracurricular activities.

Research Question # 5: To what characteristic(s) do higher achieving, low socioeconomic status freshmen from an urban high school in East Tennessee attribute their academic success?

Selected high academic achieving freshmen were asked this question in interviews and the results were recorded. Responses were categorized and recorded as a descriptive conclusion to the study.

## CHAPTER 4

### DATA ANALYSIS

#### *Introduction*

Impoverished children remain the population with the greatest risk of failure in today's public schools. In an ever-changing competitive global market, educational failure in high school greatly reduces an individual's financial possibilities. Students' future successes or failures can be determined all too often by their academic performance during the freshman year. The purpose of the study was to identify which factors are most closely related to academic success during the freshman year (9th grade) of low socioeconomic students in one urban high school.

#### *Demographics*

The population in this study was 377 ninth-grade students enrolled in one urban high school located in East Tennessee during a 2-year period. Data were collected for the 2005-2006 and 2006-2007 school years. The subjects were selected based on their low socioeconomic status. The criterion for low socioeconomic classification was students' family income allowing them to qualify for free -and reduced-price meals. These impoverished students were then divided into two groups based on academic performance during their freshman year of high school. Those students with GPAs of 2.5 or higher were classified as higher achieving, low socioeconomic status (HLSES) students. Students with GPAs of 2.4 or lower were considered lower achieving, low socioeconomic status (LLSES) students. The higher achieving group contained 85 students and the lower achieving group consisted of 292 students.

The students attended an urban high school with an enrollment of 1,193 students for the 2005-2006 school year. Table 1 displays the ethnicity of the student population.

Table 1

*Ethnicity of Target High School (2005-2007)*

| Ethnicity        | N     | %    |
|------------------|-------|------|
| White            | 1,570 | 65.8 |
| African American | 751   | 31.5 |
| Hispanic         | 56    | 2.04 |
| Asian            | 6     | 0.03 |
| Native American  | 3     | 0.01 |
| Pacific Islander | 1     | 0.04 |

In 2006, the target school had an attendance average of 88.5%, which was lower than the state's goal of 93.0%. The school's graduation rate was 53.8%, which was 36 percentage points lower than the state's goal of 90%. Over 74% (884 students) qualified for the free- and reduced-price meals program and were thus considered low socioeconomic students in this study.

Table 2 shows the ethnic breakdown of suspensions by the school for the year 2006.

Table 2

*Percentage of Each Ethnic Group Suspension for 2005-2007*

| Ethnicity        | N   | %    |
|------------------|-----|------|
| White            | 571 | 54.3 |
| African American | 456 | 43.4 |
| Hispanic         | 20  | 1.9  |
| Asian            | 1   | .09  |
| Native American  | 3   | .29  |
| Pacific Islander | 0   | 0.0  |

A higher percentage of males than females received suspensions in the designated school in 2006. Males comprised 50.97% of the school's population but comprised 60.32% of the suspensions. Females were 49.03% of the population but have only 39.68% of the suspensions.

This study was guided by five research questions. SPSS was used to perform data analyses to test 11 null hypotheses. There were nine predictor (independent) variables in this study: (a) ethnicity, (b) gender, (c) number of out of school suspensions, (d) number of days absent from school, (e) number of schools attended over the past 5 years, (f) students' seventh-grade reading-language arts TCAP scores, (g) students' seventh-grade math TCAP scores, (h) students' involvement in extracurricular activities, and (i) students' reading levels. There was one criterion (dependent) variable (GPA) in this study.

### *Analysis of Research Questions*

#### *Research Question # 1*

Is there a relationship between higher achieving, low socioeconomic status (HLSES) students and lower achieving, low socioeconomic status (LLSES) students during their freshman year in an urban high school in East Tennessee in regard to the following characteristics: (a) ethnicity, (b) gender, and (c) involvement in extracurricular activities?

The hypotheses associated with this research question were:

Ho<sub>1</sub><sub>1</sub>: There is no relationship between HLSES and LLSES status with regard to ethnicity.

Ho<sub>1</sub><sub>2</sub>: There is no relationship between HLSES and LLSES status with regard to gender.

Ho<sub>1</sub><sub>3</sub>: There is no relationship between HLSES and LLSES status with regard to involvement in extracurricular activities.

To determine whether a statistical relationship existed between achievement group and students' ethnicity, gender, and involvement in extracurricular activities a two-way contingency table analysis using crosstabs was performed. A two-way contingency table analysis was conducted to evaluate whether there was a statistically significant relationship between student

achievement group and those students' involvement in extracurricular activities. The two variables were student achievement group (HLSSES –GPA of 2.5 or higher at the end of their freshman year and LLSSES – GPA lower than 2.5 at the end of their freshman year) and whether or not students were involved in an extracurricular activity during their freshman year. Achievement group and involvement in extracurricular activity were found to be significantly related, Pearson  $X^2(1, N = 379) = 16.35, p < .01$ . Cramer's  $V = .21$ . As a result of this analysis,  $H_0:1_1$  was rejected. The percentage of higher achieving students involved in extracurricular activities was 54.12% compared with only 30.27% of lower achieving students (see Figure 1).

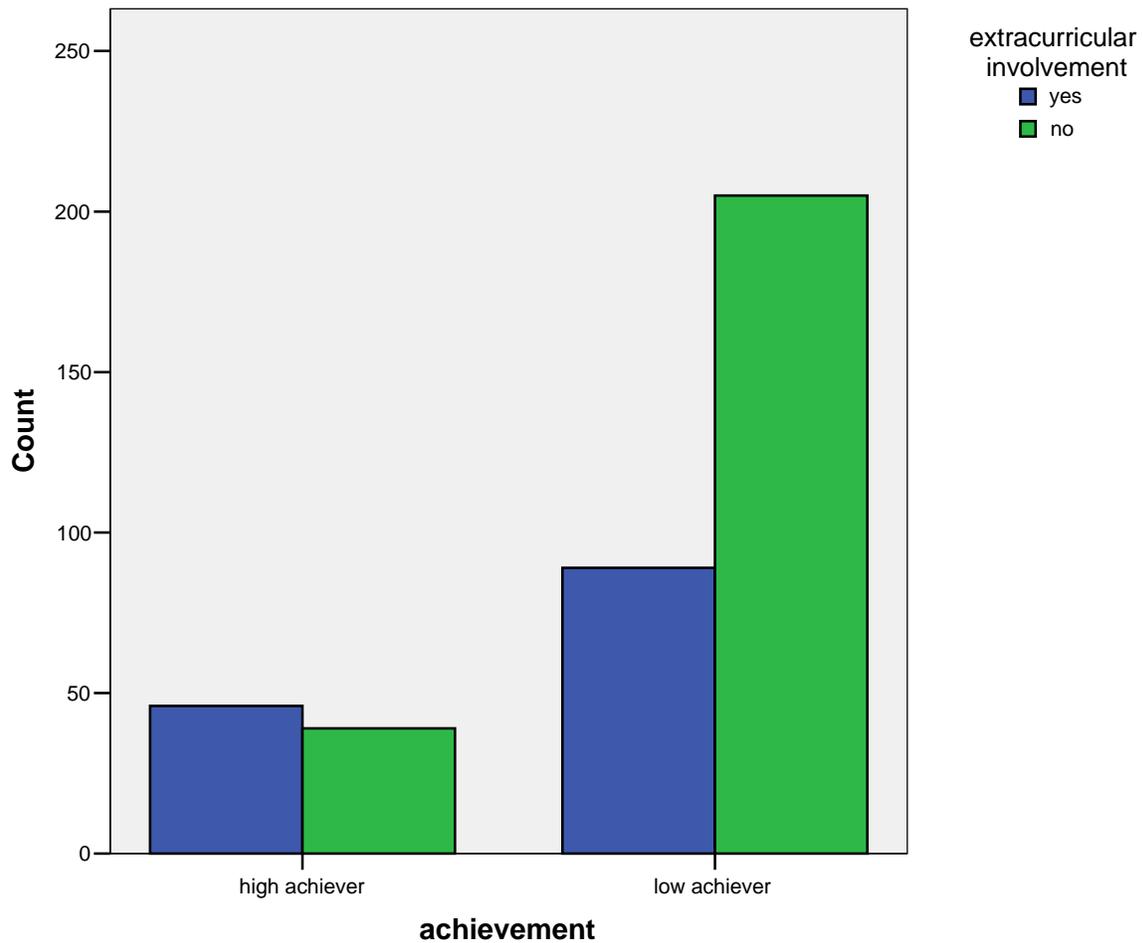


Figure 1. Clustered Bar Chart of Extracurricular Involvement Within Achievement Groups

A two-way contingency table analysis was conducted to evaluate whether there was a statistically significant relationship between student achievement group and gender. The two variables were student achievement group (HLSES –GPA of 2.5 or higher at the end of their freshman year and LLSES – GPA lower than 2.5 at the end of their freshman year) and whether the student was a female or male. Achievement group and gender were found to be significantly related, Pearson  $X^2(1, N = 379) = 11.18, p < .01$ , Cramer's  $V = .17$  (see Figure 2). As a result of this analysis,  $H_{012}$  was rejected. The HLSES was composed of 58.82% females, whereas the LLSES contained 61.56% males.

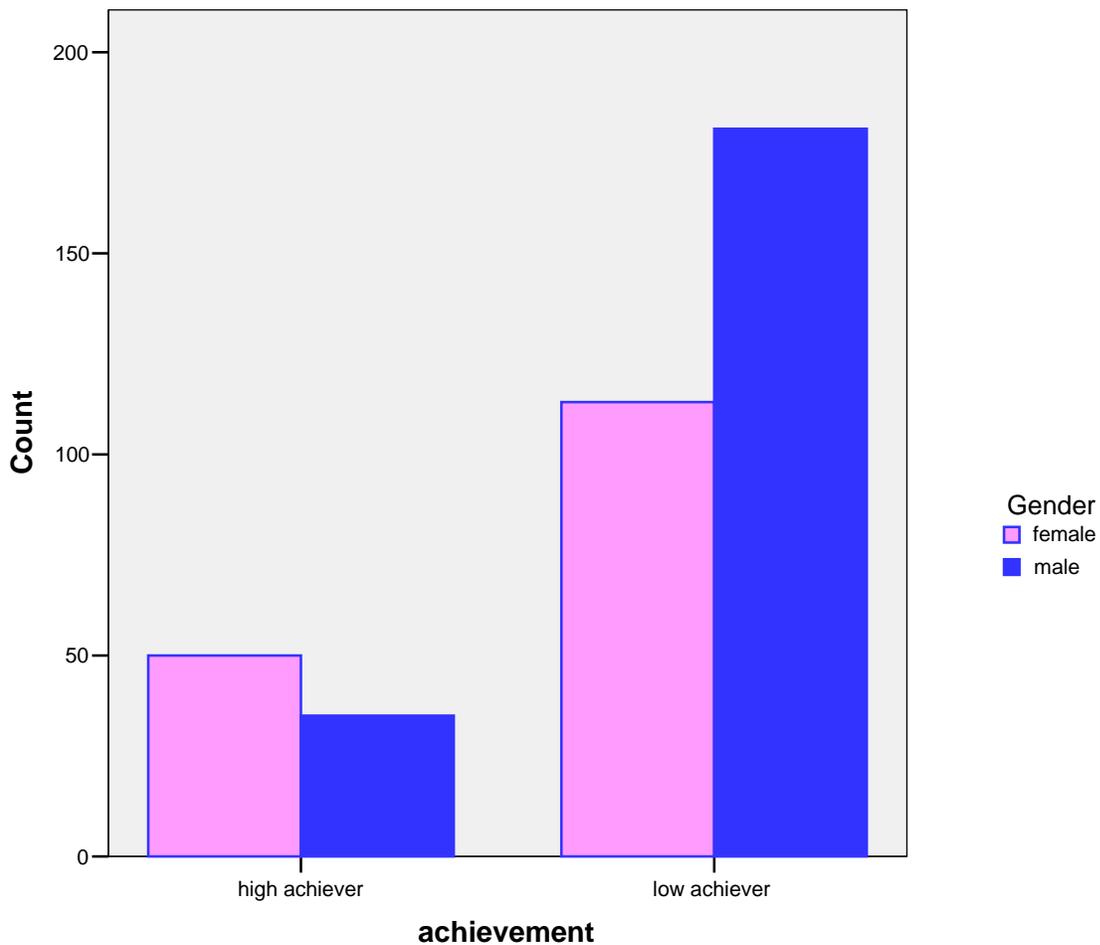


Figure 2. Clustered Bar Chart Showing Gender Within Achievement Groups

A two-way contingency table analysis was conducted to evaluate whether there was a statistically significant relationship between student achievement group and students' ethnicity. The two variables were student achievement group (HLSES –GPA of 2.5 or higher at the end of their freshman year and LLSSES – GPA lower than 2.5 at the end of their freshman year) and ethnicity, (White, Black and Hispanic). Achievement group and ethnicity were found to be significantly related, Pearson  $X^2(2, N = 378) = 7.76, p = .02$ , Cramer's  $V = .14$ . As a result of this analysis,  $H_0:1_3$  was rejected. The percentage of higher achieving students by ethnic group were White = 63.53%, Black = 30.58%, and Hispanic = 5.88%.

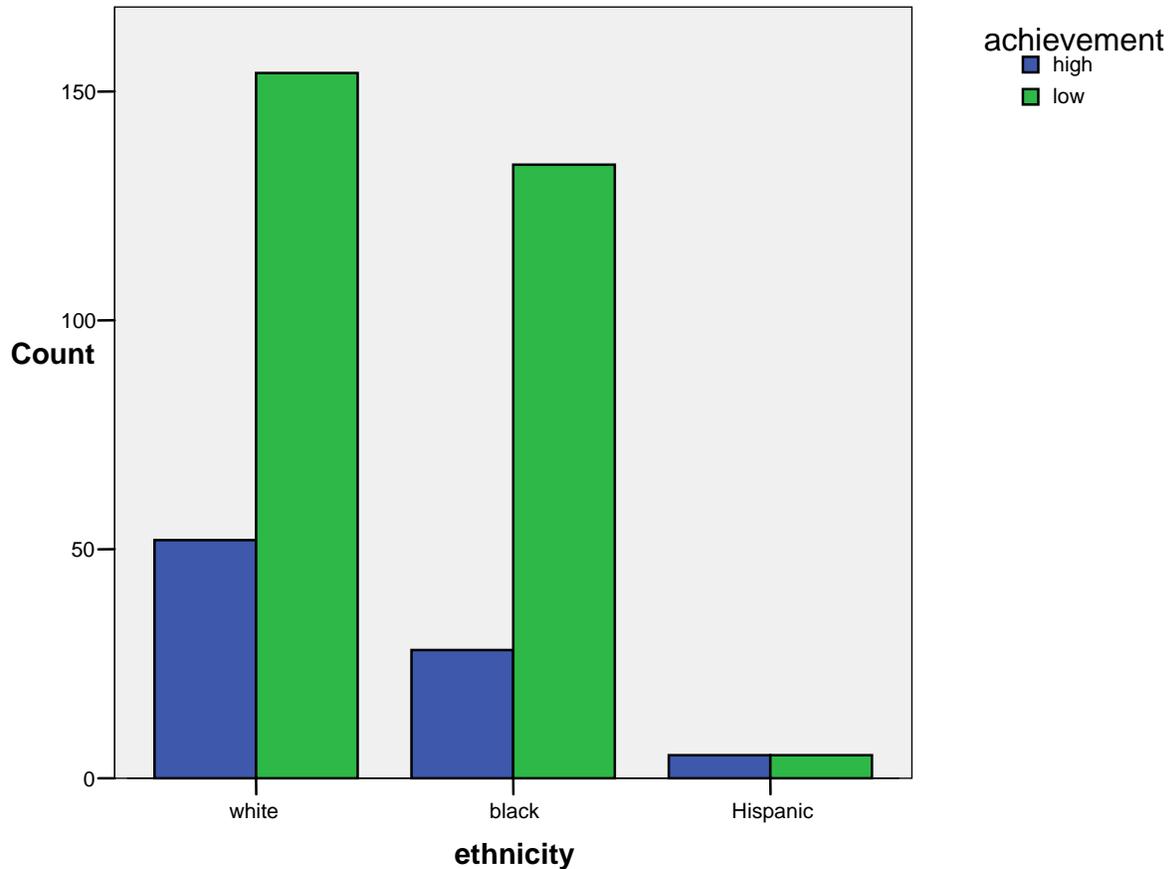
Follow-up pairwise comparisons were conducted to evaluate the difference among these proportions. Table 3 and Figure 3 shows the results of these analyses. The Holm's sequential Bonferroni method was used to control for Type I error at the .05 level across all three comparisons. The only pairwise difference that was significant was between the Black and Hispanic groups. The probability of a student being higher achieving was about 2.94 times (.50/.17) more likely when a student was Hispanic as opposed to Black.

Table 3

*Results for the Pairwise Comparisons Using the Holm's Sequential Bonferroni Method*

| Comparison         | Pearson $X^2$ | $p$ value (Alpha) | Cramer's $V$ |
|--------------------|---------------|-------------------|--------------|
| Black vs. Hispanic | 6.50*         | .011 (.016)       | .19          |
| White vs. Black    | 3.38          | .066 (.025)       | .10          |
| White vs. Hispanic | 3.00          | .083 (.05)        | .12          |

\*  $p$  value  $\leq$  alpha



*Figure 3. Clustered Bar Chart of Achievement Within Ethnic Groups*

*Research Question #2*

*Are there differences between HLSES students and LLSES students during their freshman year in an urban high school in East Tennessee with regard to the following characteristics: (a) seventh-grade TCAP scores in reading-language arts and mathematics, (b) number of days of out-of-school suspension, (c) students' literacy grade level equivalency in reading, (d) students' mobility rate, and (e) students' attendance?*

The hypotheses associated with this research question were:

- Ho2<sub>1</sub>: There is no difference in seventh grade reading-language arts TCAP scores between the HLSES and LLSES groups.
- Ho2<sub>2</sub>: There is no difference in seventh grade mathematics TCAP scores between the HLSES and LLSES groups.
- Ho2<sub>3</sub>: There is no difference in the number of days suspended between the HLSES and LLSES groups.
- Ho2<sub>4</sub>: There is no difference in students' grade level literacy scores between the HLSES and LLSES groups.
- Ho2<sub>5</sub>: There is no difference in students' attendance rates between HLSES and LLSES groups.
- Ho2<sub>6</sub>: There is no difference in the mobility rates of students between HLSES and LLSES groups.

To answer this research question, each criterion variable was measured and the differences between the two groups were calculated. Independent-samples *t* tests were used to compare the mean differences between the two groups.

The independent-samples *t* test for differences in the means of the HLSES and LLSES groups with regard to seventh-grade reading-language arts TCAP scores was significant,  $t(311) = 5.04, p < .001$ . Students in the higher achieving, low socioeconomic group ( $M = 513.77, SD = 4.84$ ) tended to score higher on their seventh-grade reading-language arts TCAP exam than did those students in the lower achieving, low socioeconomic group ( $M = 482.83, SD = 46.33$ ). The 95% confidence interval for the difference in means was 18.85 to 43.02. The  $\eta^2$  index was .08. As a result of this analysis, Ho2<sub>1</sub> was rejected. Figure 4 shows the distribution of seventh-grade TCAP reading-language arts scores for higher achieving and lower achieving groups.

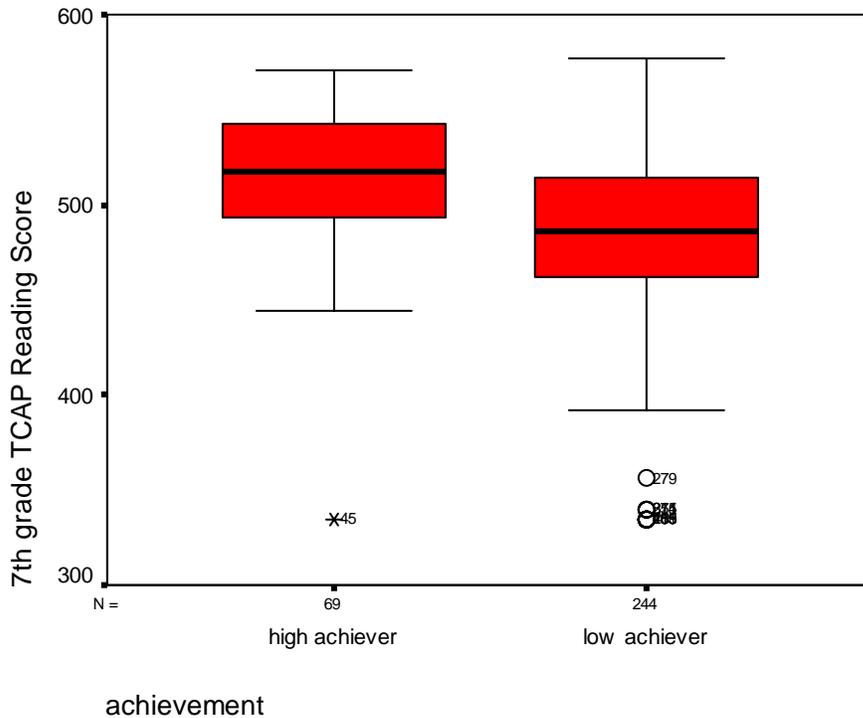


Figure 4. Distribution of 7th-Grade TCAP Reading-Language Arts Scores for Higher Achieving and Lower Achieving Groups

The test for differences in the means of the HLSES and LLSES groups with regard to seventh-grade math TCAP scores was also significant,  $t(312) = 4.36, p < .01$ . Students in the higher achieving, low socioeconomic group ( $M = 516.68, SD = 41.12$ ) tended to score higher on the seventh-grade math TCAP exam than did those students in the lower achieving, low socioeconomic group ( $M = 490.77, SD = 44.29$ ). The 95 % confidence interval for the difference in means was 14.21 to 37.61. The  $\eta^2$  index = .06. As a result of this analysis,  $H_0$  was rejected. Figure 5 shows the distribution of seventh-grade TCAP math scores for higher achieving and lower achieving groups.

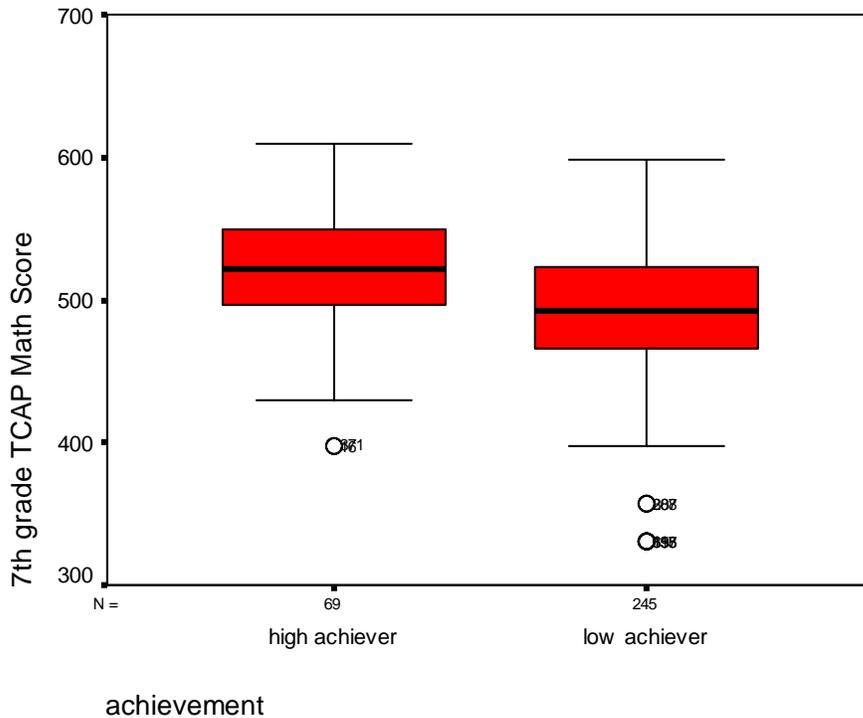


Figure 5. Distribution of 7th Grade TCAP Math Scores for Higher Achieving and Lower Achieving Groups

The test for differences in the means of HLSES and LLES groups with regard to the number of days suspension was significant,  $t(314.81) = 8.07, p < .001$ . Students from the LLES group ( $M = 11.27, SD = 21.33$ ) tended to be suspended more often were than those from the HLSES group, ( $M = .99, SD = 2.39$ ). The 95 %confidence interval for the difference in means was  $-12.79$  to  $-7.77$ . The  $\eta^2$  index = .14. As a result of this analysis,  $H_0$  was rejected. Figure 6 shows the distribution of number of days of suspensions for higher achieving and lower achieving groups.

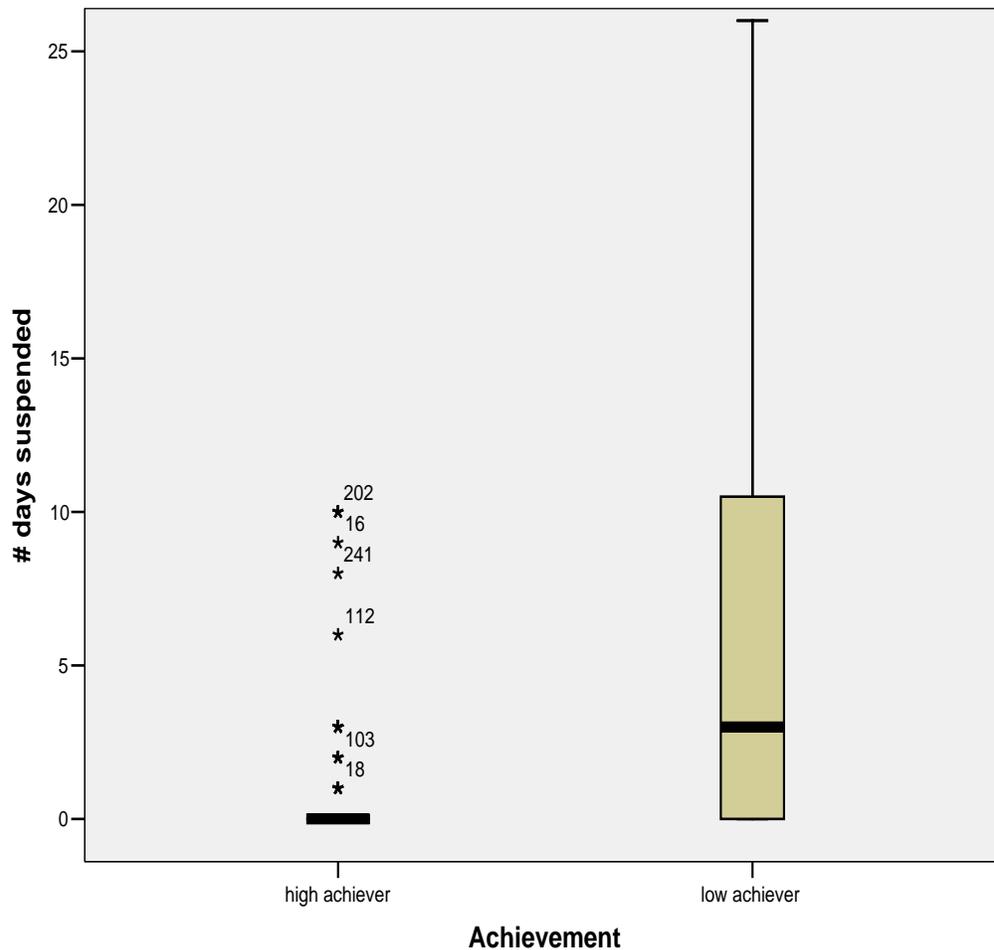


Figure 6. Distribution of Number of Days Suspended for Higher Achieving and Lower Achieving Groups

The test for differences in the means of HLSES and LLSES groups with regard to grade level literacy scores was significant,  $t(109.34) = 3.88, p < .01$ . Students from the HLSES group ( $M = 7.97, SD = 3.40$ ) tended to read at a higher grade level than did those in the LLSES group, ( $M = 6.30, SD = 2.99$ ). The 95 % confidence interval for the difference in means was .81 to 2.52. The  $\eta^2$  index = .04. As a result of this analysis,  $H_{024}$  was rejected. Figure 7 shows the distribution of literacy rates for higher achieving and lower achieving groups.

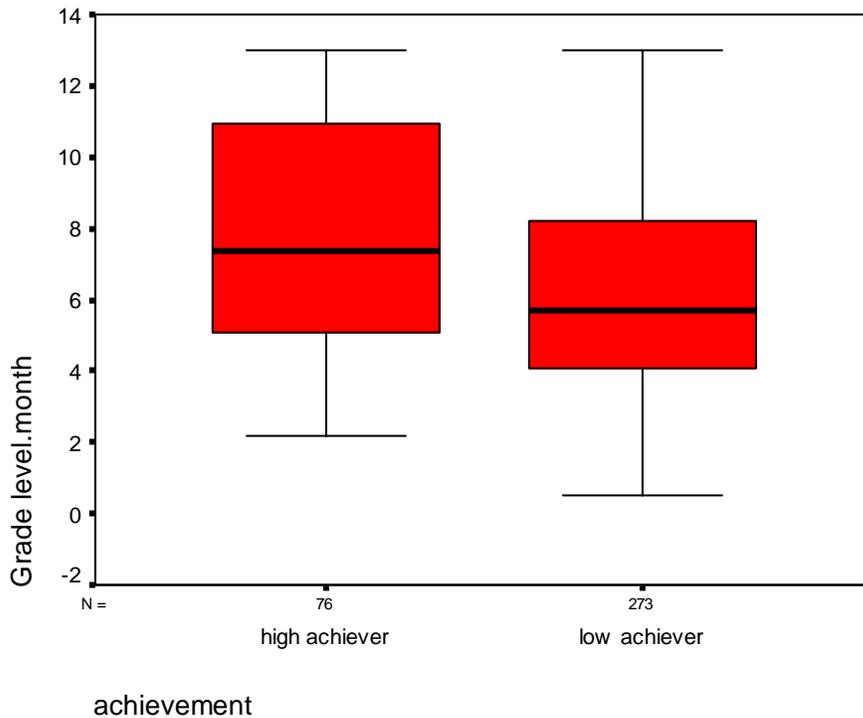


Figure 7. Distribution of Literacy Rates for Higher Achieving and Lower Achieving Groups

The test for differences in the means of HLSES and LLSES groups concerning student attendance was significant,  $t(346.20) = 10.29, p < .01$ . Students from the HLSES group ( $M = 7.47, SD = 7.98$ ) were more apt to attend school regularly than were those from the LLSES group, ( $M = 22.68, SD = 20.44$ ). The 95% confidence interval for the difference in means was -18.12 to -12.30. The  $\eta^2$  index = .22. As a result of this analysis,  $H_0$  was rejected. Figure 8 shows the distribution of days absent for higher achieving and lower achieving groups.

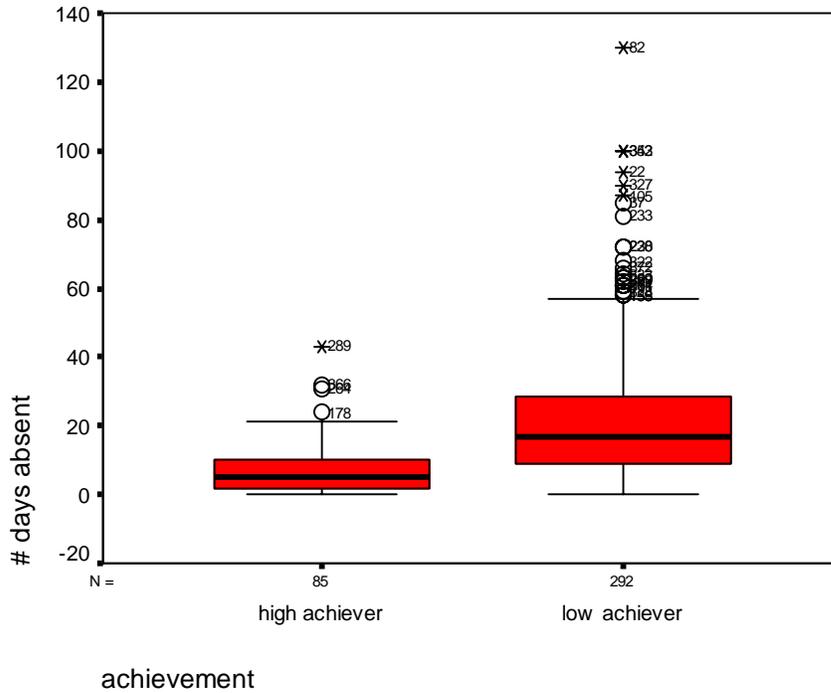


Figure 8. Distribution of Days Absent for Higher Achieving and Lower Achieving Groups

The test for differences in the means of HLSES and LLSES groups concerning mobility rates was not significant,  $t(359) = 1.13, p = .26$ . The  $\eta^2$  index was .01. Students from the HLSES group ( $M = 3.43, SD = 2.63$ ) experienced about the same number of transitions in schools as did students from the LLSES group, ( $M = 3.77, SD = 2.35$ ). As a result of this analysis,  $H_{026}$  was not rejected. The 95% confidence interval for the differences in means was -.94 to .25. Figure 9 shows the distribution of the number of school transitions over the past 5 years for high and low achieving groups.

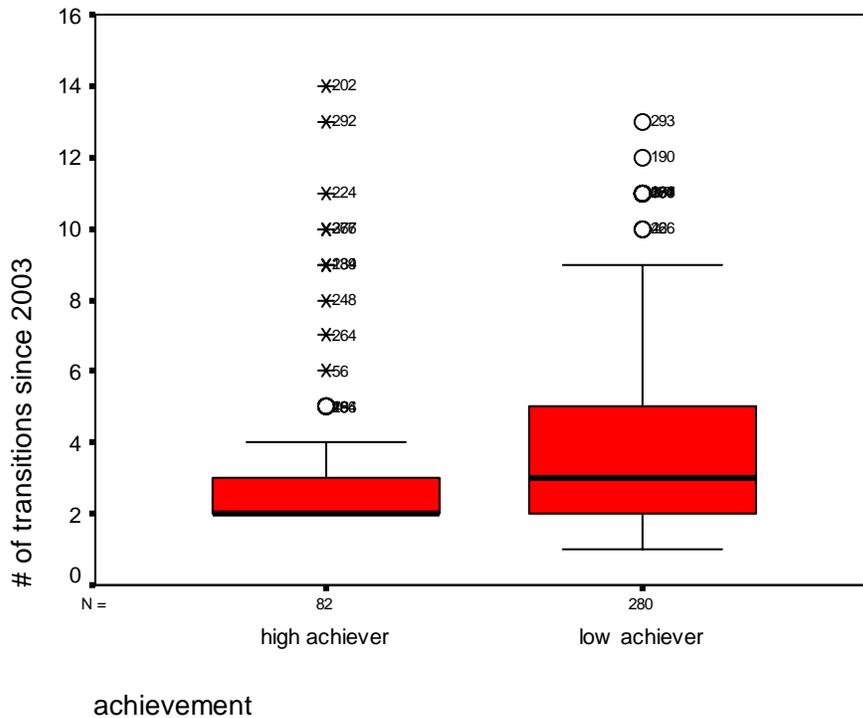


Figure 9. Distribution of the Number of School Transitions Over the Past 5 Years for High and Low Achieving Groups

Research Question # 3

Which of the nine predictor variables: (a) ethnicity, (b) students’ seventh-grade TCAP reading-language arts scores, (c) students’ seventh-grade TCAP math scores, (d) gender, (e) number of days suspended, (f) students’ individual literacy score, (g) students’ mobility rate, (h) attendance, and (i) involvement in extracurricular activities are most influential in predicting GPAs in low socioeconomic status, higher achieving (HLSES) freshmen in an urban high school in East Tennessee?

The hypothesis associated with this research question was:

Ho3<sub>1</sub>: There is no significant relationship between the criterion variable of HLSES’s freshman GPA and the composite variable of students’ ethnicity, students’

seventh- grade reading-language arts TCAP test scores, students' seventh-grade mathematics TCAP test scores, students' gender, the number of days each student was suspended, the students' literacy score, the students' mobility rate, the students' attendance, and the students' involvement in extracurricular activities.

A simultaneous multiple regression was conducted to evaluate how well a group of nine variables predict the criterion variable of GPA of HLSES freshmen. The predictor variables were: students' ethnicity, seventh-grade TCAP reading-language arts scores, seventh-grade TCAP math scores, gender, number of days suspended, individual literacy score, attendance, mobility rate, and involvement in extracurricular activities. The linear combination of the predictor variables was not significantly related to the GPAs of HLSES freshmen  $F(9, 53) = 1.21, p = .31$ . The multiple correlation coefficient,  $R = .41$ , indicated that approximately 17% of the variance of GPA in HLSES freshmen can be accounted for by the linear combination of the predictor variables. Table 4 presents the coefficients to indicate the relationship of individual predictors to students' GPA. None of the nine predictor variables was significant ( $p < .05$ ).

Table 4

*Coefficients of the Simultaneous Linear Regression Between HLSES Freshmen GPAs and Predictor Variables*

| Factor          | Unstandardized |      | Standardized<br>Coefficient<br>$\beta$ | <i>t</i> | <i>p</i> |
|-----------------|----------------|------|--|----------|----------|
|                 | B              | S.E. |  |          |          |
| Reading Level   | -.005          | .025 | -.034                                  | .193     | .848     |
| Ethnicity       | -.136          | .117 | -.167                                  | 1.159    | .252     |
| Gender          | -.082          | .126 | -.083                                  | .647     | .521     |
| Suspension      | -.045          | .038 | -.230                                  | 1.180    | .243     |
| Absences        | -.007          | .013 | -.092                                  | .564     | .575     |
| Extracurricular | -.118          | .133 | -.123                                  | .886     | .380     |
| TCAP Math       | .000           | .002 | -.031                                  | .147     | .883     |
| TCAP Reading    | .001           | .002 | .085                                   | .399     | .692     |
| Transitions     | -.010          | .031 | -.052                                  | .326     | .745     |

\*  $p < .05$

#### *Research Question # 4*

Which of the nine predictor variables: (a) ethnicity, (b) students' seventh-grade TCAP reading-language arts scores, (c) students' seventh-grade TCAP math scores, (d) gender, (e) number of days suspended, (f) students' individual literacy score, (g) student mobility rate, (h) attendance, and (i) involvement in extracurricular activities) are most influential in predicting

GPA's in impoverished, low achieving (LLSES) freshmen in an urban high school in East Tennessee?

The hypothesis associated with this research question was:

Ho4: There is no significant relationship between the criterion variable of LLSES's freshman GPA and the composite variable of students' ethnicity, students' seventh-grade reading-language arts TCAP test scores, students' seventh-grade mathematics TCAP test scores, students' gender, the number of days each student was suspended, the students' literacy score, the students' mobility rate, the students' attendance, and the students' involvement in extracurricular activities.

A simultaneous multiple regression was conducted to evaluate how well a group of nine variables predict the criterion variable of GPA of LLSES freshmen. The predictor variables were: students' ethnicity, seventh-grade TCAP reading-language arts scores, seventh-grade TCAP math scores, gender, number of days suspended, individual literacy score, attendance, mobility rate, and involvement in extracurricular activities. The linear combination of the predictor variables was significantly related to the GPA's of LLSES freshmen,  $F(9,211) = 27.76$ ,  $p < .01$ . The sample correlation coefficient,  $R = .74$  indicated that approximately 54% of the variance of LLSES freshman GPA's in the sample can be accounted for by the linear combination of predictor variables.

Table 5 shows the coefficients to indicate the relationship of individual predictors to students' GPA.

Table 5

*Coefficients of the Simultaneous Linear Regression Between LLSSES Freshmen GPAs and Predictor Variables*

| Factor          | Unstandardized Coefficient |      | Standardized Coefficient<br>$\beta$ | $t$  | $p$   |
|-----------------|----------------------------|------|-------------------------------------|------|-------|
|                 | B                          | S.E. |                                     |      |       |
| Reading Level   | .018                       | .015 | .068                                | 1.14 | .255  |
| Ethnicity       | -.009                      | .071 | -.006                               | .128 | .899  |
| Gender          | -.223                      | .075 | -.142                               | 2.99 | .003* |
| Suspension      | -.008                      | .002 | -.204                               | 3.77 | .000* |
| Absences        | -.020                      | .002 | -.468                               | 8.25 | .000* |
| Extracurricular | -.282                      | .084 | -.171                               | 3.34 | .001* |
| TCAP Math       | .001                       | .001 | .050                                | .819 | .414  |
| TCAP Reading    | .001                       | .001 | .050                                | .818 | .414  |
| Transitions     | -.033                      | .018 | -.091                               | 1.86 | .065  |

\*  $p < .05$

Four of the nine predictors were statistically significant ( $p < .05$ ). Each of the four had a negative relationship to student GPA, (Gender,  $p < .01$ ,  $\beta = -.22$ , suspension days,  $p < .01$ ,  $\beta = -.01$ , days absent,  $p < .01$ ,  $\beta = -.02$ , and involvement in extracurricular activities,  $p < .01$ ,  $\beta = -.28$ ). This means that as a LLSSES student's suspension days increased by one standard deviation, his or her GPA dropped .01 of a standard deviation, an inverse relationship. An inverse relationship also existed between days absent and student GPA. As days absent increased one standard deviation, GPA dropped .02 standard deviations.

The variables gender and extracurricular involvement are nominal variables as opposed to interval in the two before mentioned cases. For gender, female =1 and male =2. As the

gender value increased 1 standard deviation, (moving toward 2 = male) student GPA decreased by .22 standard deviations. This meant being male has a significant inverse effect on student GPA. Similarly, the variable extracurricular involvement is nominal. Involvement during the freshman year = 1, noninvolvement = 2. As the extracurricular involvement variable increased one standard deviation, (moving toward 2 = noninvolvement), student GPA decreased .28 standard deviations. This meant noninvolvement in extracurricular activities during the freshman year had a negative effect on a student's GPA.

#### *Research Question #5*

*Interviews.* Follow-up interviews were conducted with 10 students from the higher achieving group of freshmen to determine factors that these students considered important to their success. Three questions were asked of each of the selected students.

1. In your opinion, what one factor allowed you to have academic success during your freshman year of high school?
2. How did (the before-mentioned factor from question #1 response) contribute specifically to your academic success?
3. What could schools do to enable more students to experience academic success during their freshman year?

The students interviewed cited two main reasons for academic success during their freshman year. Many of them credited having self-discipline and determination that drove them to pursue their education and to make it a top priority in their lives. Students also cited the presence of a supervising adult in their life to help guide them and to keep them focused on academics as a cause for their success.

Students reported that their self-discipline allowed them to see long-range goals and to ignore the callings of instant gratifications in lieu of future options following graduation. They said they also felt that having a loving caring adult invest time and energy in them had caused

their confidence to soar during their freshman year and enabled them to believe they could succeed in school.

The students interviewed left three suggestions for improving the success rate of future freshmen. First, learning must be fun. These students said they felt others would learn more effectively if they were actively engaged and interested in their studies. They also said that the urgency of the freshman year and the credits that could be earned should be stressed to all ninth graders. These students related that too many freshmen blow off their first year thinking they will have time to make everything up, only to find they lose interest and drop out later. Finally, they suggested that schools should develop programs and support groups so that students could understand in more detail the importance of succeeding academically during their freshman year.

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

*Summary*

The intent of this chapter is to summarize and explain the data analysis results of this study in relation to factors that were related to grade point averages of low socioeconomic, urban students in an East Tennessee high school and to make recommendations for future practice and research. Some researchers have called the dropout problem in U.S. high schools an epidemic (Bridgeland, 2006). Certainly one point is clear--the high school dropout rate has increased in recent years. Individuals who are not academically successful in high school face a bleak future. One demographic group making up the largest proportion of dropouts has been economically disadvantaged students. Federal accountability mandates, especially *No Child Left Behind*, have placed even greater emphasis on high school graduation. One academic year that has proven critical to a student's chances of graduating is the freshman year. Recent research has focused on the importance of the freshman year (Barton, 2005; Fields, 2005). If graduation is important to the future success of individuals and the freshman year is academically when students begin a pattern of success or failure, discovering the factors that have the greatest relationship with a freshman student's grade point average would provide essential information for educators.

*Findings*

This study was guided by four research questions. First, was there a significant difference between higher achieving and lower achieving, low socioeconomic freshmen with regard to three categorical predictor variables. Second, was there a significant difference between higher achieving and lower achieving, low socioeconomic freshmen with regard to six quantitative variables. Third, which of these nine factors had a significant relationship to a

student's GPA in the higher achieving group. Fourth, which of these nine factors had a significant relationship to a lower achieving freshman's GPA. At the conclusion of the statistical tests, 10 follow-up interviews were conducted in order for higher achieving freshmen to identify the factor(s) they believe helped them experience academic success during their freshman year.

There were nine predictor (independent) variables in this study. Students' literacy level scores were derived from their scores on the Renaissance Learning STAR Reading Test administered by computer during the fall of their freshman year. Whether or not a student was involved in an extracurricular activity during his or her freshman year was obtained from rosters kept in the school's guidance office for permanent records. The remaining seven variables of data were obtained from the school districts' digital database maintained by the central office. These variables were student ethnicity, student gender, number of suspension days, number of days absent, seventh-grade TCAP reading-language arts scores, seventh-grade TCAP math scores, and the number of transitions or schools, attended by each student over the past 5 years. Parents' permission to ask open-ended questions of the higher achieving, low-socioeconomic students was obtained in written form (see Appendix B).

The population in this study was composed of 377 ninth-grade students enrolled in one urban high school located in East Tennessee during the 2005-2006 and 2006-2007 school years. All subjects were selected based on their low socioeconomic status defined by whether or not students qualified for free- or reduced-price meals in their school. A frequency analysis was conducted to determine the demographics of the population. The analysis of low socioeconomic status freshman disclosed that 205 (54.3%) of the freshmen were White, followed by 160 (42.4%) Black, 10 (2.7%) Hispanic, and 2 (.53%) who chose the Other category. Of the participants, 213 of the freshmen (56.2%) were males compared with 162 females (42.7%). Only 134 (35.4 %) of freshmen were involved in extracurricular activities leaving 238 (62.8%) not involved. The population's mean number of suspension days was just under nine (8.97.) The average number of days absent was 19.24. The population's average TCAP math score was 496.46 and TCAP reading-language arts score was 489.65. The average number of transitions

over the past 5 years for the group was 3.70. The group had an average reading level of 6.67. The population's average GPA was 1.51.

These demographics changed considerably when comparing the higher achieving group with the lower achieving group. The higher achieving group contained 85 students whereas the lower achieving group had 292 students. With regard to ethnicity, the higher achieving group was composed of 52 (61.2%) Whites, 27 (31.8 %) Blacks, and 5 (5.9%) Hispanics. The lower achieving group had 151 (54.15%) Whites, 133 (45.5%) Blacks, and 5 (1.7%) Hispanics. Regarding gender, the higher achieving group consisted of 34 (40.0%) males and 49 (57.65%) females. The lower achieving group was made up of 178 (61.0%) males and 112 (38.4%) females. Forty-five (52.9%) of the higher achieving students were involved in extracurricular activities whereas 38 (44.7%) chose not to participate. The lower achieving group had 89 (30.5%) of the freshmen involved in extracurricular activities with 198 (67.8%) not participating. The higher achieving group averaged only .99 days suspension compared with 11.29 for lower achievers. The higher achieving group missed fewer days of school averaging 7.47 days whereas lower achievers missed on average, 22.67 days. The higher achieving group's average TCAP math score was 516.68 followed by an average of 490.95 by the lower achieving group. The higher achieving group also outscored the lower achieving group on average on the TCAP reading-language arts test, 513.77 to 482.80, respectively. There was little difference in average number of transitions over a 5-year period between the two groups. Higher achieving students averaged 3.43 transitions whereas low achieving students averaged 3.77 transitions. Higher achieving students averaged a reading level score of 7.97 followed by lower achieving students with a score of 6.30. Higher achieving students' average GPA was 3.00. Lower achieving students averaged a GPA of 1.09.

### *Research Questions*

A two-way contingency table analysis was conducted to evaluate whether there was a statistically significant relationship between student achievement group and those students' involvement in extracurricular activities. The two variables were student achievement group HLSES (GPA of 2.5 or higher at the end of their freshman year) and LLSSES (GPA lower than 2.5 at the end of their freshman year) and whether or not a student was involved in an extracurricular activity during his or her freshman year. Achievement group and involvement in extracurricular activity were found to be significantly related ( $p < .001$ ). The percentage of higher achieving students involved in extracurricular activities was 54.12% compared with only 30.27% of lower achieving students.

A two-way contingency table analysis was conducted to evaluate whether there was a statistically significant relationship between student achievement group and students' gender. The two variables were student achievement groups: HLSES (GPA of 2.5 or higher at the end of their freshman year) and LLSSES (GPA lower than 2.5 at the end of their freshman year) and gender. Achievement group and gender were found to be significantly related ( $p = .02$ ). The HLSES was composed of 58.82% females, whereas the LLSSES contained 61.56% males.

A two-way contingency table analysis was also conducted to evaluate whether there was a statistically significant relationship between student achievement group and students' ethnicity. The two variables were student achievement group: HLSES (GPA of 2.5 or higher at the end of their freshman year) and LLSSES (GPA lower than 2.5 at the end of their freshman year) and ethnicity (White, Black, and Hispanic). Achievement group and ethnicity were found to be significantly related ( $p = .02$ ). Of Hispanic students, 50% were in the higher performing group followed by 25% of all White students and 17% of all Black students.

Follow-up pairwise comparisons were conducted to evaluate the difference among these proportions. The Holm's sequential Bonferroni method was used to control for Type I error at the .05 level across all three comparisons. The only pairwise difference found significant was between the Black and Hispanic groups. The probability of a Hispanic low socioeconomic

student being higher achieving was about 2.94 times (.50/.17) more likely when a student was Black.

Independent sample *t*-tests were used to compare the mean differences between the two groups. The independent-samples *t* test for differences in the means of the HLSES and LLES groups with regard to seventh-grade reading-language arts TCAP scores was significant ( $p < .001$ ). Students in the higher achieving, low socioeconomic group ( $M = 513.77$ ,  $SD = 4.84$ ) tended to score higher on their seventh-grade reading-language arts TCAP exam than did those students in the lower achieving, low socioeconomic group ( $M = 482.83$ ,  $SD = 46.33$ ).

The test for differences in the means of the HLSES and LLES groups with regard to seventh-grade math TCAP scores was also significant ( $p < .001$ ). Students in the higher achieving, low socioeconomic group ( $M = 516.68$ ,  $SD = 41.12$ ) tended to score higher on the seventh-grade math TCAP exam than did those students in the lower achieving, low socioeconomic group ( $M = 490.77$ ,  $SD = 44.29$ ).

The test for differences in the means of HLSES and LLES groups with regard to the number of days suspension was significant ( $p < .001$ ). Students from the LLES group ( $M = 11.27$ ,  $SD = 21.33$ ) tended to be suspended more often than did those from the HLSES group, ( $M = .99$ ,  $SD = 2.39$ ).

The test for differences in the means of HLSES and LLES groups with regard to grade level literacy scores was significant. ( $p < .001$ ) Students from the HLSES group ( $M = 7.97$ ,  $SD = 3.40$ ) tended to read at a higher grade level during their freshman year than did those in the LLES group, ( $M = 6.30$ ,  $SD = 2.99$ ). The test for differences in the means of HLSES and LLES groups concerning student attendance was significant ( $p < .001$ ). Students from the HLSES group ( $M = 7.47$ ,  $SD = 7.98$ ) were more apt to attend school regularly than were those from the LLES group, ( $M = 22.68$ ,  $SD = 20.44$ ). This finding was supported by Bridgeland's 2006 study that showed 59% - 65% of dropouts interviewed had chronic absentees the year before they dropped out of school.

However, the test for differences in the means of HLSES and LLSES groups concerning mobility rates was not significant ( $p = .26$ ). Students from the HLSES group ( $M = 3.43$ ,  $SD = 2.63$ ) experienced about the same number of transitions in schools as did students from the LLSES group, ( $M = 3.77$ ,  $SD = 2.35$ ).

Eight of the nine predictor variables had a significant relationship between the higher and lower performing groups further supporting the current research in education. Extracurricular involvement in this study was significantly related to the higher achieving group. These data supported the study conducted by the National Center for Education Statistics (2005e) that showed an increase in involvement in extracurricular activities over the past decade in higher achieving, low socioeconomic student groups. Another fact mirrored by the current study is that like the NCES's study, both showed a lower level of involvement from low socioeconomic, lower achieving students. Gender had a significant relationship to higher academic performance in this study as in Sum's 2003 study that revealed 120 males per 100 females dropped out of high school over a 5-year period (1996-2000). The trend from this study showed males struggle more academically than females. The results of this study supported the findings of the National Center for Education Statistics (2005a) with regard to ethnicity. That report documented White students outperformed minority students academically in the SAT test. Another study conducted by the NCES (2005b) noted the poorer academic performance by the minorities resulted in a higher dropout rate for minority students. This trend was supported by this study with the exception of Hispanic students who, percentage-wise, outperformed both White and Black students. The validity of the finding for this study is non-significant based on the small number of Hispanic students involved, 10. The significance relationship disclosed in this study between a student's prior academic and current academic performance was supported by the report, *The Silent Epidemic* (Bridgeland, 2006). In this report, the number one reason (35%) high school dropouts reported for having dropped out of school was their previous lack of success in school. Rumberger (2003) came to the same conclusions. In his report, 39% of the dropouts interviewed reported failing in school as their number one reason for dropping out of school. This study also

found suspension to have a negative relationship to academic performance. This finding was supported by research conducted by Rausch (n. d.). Rausch concluded that students removed from school for discipline were more likely to be suspended again and the suspension did not contribute to students' improved learning. The data from this study supported literacy as being an important factor in high academic performance in school. This finding was supported by Ferguson's 2005 study that revealed 7,000 students dropped out of school each day. The number one reason Ferguson found that students dropped out of school was they did not have the literacy skills to keep up with the high school curriculum.

One exception found in this study was the research with regard to student mobility rates. This study's findings oppose the research from the NAEP in a report released in 2002 that stated students with two or more school changes over a 2-year period were half as likely to be proficient in reading as students with no changes. Rumberger's (1999) study conducted in California also suggested students' test scores from highly mobile high schools were significantly lower than students' scores from high schools with low mobility. Data from this study reported no significant relationship between students' mobility rates and academic performance.

A simultaneous multiple regression was conducted to evaluate how well a group of nine variables predict the criterion variable of GPA of HLSES freshmen. The predictor variables were students' ethnicity, seventh-grade TCAP reading-language scores, seventh-grade TCAP math scores, gender, number of days suspended, individual literacy score, attendance, mobility rate, and involvement in extracurricular activities. The linear combination of the predictor variables was not significantly related to the GPAs of HLSES freshmen ( $p = .31$ ). The multiple correlation coefficient,  $R = .41$ , indicating that approximately 17% of the variance of GPA in HLSES freshmen could be accounted for by the linear combination of the predictor variables. None of the nine predictor variables was significant ( $p < .05$ ).

A simultaneous multiple regression was also conducted to evaluate how well the same group of nine variables predicted the criterion variable of GPA of LLESSES freshmen. The linear

combination of the predictor variables was significantly related to the GPAs of LLESES freshmen, ( $p < .001$ ). The sample correlation coefficient,  $R = .74$  indicating that approximately 54% of the variance of LLESES freshman GPAs in the sample could be accounted for by the linear combination of predictor variables.

Four of the nine predictors (gender, suspension days, days absent, and involvement in extra curricular activities) were statistically significant ( $p < .05$ ). As students' suspension days increased 1 standard deviation, their GPA dropped .01 of a standard deviation, an inverse relationship. The more days a student was suspended the lower their GPA. An inverse relationship also existed between days absent and student GPA. As days absent increased 1 standard deviation, GPA dropped .02 standard deviations. Females were more likely to perform higher academically. There was a positive relationship between involvement in extra curricular activity and freshman GPA.

#### *Results of Follow-Up Interviews*

At the conclusion of the statistical analyses, 10 follow-up interviews were conducted by the researcher to allow higher achieving students the opportunity to report on the factor(s) that had the greatest impact on their academic success during their freshman year. Students credited two main factors for their academic success. The majority said they felt their own self-determination and self-discipline were to thank for their positive freshman grades. These ideas were reflected in statements such as, "You have to prioritize your life and know what is important." and "You have to decide to make good grades and chose to hang out with the right crowd." Many of these students seemed to have instilled in them an understanding of the importance of an education and said they realized this was their one shot to get it right so they had better seize the opportunity and succeed.

Many students also credited a sense of supervision and guiding force in their life to help direct them to the best path. A few mentioned special teachers who went the extra mile to help them stay focused on schoolwork. Others cited the vision and path set forward by their parents

from a very early age and admitted their parents placed high value on education. Intervention groups that focused on student's needs and academics also received credit for keeping students from steering onto the wrong path. One student credited his Upward Bound Program saying they were always talking about the importance of "academic stuff."

The students who said their own determination and discipline led them to academic success claimed their determination was encouraged by looking beyond the "day-to-day" and seeing a greater purpose--a purpose that allowed them to have a vision of something in the future that was worth more than instant gratification.

Students who had a caring adult in their life said knowing that someone cared and was accessible to them caused their confidence to grow and gave them the belief that they could make it. This group of students offered three major suggestions as to how a school might better increase the number of freshmen students who experience success. Students suggested that learning should be fun and entertaining. They mentioned that too often classes they attended during their freshman year were boring. They said they felt students were more apt to succeed when they find school interesting. Next, these students reported schools must spend time and be intentional about getting the message to all freshmen about the importance of beginning high school with academic success. Suggestions included inviting former students back to address groups of freshmen to describe the hardships faced by those who did not succeed in their freshman year. Finally, students said they felt schools should design a class that taught study skills and life skills that prepared students for success in the future.

### *Conclusions*

Based on the data analyzed during this study, it is possible to determine the factors that influence academic success for low socioeconomic students during their freshman year. The following conclusions were obtained from this study. Student involvement in extracurricular activities provides freshmen students a greater likelihood of academic success during their freshman year. Female freshmen have higher GPAs during their freshman year than their

counterpart male students. African American students face a greater academic challenge than do any other ethnic group during their freshman year. A student's scores on previous standardized tests (TCAPS) serves as an accurate predictor of GPA during a student's freshman year. The number of days a student is suspended during his or her freshman year does seem to have a relationship with freshman GPA. A student's literacy level does have a significant relationship to his or her freshman academic performance. The number of days students miss school during their freshman year does have a significant relationship to their academic performance. Students' mobility rate does not have a significant relationship with their academic performance during their freshman year. None of the nine factors tested were significant predictors of academic performance among higher achieving freshmen.

### *Recommendations for Practice*

The following recommendations are presented to counselors, teachers, and principals regarding academic success for high school freshmen:

1. All students need multiple opportunities to participate in extracurricular activities in their schools.
2. Prevention-type programs should target males and Black students with early interventions and academic support.
3. Decision makers should consider scores from standardized tests as good predictor data for academic performance during a student's freshman year.
4. Alternative forms of discipline should be developed in lieu of suspension. Days missed from school have a negative impact on students' education during their freshman year.
5. School systems should fund literacy initiatives. Good reading skills are major contributors to academic success.

### *Recommendations for Further Research*

1. This study should be replicated using a larger sample that would include multiple urban schools from additional geographic regions of the southern state.
2. This study should be replicated to include the influence of additional factors such as family factors.
3. This study should be replicated using additional years of freshman data from the same school.
4. A longitudinal design should be implemented in order for this group of freshman students to be tracked until graduation to see if their academic performance remains the same throughout their 4 years.
5. A qualitative study of impoverished freshmen might provide more details of students' success.

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APPENDICES

APPENDIX A

Federal Income Eligibility Guidelines

*Federal Income Eligibility Guidelines*

| Household Size | Reduced-Price Meals | Free Meals |
|----------------|---------------------|------------|
| 1              | 18,889              | 13,273     |
| 2              | 25,327              | 17,797     |
| 3              | 31,765              | 22,321     |
| 4              | 38,203              | 26,845     |
| 5              | 44,641              | 31,369     |
| 6              | 51,079              | 35,893     |

Source: United States Department of Agriculture, 2007

## APPENDIX B

### Questions for Higher Achieving Students

1. In your opinion, what one factor allowed you to have academic success during your freshman year of high school?
- 2..How did (the before-mentioned factor from question #1 response) contribute specifically to your academic success?
3. What could schools do to enable more students to experience academic success during their freshman year?

## APPENDIX C

### Parental Informed Consent Form

#### Factors Predicting Academic Success for Impoverished Urban High School Freshmen

Dear Parent:

*This Informed Consent will explain about your student being a participant in a research study. It is important that you read this material carefully and then decide if you will allow your student to volunteer.*

PURPOSE: The purpose of this research study is to determine factors that relate to low socioeconomic student's success during their freshman year of high school, in hopes of improving significant factors so future students can experience greater academic success. The first part of this study consisted of collecting data on freshman students in order to determine factors which contribute to academic success of freshman students in an urban school. The second part of the study will consist of 10 voluntary interviews of higher achieving freshmen.

DURATION Each of the 10 voluntary participants will be asked a series of questions over a 15-20 minute, one time interview. Each of the participants was selected based on his/her academic success during his/her freshman year.

PROCEDURES The procedures, will involve you as a research subject, include: Voluntarily being asked three questions by the researcher over a 15-20 minute interview. During this time the participants will be asked: (1) to identify the one factor they feel allowed them to have academic success during their freshman year, (2) How did the named factor from question 1 specifically impact their educational success during your freshman year, and (3) What could schools do to enable more students to experience academic success during their freshman year?

ALTERNATIVE PROCEDURES/TREATMENTS Participation in this process is voluntary. There are no alternative procedures except not to participate in the study.

POSSIBLE RISKS/DISCOMFORTS There is no risk anticipated to this research study. All answers given by student will be confidential. No participants will be identified by the researcher in this study. All interviews will be held at the location and time requested by the student and/or parent/guardian.

POSSIBLE BENEFITS The possible benefits of this research study are that the information received by the researcher will be communicated to the staff at this particular school. The school will use the information to construct new intervention programs to help other freshmen

experience similar academic success during their freshman years. Throughout this process students being interviewed may also develop a better sense of understanding of what support they need to continue to succeed in his/her school setting.

VOLUNTARY PARTICIPATION Participation in this research experiment is voluntary. Your student may refuse to participate or quit at any time. If your student decides to quit or refuse to participate, the benefits or treatment to which he/she is otherwise entitled will not be affected. Your student may quit by calling (Mr. Rysewyk), whose phone number is (594-1246). You will be told immediately if any of the results of the study should reasonably be expected to make you change your mind about staying in the study.

CONTACT FOR QUESTIONS Any questions you have about the research or the research process feel free to contact Mr. Rysewyk at 594-1246, or 594-1241, or by email rysewykj@k12tn.net.

You may call the Chairman of the Institutional Review Board at 423/439-6054 for any questions you may have about your rights as a research subject. If you have any questions or concerns about the research and want to talk to someone independent of the research team or you can't reach the study staff, you may call an IRB Coordinator at 423/439-6055 or 423/439/6002.

CONFIDENTIALITY Every attempt will be made to see that your student's study results are kept confidential. A copy of the records from this study will be stored in Mr. Rysewyk's office in a secured filing cabinet at Fulton High School for at least 5 years after the end of this research. The results of this study may be published and/or presented at meetings without naming you as a subject. Although your rights and privacy will be maintained, ETSU IRB, DHHS and personnel particular to this research ETSU Education Program have access to the study records. you as a participant in this investigation.

By signing below, you confirm that you have read or had this document read to you. You will be given a signed copy of this informed consent document. You have been given the chance to ask questions and to discuss your participation of your student with the Mr. Rysewyk. You freely and voluntarily choose to allow your student to be in this research project.

---

SIGNATURE OF PARENT

DATE

---

PRINTED NAME OF PARENT

DATE

---

SIGNATURE OF INVESTIGATOR

DATE

APPENDIX D

Minor Assent Form

I (please print) \_\_\_\_\_ have been informed that my parent(s)/guardian(s) gave me permission to participate in a study that will identify characteristics of students who were higher achieving during their freshman year, as defined by earning a GPA of 2.5 or higher.

My participation in this study is voluntary, and I have been told that I may stop participating at any time. If I choose not to participate, it will not affect my academic status in any way. I also understand that my participation is confidential; at no time will my name be used.

I understand my participation in the study will consist of a 15-20 minute interview held in a private conference room. During this time I will be asked to respond verbally to the following questions: 1) In my opinion, what one factor allowed me to experience academic success during my freshman year? 2) How did (the before-mentioned factor from question #1 response) contribute specifically to my academic success? 3) What could schools do to enable more students to experience academic success during their freshman year?

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

APPENDIX E

Letter of Permission to Use Student Data

Knox County Schools  
Andrew Johnson Building

January 28, 2008



Jon Rysewyk  
2712 Glacier Way  
Knoxville, TN 37924

Dear Jon Rysewyk:

You are granted permission to contact appropriate building-level administrators concerning the conduct of your proposed research study: *Factors Predicting Academic Success for Impoverished Urban High School Freshman*. Final approval of any research study taking place within the Knox County School system is contingent upon acceptance by the principal(s) at the site(s) where the study will be conducted. Include a copy of this permission form when seeking approval from the principal(s).

In all research studies names of individuals, groups, or schools may not appear in the text of the study unless specific permission has been granted through this office. The principal researcher is required to furnish this office with one copy of the completed research document.

Good luck with your study. Do not hesitate to contact me if you need further assistance or clarification of the research policies of Knox County Schools.

Yours truly,

A handwritten signature in cursive script that reads 'John Beckett'.

John Beckett  
Evaluation Specialist  
Phone: (865) 594-1735  
Fax: (865) 594-1709

Project No:070815

VITA

JONATHAN W. RYSEWYK

Personal Data:      Date of Birth: August 20, 1973  
                          Place of Birth: Wilmington, North Carolina  
                          Marital Status: Married  
                          Children: 2 Daughters : Alexandra and Emerson

Education:            University of Tennessee, Knoxville;  
                          B.A. Psychology  
                          1996  
  
                          University of Tennessee, Knoxville;  
                          M.S. Education  
                          1999  
  
                          Tennessee Technological University;  
                          Education Specialist, Ed.S;  
                          2004  
  
                          East Tennessee State University, Johnson City, Tennessee;  
                          Educational Leadership and Policy Analysis, Ed.D.;  
                          2008

Professional  
Experience:

                          Intern, Science;  
                          Bearden High School, Knoxville, TN;  
                          1998-1999  
  
                          Science Teacher / Basketball Coach,  
                          Oliver Springs High School;  
                          1999-2001  
  
                          Science Teacher and Department Head;  
                          Karns High School, Knoxville, TN  
                          2001-2003  
  
                          Assistant Principal;  
                          Fulton High School, Knoxville, TN  
                          2004-2008  
  
                          Executive Principal;  
                          Fulton High School, Knoxville, TN  
                          2008-Present

Honors and  
Awards:

2007 Milken National Educator Award for the State of Tennessee