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AN ANALYSIS OF THE RELATIONSHIP BETWEEN DROPOUT VARIABLES
AND THE RACE AND GENDER OF HIGH SCHOOL STUDENTS

by

Eddie Marcel Jones

A Dissertation

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Doctor of Education

Major: Leadership and Policy Studies

The University of Memphis

May 2012

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DEDICATION

To those who labored, fought, and struggled before me to pave the way for quality education. To my children -- Trevor and Erin – new paths have been cleared on this day; move forward and higher.

Deuteronomy 8:1-3

ACKNOWLEDGMENTS

There were so many folks who impacted this study that it is difficult to name them all. There were a few that remarked it couldn't be done, but their voices were hushed by the many who believed it could be done. As I reflect on those who deposited time, prayers, sweat, and tears, there are a few standouts that I must recognize for their contributions.

The inspiration for continuing to write in the midst of disappointments and discouragement came from both of my grandmothers who dropped out of grade school to help care for younger siblings and returned to complete their GED as middle aged adults. My mother and father carried this passion for education further and became the first generation of college graduates in their families. Now, my efforts have raised the standard even higher for the next generation.

Thank you to my wife, Tressa, for your patience and cheers along the way. You have been so accommodating since I started the doctoral program. You endured the bright lights coming from the living room at all times of the night while I was typing away at chapter after chapter. You even listened to all of my, "I give up" moments. You are special and I love you.

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Thank you to the best Dissertation Committee a graduate student could ever imagine. Dr. Larry McNeal, my advisor, dissertation chair, and friend for life. You have

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ABSTRACT

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The purpose of this study was to analyze the relationship between dropout variables and the race and gender of high school students in a mid-south suburban school district. Data was collected on 353 dropouts and 316 graduates that attended one of the district's eight high schools between the years 2006 - 2011. Variables selected for study included ethnicity, gender, special education classification, socioeconomic status, retention occurrences, absentee rates, behavioral infractions, and grade point average. Descriptive statistics, Correlations, Tests for Differences, and Logistic regression analysis were run to determine both the predictability of these variables and their relationship among the two ethnic and gender groups. The analysis also provided the answers to thirteen research questions posed.

Results from the various analyses revealed the variable grade point average was the best predictor for dropout occurrences. In each Hierarchical Logistic Regression model run, grade point average was highly significant. In the absence of grade point average, however, the other identified dropout variables became significant depending on which specific ethnic and/or gender group was being analyzed.

Since the results of this quantitative research provide a method for predicting dropout occurrences, both school district administrators and legislators could use a similar data collection and regression testing to predict dropout rates across this nation. Having this accurate knowledge would prove beneficial in establishing intervention programs, allocating resources for prevention, and implementing appropriate graduation

policies. Additionally, educators and other practitioners can better comprehend the impact that these variables have upon specific gender and ethnic groups. To this end, educators will be able to pinpoint the areas of need and develop effective intervention strategies that will aid in reducing the dropout rate.

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Chapter 1

Introduction

One of the most critical issues prevalent in America's educational system is the high school dropout rate (Barton, 2005). Nearly 50 years ago, Conant (1961) wrote that America was allowing "social dynamite" to accumulate in its most populated areas of the nation. For decades, America's public education system has faced the daunting task of lowering dropout rates in urban, suburban, and rural areas. While school districts have graduated numerous high school students, the educational system has failed in many ways to assist a growing number of students who struggle to remain in school until their secondary education is complete (Farrell, 1990). In fact, nearly one-third of the nation's students drop out before completing their diploma requirements each year (Bridgeland, Dulilio, & Morrison, 2006). According to Diploma (2008), 1.2 million students fail to graduate from high school annually. More recent estimates assess that between 3.5 million to 6 million people are currently without a high school diploma (CLMS, 2009). The trend of high school dropouts is so significant that America has declared the decline in high school graduation rates an epidemic (Bridgeland, 2006).

The problem of school dropouts is widespread among most of the nation's school districts (Christenson & Thurlow, 2004). According to Roderick (1993), over one-quarter of the students enrolled in high school never complete their high school requirements to earn a diploma. The crisis is specifically visible during the first year of high school when ninth grade enrollment surpasses all other grade levels due to mass numbers of entering freshmen failing to meet the requirements for 10th grade (Cohen & Smerdon, 2009). Essentially, districts are forced to deal with the projected number of

freshmen entering high school for the first time coupled with high numbers of at risk students repeating ninth grade coursework due to failure their first year.

These students are at risk of failure to attain a high school diploma. In fact, at risk students are more likely to make a decision prior to their senior year to drop out (Jordan, McPartland, & Lara, 1999). The students also develop factors that may negatively impact their enrollment status. These factors have been coined “push-pull effects” (Jordan et al., 1999). Push effects are occurrences within the school climate that may increase the desire to dropout. Pull effects are external factors that divert the focus of a student from completing school. For example, the reasons students drop out can be attributed to long-running academic failure or the occurrence of life events (Samuels, 2007). Students who experience pregnancy, bullying, gang influences, or tragedy within their family structure are at greater risk for dropping out, especially if there is no successful form of intervention. Moreover, those students who experience years of academic failure are at greater risk of long-running absenteeism that could lead to a decision to drop out (Samuels, 2007). The end result is a declining graduation rate.

Effectively dealing with a low graduation rate has been the focus of many school districts across this nation (Lehr, Johnson, Bremer, Cosio, & Thompson, 2003). School districts have initiated reform efforts which include converting large high schools into smaller learning communities and restructuring the way schools work (Cohen & Smerdon, 2009). Lehr et al. (2003) categorized these interventions according to five types. The five types of interventions are personal or affective, academic, family outreach, school structured, and work related. Personal or affective interventions may include personal counseling, student retreats, or even classroom based discussion.

Academic interventions may involve the provision of specialized courses or tutoring. Family outreach methods may include home visits. School structured interventions include alternative schools and even reducing the size of classes. Finally, work related interventions may involve the establishment of vocational training or volunteer/service programs.

Dropout intervention programs are common methods many districts are using to assuage the growing number of high school dropouts (Lehr et al., 2003). In fact, there is ample high school dropout research that supports the reform efforts these school districts are undertaking (Dynarski & Gleason, 2002). There is equally as much research available that examines the national trends and the negative impact these trends have upon the American society (Bloom, 2010; Economic Committee, 1991; Jenkins, 2006; Office of Juvenile Justice and Delinquency Prevention, 1995). As important as all dropout literature is, the research that looks closely at dropout variables and the relationship between race and gender is the focus of this study. Looking closely at these as opposed to focusing on their effect on society allows the researcher to arrive at the root of the problem. This study may provide more insight as to why individuals choose to dropout of school before completing their diploma requirements.

Background to the Study

Although much research has been devoted to the issue of dropouts, the issue of high school dropouts continues to plague several school districts (Greene, 2002). Many of these districts have taken both a proactive and reactive stance, developing reform programs to address the dropout problem (Christenson & Thurlow, 2004). In the early 1980's an educational reform movement began with the publication of *A Nation At Risk*

Report (Roderick, 1993). Published by The National Commission on Excellence in Education, the report brought much attention to the failures of the American system of education.

The report failed, however, to address the growing problem of school dropouts. In fact, the dropout problem was not even mentioned as a possible factor for at risk behavior in the educational system (Roderick, 1993). Instead, the report focused on the call for stricter standards regarding performance and competency measures (Stedman & Smith, 1983). The report also concluded that student achievement was dismal when compared internationally with other industrialized nations (Roderick, 1993). Soon after the report, other reports were published, identifying the rising number of dropouts as a primary indicator of the failure of the American system of education. Edleman and Howe (1985) proffered that the dropout problem is the most significant indication of school failure.

The increasing dropout problem has several residual effects. According to Roderick (1993), high school dropouts will earn less than their graduate counterparts. In addition, even with some college experience, high school graduates earn twice as much as men without high school diplomas (Kronick & Hargis, 1998; McKinley, Bloom, & Freeman, 1990). Furthermore, dropouts are also more likely to be unemployed than high school graduates. The lack of employment leads to other societal issues including the need for public assistance and the likelihood of imprisonment (Dropout, 1998). Also, according to research conducted by U.S. Department of Education (1998), the majority of America's prisoners are high school dropouts (Tyler & Lofstrom, 2009; U.S. Department

of Education, 1998). Consequently, the dropout problem has residual effects on the American society.

Exacerbating the dropout issue in America are the numerous risk factors that many students face as early as birth (Christenson, Sinclair, Lehr, & Godber, 2001). Students classified as socio-economically disadvantaged require financial assistance in the home and at the school level. Students who are diagnosed as cognitively dysfunctional often require special education assistance. Socio-economic status and cognitive function are clearly two factors that were not directly introduced by the school system but the result of influences outside the realm of the educational system. Education legislation, however, still places responsibility of public schools to educate all children (NCLB, 2001).

An important piece of educational legislation, The No Child Left Behind Act (NCLB), has increased awareness of the growing dropout problem, especially with regard to schools' meeting their Adequate Yearly Progress – AYP (Patterson, Hale, & Stessman, 2008; Sparks, 2010). Defined clearly by the No Child Left Behind Act, school districts must meet and maintain adequate yearly progress as measured by achievement test scores and graduation rates (NCLB, 2001). Not meeting AYP requirements of minimal graduation rates, many school districts are challenged to address this problem (Sparks, 2010).

Nearly 40% of students drop out at the end of their ninth grade year (Editorial Projects in Education Research Center, 2006). Unfortunately, low graduation rates are becoming the norm for many high schools, especially those within urban school districts (Mishel & Roy, 2006; Rumberger & Rodriguez, 2002). In these low-income urban areas,

the ninth-grade year becomes the pivotal point when the decision to dropout is most critical.

Research conducted by Balfanz and Legters (2004) revealed that nearly 50% percent of all dropouts are the product of 15% of all high schools located in highly impoverished communities. The term “dropout factory” has been coined to label nearly 2,000 schools nationwide whose senior class is comprised of 60 percent or fewer of the students that entered as freshmen (Balfanz & Legters, 2004; Duke & Jacobson, 2011). The largest concentration of these dropout factories appears in large cities and highly impoverished rural areas (Balfanz & Legters, 2004). Common to both large cities and high-poverty rural areas is a high minority population as well. In fact, research conducted by Carpenter and Ramirez (2007) indicates the existence of unique patterns of academic achievement between African American and Caucasian students at risk for dropping out.

Problem Statement

Several variables contribute to the decision to dropout of high school prior to completing graduation requirements (Macmillan, 1991; Rumberger, 1995; Rosenthal, 1998; Suh, Suh, & Houston, 2007; Wolman, Bruininks, & Thurlow, 1989). These variables vary in their impact upon students. In general, most research concludes that the presence of two or more of these variables greatly increases the chances a student will dropout (Carpenter & Ramirez, 2007). These findings, however, vary according to the race and/or gender of the student. This study will analyzed the relationship between selected variables and the race and gender of high school students attending a mid-south suburban school district. Research identifies several dropout variables, primarily

absenteeism, academic performance, disciplinary issues, family structure, and socioeconomic status (Battin-Pearson & Newcomb, 2000; Lillard & DeCicca, 2001; Suh et al., 2007). For purposes of this study the dropout variables were absenteeism, retention, grade point average, age of student, socioeconomic background, behavioral infractions, and special needs classification.

Research Questions

The key questions that guided this research inquiry were:

1. Examined in the aggregate and as grouped by legal age of departure, how does a selection of demographic and institutional variables describe a population of students who have dropped out of schools in a moderately-sized suburban district during the previous five years?

2. After pooling observations made on a comparable sample of graduates with those made on the dropout population, what relationships emerge between each of the selected variables taken individually and a student's status as a graduate or dropout?

3. What differences in the strength of such relationships are seen when observations made on the population of dropouts grouped by legal age of departure are compared?

4. After pooling observations made on the sample of graduates with those made on the dropout population, what institutional and demographic variables, when simultaneously examined, are observed to predict dropping out of school, both for the aggregate and as grouped by legal age of departure?

5. Examined in the aggregate and as grouped by legal age of departure, how does the selection of demographic and institutional variables describe the population of White

students and Black students who have dropped out of school under the circumstances previously outline?

6. When the pooled observations made on graduates and on White and Black dropouts are analyzed, what relationships emerge between each of these selected variables taken individually and a student's status as a graduate or dropout, both for the aggregate and as grouped by legal age of departure?

7. What differences in the strength of such relationships are seen when observations made on the population of White and Black dropouts are compared, both in the aggregate and by legal age of departure?

8. After pooling observations made on graduates and dropouts, what institutional and demographic variables, when simultaneously examined, are observed to predict dropping out of school for White students and Black students, considered in the aggregate?

9. Examined in the aggregate and as grouped by legal age of departure, how does the selection of demographic and instructional variables describe the populations of a male and female students who have dropped out of school under the circumstances previously outlined?

10. When the pooled observations made on graduates and male and female dropouts are analyzed, what relationships emerge between each of these selected variables taken individually and a student's status as a graduate or dropout, both for the aggregate and as grouped by legal age of departure?

11. What differences in the strength of such relationships are seen when observations made on the populations of male and female dropouts are compared, both in the aggregate and by legal age of departure?

12. After pooling observations made on graduates and dropouts, what institutional and demographic variables, when simultaneously examined, are observed to predict dropping out of school for male and female students, considered in the aggregate?

13. In crossing the gender and ethnic characteristics of students in the dropout population, what relationships emerge between the remaining variables and a student's status as a dropout or graduate; how does the strength of such relationships compare across groups?

Purpose of the Study

The purpose of this study was to analyze the relationship between selected dropout variables and the race and gender of high school students who were enrolled in a mid-south suburban school district. The literature contains few studies that detail the relationships between the variables and race/gender of high school students; therefore, a study focused on understanding the dynamics of how variables impact various subgroups is proposed. The intent of this study was to determine if relationships existed between the selected variables, race, and gender.

Definition of Terms

The following terms were defined according to their usage in this study and ensure clarity in this research.

1. African American/Black. Individuals classified as African American/Black are American citizens from African descent -- the offspring of African slaves, Negro,

Black (African American, 2001). This definition includes individuals from mixed heritages with one parent from African descent. In the review of literature, the term Black is used interchangeably with the term African American. However, for purpose of this study, the term African American will be used.

2. AYP (Adequate Yearly Progress). The term AYP relates to state-defined minimal levels set for improvement in student achievement (as measured by standardized achievement tests), graduation rate, attendance, and safety. Benchmarks are set for overall achievement as well as for subgroups of students by race, economic status, and disabilities (NCLB, 2001).

3. Caucasian/White. Individuals classified as Caucasian/White are Americans that are indigenous to Europe, northern Africa, western Asia -- European-American, White-American, Caucasian (Caucasian, 2001). In the review of literature, the term White is used interchangeably with the term Caucasian. However, for purpose of this study, the term Caucasian will be used.

4. Dropout. Dropout is an academic term used to describe the enrollment status of a student at the start of the school year. National standards for dropouts include: (a.) student enrolled in school the previous year; and (b.) not enrolled at the beginning of the school year; and (c.) has not graduated from high school; and (d.) does not meet any of the exclusions such as transferred to another public school district or private school, temporary absence due to illness or suspension, or death (NCES, 1999).

5. Dropout rate. Three kinds of dropout rate statistics have been identified. They are (a) Event or Annual; (b) Status; and (c) Cohort (Coley, 1995; MacMillan, 1991). The Event rate measures the proportion of dropouts in a single year. The Status dropout rate

represents the percentage of 16-24 year olds that are not enrolled in school and have not earned a high school diploma or equivalent such as a General Educational Development [GED] certificate (NCES, 2010). The Status rate measures the proportion of students who have dropped out regardless to when they withdrew. The Cohort rate measures a single group of dropouts over a period of time (Thurlow, Sinclair, & Johnson, 2002). For purpose of this study, the cohort dropout rate will be utilized.

6. Dropout variable. Dropout variables are factors that may contribute to the decision to leave school before completing the requirements for a high school diploma. For the purpose of this study, the dropout variables are absenteeism, retention, grade point average, age of student, socioeconomic background, behavioral infractions, and special needs classification. These were used in this study due to their availability through the school district's database.

7. Legal Age of Departure. The coding used to identify dropouts in a suburban school district located in the mid-south grouped dropouts according to the legal age of the student at the time of departure or dropping out. Students that dropped out under the age of 18 were coded as "00." Students that dropped out at the age of 18 and over were coded as "01." Thus, the terms "under 18" and "18 and over" were used to define two separate groups of dropouts.

8. Subgroups. For purposes of this study, subgroups are defined as African American and Caucasian students who have been declared as dropouts in a mid-south school district.

Significance of the Study

This study is important for school level personnel and district level administrators who are challenged with the demands of increasing high school graduation rates. Since the origins of compulsory education, dropout rates have been of grave concern to school districts across America (Matthews, 2006; Mishel & Roy, 2006). Today, increased academic accountability mandated by *NCLB* for every school district in the United States has made it a priority for all students to graduate and contribute to society. Many school districts across the nation are attempting to address the problem of high school dropout rates.

First, these districts must begin with identifying common predictive factors. Identifying predictive indicators helps to diagnose the root causes of dropout behavior. Examining how these indicators affect various subgroups can assist district level leaders with developing effective policy and programs. Intervention and prevention programs and policies may, in turn, play a key role in curbing the rising dropout rate.

For researchers, this study will add to the existing body of knowledge on the relationship between dropout variables, race, and gender. The bulk of research conducted in the area of dropouts takes either a quantitative angle (emphasizing the differences between the various subgroups) or a qualitative approach (focusing on identifying key variables for high school dropouts).

Theoretical Framework

According to research conducted on high school dropouts, several factors may influence the decision withdraw from school before completing the requirements for a diploma. Fine (1987) suggested that dropout indicators range from the student's home

environment and economic confines which the student lives to the conditions of the school environment. Vincent Tinto's theory of school withdrawal provides a comprehensive explanation as to why early school leavers decide to dropout. Tinto intimates that the deciding factor of whether a student will withdraw early depends largely upon whether the individual has developed a social attachment to the school and become integrated academically into the school community (Tinto, 1975). Academic integration is evidenced by the grades the student receives and his or her expression of like/dislike for the subject(s) being taught. Social integration involves the acquisition of friends among the student's peer group as well as the amount of personal interaction between the student and staff (Tinto, 1987). The decision to dropout may be the result of a multidimensional process that involves interaction between the student and the institution. Tinto (1987) adds that a student's experience during the first term of his or her transition is vital to the longevity of the student's school career. Tinto's model, also called the Student Integration Model, suggests that a balance between academic and social integration increases the likelihood that the student will remain in school (Tinto, 1975). Consequently, integration in one area more than the other area may lead to a decision to drop out.

Tinto (1987) intimates that integration is a process and viewed the decision to dropout in three phases. He derived his view from a social anthropology standpoint, making the observation that a person's movement from one tribal group to another is closely paralleled with the transition that a high school graduate experiences moving from home to a college community. Both transitions involve separation from the familiar, transition to the unfamiliar, and incorporation or integration (Tinto, 1987).

While Tinto's research was focused on college students, in some aspects, transition to college differs from the transition experienced by middle school students moving to a high school setting. There are many more commonalities, however, that make Tinto's theory relevant to the high school student at risk for dropping out. One state report indicated that the greatest incidence of dropouts occurred in Grade 9 (Texas Education Agency, 2003). Moreover, another study noted that black males had a greater likelihood of failing at least one subject during the first semester of their ninth grade year than any other ethnic/gender group (Roderick & Camburn, 1999). Due to the fact that the transition from middle school to high school can be so difficult for some students, early interventions are recommended before middle and high school to prevent large numbers of dropouts from occurring (Stegelin, 2002). Dropping out of school is the result of long term disengagement from the school culture; therefore, providing intervention strategies early on may offset the growing number of dropouts in America (Alexander & Entwisle, 1997; Hess, 2000).

School transitions are often associated with decreased self-esteem, decreased involvement in extracurricular activities, and decreased grade performance (Cantin & Boivin, 2004). Each of these factors can have a negative impact on the decision to remain in school. As social demands and academic rigor increase, the support adolescents receive may be absent. The stress of adjusting to demands of new environments and a demanding curriculum can result in the process of disengagement (Roderick, 1993). When the student is not attached to the new school environment and other at risk factors are added, the decision to dropout is impacted even greater. Regardless to the student's academic level, disengagement from the school's culture is a

strong influence in the decision to dropout prior to completing graduation requirements. It is for the reasons discussed that Tinto's model is an appropriate theory to frame this study.

Limitations of the Study

The limitations in this study were the result of several factors. First, due to the limited population of this study, the data was generalized to a specific population of students. In addition, the results of this study were limited to the accuracy of the data collected and archived in the district's main frame computer system.

Delimitations of the Study

The study was limited to:

1. While this study sought to identify select key dropout variables and examine their relevance within subgroups, it failed to consider all dropout variables.
2. Only high school dropouts were considered for this study. Students that dropped out prior to high school were not considered.
3. Only African American and Caucasian students were examined in this study. Students of Asian and Hispanic origin were not considered.
4. Dropouts prior to the 2006-07 academic school year or after the 2011-12 school year were not used for this study. Only dropouts that occurred within this five-year period of reporting were considered.
5. The data collected is confined to a select population of students within a mid-south suburban district. Ideally, this particular district differs in many ways (especially with respect to socioeconomics) from other mid-south school districts. Suburban school districts often report a 15% gap between their dropout rate and urban school districts'

rates (Mishel & Roy, 2006; Swanson, 2004). The generalizability of the findings in this study, therefore, will be limited to districts with similar student population and socioeconomics.

Organization of Study

This study was organized into five chapters. Each chapter contains specific information describing the study. Chapter 1 discusses the background related to the topic of dropouts, the purpose and significance of the study, as well as the theoretical framework that addresses the problem. Chapter 2 provides a review of the literature related to high school dropouts, including studies on dropout variables. The second chapter is divided into three major sections. The first section defines the dropout problem, including clarifying the various dropout rates used to determine percentages of students who fail to complete their requirements for graduation. The next section deals with the various dropout predictors found in studies. The last section within Chapter 2 addresses the impact that dropouts have on this nation's economy and the prevention programs that have been put in place to address this problem.

Chapter 3 identifies the methodology of the study, including sampling techniques, data collection, and analysis procedures. Chapter 4 provides the results of this study with emphasis on the research questions. Finally, Chapter 5 includes a discussion of the findings and implications of the study for future research and practice.

Chapter 2

Literature Review

Introduction

This review consisted of at least three bodies of literature. The researcher looked closely at literature regarding key federal legislation that has impacted and/or continues to affect dropout and graduation rates. In addition, literature related to dropout rates, specifically how these rates are calculated was researched. This section is followed by a discussion regarding the various high school dropout variables identified in literature.

Overview of the High School Dropout Issue

The topic of high school dropouts is a vital subject area worthy of much research, especially considering the impact that high school dropouts have upon the society at large (Buckley, Storino, & Sarni, 2003). Students who drop out from high school face a bleak future because they often lack the basic skills needed to be successful in today's economy (Rumberger, 1987). Several important researchers have contributed to the abundance of studies on dropout indicators, dropout statistics, and dropout prevention. These researchers include Elaine Allensworth, Robert Balfanz, John Easton, Nettie Legters, and Ruth Neild to name a few.

Some of the most recent studies published by researchers focus on the profile of students who dropout, including their race, gender, and socioeconomic background (Hess, 2000; Rumberger & Rodriguez, 2002). Other studies closely examine identifiable dropout indicators such as poor academic performance, poor attendance rates, high retention episodes, and severe school culture disengagement (Anderson & Whipple, 2002; Battin-Pearson & Newcomb, 2000; Jordan et al., 1999). Dropout studies present

useful information that may prove invaluable to many school districts and their stakeholders.

The majority of the studies on dropout rates have found that no one variable is solely responsible for influencing the decision to remain in school or not (Battin-Pearson & Newcomb, 2000; Carpenter & Ramirez, 2007). Indeed, several factors often combine to intensify the decision to drop out. In order, however, to obtain a full understanding of the effect dropout rates have upon the American society, it is critical that a thorough review of published studies on this topic be conducted.

Hoyle and Collier (2006) reported the findings from the Children's Defense Fund that every nine seconds a high school student drops out prior to completing his or her graduation requirements. Due to the negative impact this trend has upon the American society, educators and policymakers have enacted nationwide reform in an effort to curtail the growing rate of dropouts (Legters, Balfanz, Jordan, & McPartland, 2002). Several consequences can be linked to dropping out, including high unemployment, health problems, welfare assistance, and a higher crime rate (Kronick & Hargis, 1998). One of the major consequences of dropping out involves the negative status many dropouts face throughout their entire lifetime. Additionally, dropouts can expect to earn much less than high school graduates and college graduates (Murmane, Willet, & Boudett, 1995).

Another major cost brought on by the dropout epidemic involves the amount of money spent on maintaining the nation's prisons. Researchers are finding that a prevailing number of men with little education are participants of the criminal justice system (LeCompte & Dworkin, 1991; Western, 2007). One report indicated that the

increase in dropouts over the past decade has contributed to the rising costs in social programs and prisons, as well as a loss in tax revenue due to the reduced earning potential of dropouts overall (Fields, 2008).

In fact, a closer look at the educational level of all prison inmates reveals just how much of a negative impact dropouts have upon society. Recent numbers show that dropouts disproportionately represent 75% of state prison inmates (Fields, 2008). The dropout problem was highlighted in Webster's (2007) study of the criminal justice system when he asserted that African American men were six to eight times more likely to be incarcerated than White men. Because of Webster and other researchers' attention to this issue, educators and their stakeholders have looked for answers to the growing epidemic of dropouts in America. Despite educational reform, however, the problem of dropouts continues to persist (Lehr, Clapper, & Thurlow, 2005; Rumberger & Palardy, 2005; Shippy, 2003). As the problem of dropouts in America continues, the quest for a solution continues as well.

Key Legislation on School Dropouts

The system of education in America has experienced much transition. As early as 1950, school facilities were inadequate and schools in the south were largely segregated. Yet, the U.S. boasted of higher graduation rates than other industrial countries (Peterson, 2010). According to Peterson (2010), as more adolescents enrolled in schools, the attendance rate increased from about 70% to 90% in the 1960s. These numbers help propel the United States to the giant it was once recognized. Looming in the dark of success of the educational system, however, was the growing problem dropouts, especially among disadvantaged youth (Reese, 2005).

The low graduation rates/high dropout rates in America has become so critical an issue that at least three presidential administrations have proposed special commissions to examine the problem and develop viable solutions through various legislative acts (Shipps, 2003; U.S. Department of Education, 2003). Both state and local education officials have committed to measuring dropout rates, looking at causes, and even establishing preventive programs (Rumberger, 1987; Shipps, 2003; Tyler & Lofstrom, 2009). Their involvement is nothing new to America's educational system. Policymakers have long promoted educational reform through key legislative acts. Perhaps the most relevant piece of legislation with regard to education occurred in the 1960s.

In 1965, President Lyndon B. Johnson enacted the first and largest comprehensive federal education law – the Elementary and Secondary Education Act (ESEA). The ESEA literally changed the very landscape of the American public education (Hana, 2005; Reese, 2005). The Elementary and Secondary Education Act was birthed as part of the War on Poverty agenda of the 1960s and was mandated to provide monetary funds for kindergarten through 12th grade education, emphasizing the need for all students to have equal access to a quality education (Hana, 2005). The effort was seen as the federal government's first major commitment to public school funding with the intention of promoting a more equal society of individuals through the educational system (McAndrews, 2006). The ESEA was significantly impactful for underprivileged children, providing funds for schools to use in training staff to work with and building resources for their economically disadvantaged students (Reese, 2005).

The writers of the Elementary and Secondary Education Act established high standards and accountability for school districts and their schools. According to the ESEA, specific revenue and resources were to be provided in order that disadvantaged students would have access to a quality public education (Mitchell, Crowson, & Shipp, 2011). Part H and Subpart 2 of the ESEA specifically addressed dropout prevention initiatives. Even with amendments to the act in 1966 with the addition of aid to handicapped children and again in 1967 with provisions being made for bilingual education programs, the ESEA continues even today with the same focus of providing a quality education for all students regardless to background or ability level (Spring, 2001; Spring, 2011). The enactment of the ESEA revolutionized the role that federal government plays in regulating the affairs of local school districts (McAndrews, 2006).

Peterson (2010) proffers that as the system of public education embarked upon reform nearly 50 years ago, control of education shifted away from localities to state governments and federal agencies. Consequently, centralization of power and loss of local control of schools occurred as a result of school reform efforts. Over the last 50 years, higher levels of government have assumed more and more control over the educational system (Mitchell et al., 2011).

Nearly 30 years later, the Clinton administration reauthorized the Elementary and Secondary Education Act and titled it, The Improving America's Schools Act. Under this law, several provisions were made that specifically pertained to alleviating the problem of high school dropout rates among disadvantaged students (McAndrews, 2006). The IASA suggested activities and programs be put in place to increase graduation rates across America, including increasing the financial assistance and resources to low income

schools (Yell & Drasgow, 2005). It was becoming increasingly clear that much of the problems with the country's educational system was largely due to the inequity of opportunities in urban areas and inadequate funding (McAndrews, 2006).

Goals 2000: Educate America Act was yet another law that provided resources to states to ensure all students could reach their potential. Congress declared goals for all schools, including an increase in graduation rate. Section 102 of the law stated that the high school graduation rate would increase to at least 90% by the year 2002. Signed into effect by then U.S. President, Bill Clinton, the act intended to identify world class standards to measure students' progress and enable them to compete in the global society (Goodwin, 2000).

The most recent reauthorization of the Elementary and Secondary Education Act is titled The No Child Left Behind Act of 2001. Proposed by former President George Bush in 2001, The No Child Left Behind Act (NCLB) raised the awareness of high school dropout rates even more as it instituted a standards based education reform (Patterson et al., 2008). The main goal of the NCLB is to close test score gaps between various subgroups of students and ultimately raising the achievement level for all students (NCLB, 2001; Swanson, 2004).

A key component of the NCLB Act requires states to prepare annual report cards that include information about their students – how they perform on state assessments, attendance, and graduation rates. Under the act, schools and districts are required to make Annual Yearly Progress (AYP) on identified performance indicators and report student achievement at below basic, basic, proficient, or advanced (NCLB, 2001; U.S. Department of Education, 2003). It should be noted that the NCLB Act requires

reporting of graduation numbers as opposed to dropout percentages. In terms of graduation rates, today's public schools fail to dominate other countries with regard to academic fortitude. In fact, graduation rates stand level with the industrial world (Peterson, 2010).

Yet, legislative acts such as the NCLB continue their legacy of educational reform. Perhaps the most significant of all federal attempts at educational reform, the ESEA, has been reauthorized several times within the past 40 years (Hana, 2005). Most recently, President Obama signed the American Recovery and Reinvestment Act (ARRA) of 2009, once again reauthorizing the legacy of the ESEA. The goal of the ARRA is to not only stimulate the national economy but also reaffirm education as a national priority (Burgette, King, Lee, & Park, 2011; U.S. Department of Education, 2010a). Under the ARRA, \$4.35 billion was provided for the Race to the Top Fund (Ravitch, 2011). One of the major goals of the ARRA is to improve high school graduation rates (U.S. Department of Education, 2010a). Funding is provided to those states that show improved results in the area of student achievement (Ravitch, 2011; U.S. Department of Education, 2010a).

Although reform programs have not produced mass changes in the number of dropouts in America, there is no question that federal legislation has helped to curtail the increasing number of dropouts (Montecel, Cortez, & Cortez, 2004; Sparks, 2010). Since the enactment of legislation has not brought about a solution to the dropout issue, it begs the question of whether legislation alone holds the key (Balfanz & Legters, 2004). Perhaps, the problem of dropouts remains deeper than federal intervention.

Calculating High School Dropout Rates

Before legislation and other prevention/intervention initiatives can be effectively instituted and even prior to determining which dropout rate should be utilized, a more proactive approach to the issue is to clearly define what constitutes a dropout and identify which students are included in dropout numbers (Adamich & Childers, 2011; Christenson & Thurlow, 2004; LeCompte & Dworkin, 1991). Nationwide, there is very little consensus on the definition of a dropout and even less agreement about how dropout rates should be measured. To complicate matters, states are allowed to determine the definition of the term “dropout” how dropout rates will be measured (U.S. Department of Education, 2003). Even in literature, researchers differ in how dropout rates are reported (Kronick & Hargis, 1998; Mishel & Roy, 2006). The data may be skewed or misleading depending on the type of study that the researcher is conducting or how the dropout rates are calculated (Laird, Cataldi, KewalRamani, & Chapman, 2008; Mishel & Roy, 2006). In short, dropout rates can be a confusing mishmash of information making it difficult to make comparisons (Swanson, 2004).

It’s important to differentiate between dropout rates and graduation rates. Graduation rates vary from the Cumulative Promotion Index (CPI) to the Common Core of Data (CCD). The CPI relies on enrollment data collected in a two-year span of time while the CCD utilizes graduation data reported from over 95,000 schools to the National Center for Education Statistics (Swanson, 2004). Neither of these measurements considers dropout numbers nor equivalents such as GED recipients.

Conversely, researchers utilize three commonly used rates to categorize dropout numbers -- event rate, status rate, and cohort rate. The event rate measures the proportion

of dropouts in a single year. Also known as the duplicate rate, the event rate counts the number of dropout occurrences instead of the number of students who have dropped out. This particular rate estimates the number of students who drop out in a single year without completing their diploma requirements (Lehr, Johnson, Bremer, Cosio, & Thompson, 2004; Mishel & Roy, 2006). In other words, the event rate measures the rate of high school students that withdrew from school between the start of one school year and the start of the following year without earning a diploma or GED. The event rate becomes a useful tool for detecting changes in the dropout behavior from year to year. It fails, however, to provide a picture of the dropout problem in general because it fails to take into consideration the students who may reenroll after the data is collected (Laird et al., 2008).

Another dropout rate, the status rate defines a high school dropout as one who is not enrolled in school and has not earned a high school diploma or equivalent regardless to the date they withdrew (NCES, 2010). Status rates are usually higher than event rates due to the inclusion of all dropouts between the ages of 16-24 (Kaufman, 2004). With the status rate, a percentage of students within a particular age range that have neither earned a diploma nor currently enrolled in school are counted as dropouts. It should be noted that students are included in these percentages regardless to when they dropped out (Kaufman, 2004; Laird et al., 2008). The focus of the status rate is primarily centered on an overall age group instead of around specific individuals. As a result, the statistics gathered can be applied to a general population.

The cohort rate, on the other hand, measures a single group of dropouts over a period of time (Thurlow et al., 2002). The cohort rate is concerned with how a group of

students – a cohort – performs (Coley, 1995). Whenever this rate is used to calculate high school dropouts, it yields the highest rate of the other two commonly used rates (Mishel & Roy, 2006; Thurlow et al., 2002). For purposes of this study, the cohort rate will be utilized to measure the data collected because it will provide a clearer point of comparison.

With three possible rates in use, it is no wonder policymakers urge states to utilize the same formula to calculate graduates versus dropouts (Fields, 2008). Take for instance the 613,379 high school dropouts recorded during the 2007-08 school year (Stillwell, 2010). If these numbers were calculated using a national event dropout rate the percentage would be 4.1% according to Stillwell (2010). Tennessee contributed 11,200 of these students during the same 2007-08 calendar year. Using the same method of calculation yielded Tennessee a 4.3% dropout rate (TDOE, 2009).

The cohort rate, on the other hand, for Tennessee high school dropouts in 2008 was 10.1% (TDOE, 2009). The cohort rate measured all ninth graders reported as dropouts in Tennessee during the 2008 school year. Therefore, its percentages, though higher than the event rate, provide a more accurate picture of the issue. When states utilize the event rate and others the cohort rate, they are essentially measuring two different populations of students, making it difficult to compare nationally.

If these same students were studied nationally utilizing the newest measure – the adjusted cohort graduation rate – the numbers could be quite misleading. Beginning in 2010-11, this measure will be used by districts in all states to report their graduation rates (Sparks, 2010). The national graduation rate rose from 72% in 2001 to 75% in 2008.

The state of Tennessee reported perhaps the largest graduation gains among all the states in America, matching the national average of 75.9% (Burgette et al., 2011).

Of course, note the major difference between graduation rates and dropout rates is that both look at different pools of students – the number of high school students that have earned a high school diploma versus the percentage of high school students that fail to complete the graduation requirements. The need for consistency in reporting dropout numbers is critical to understanding the magnitude of the problem overall.

Categorizing the High School Dropout

Equally as critical to assessing the dropout problem, is the need for categorizing the types of dropouts that exist. Kronick and Hargis (1998) suggest that dropouts can be categorized into at least three types. One type of dropout is the “quiet dropout” and constitutes the largest of the groups. The quiet dropout is the student who often experiences grade level retention and low academic achievement. The second type, according to Kronick and Hargis (1998), is the “low achieving pushout.” The low achieving pushout exhibits not only failing academics but also behavior problems as well.

A third type, the “high achieving pushout,” usually maintains adequate to above average academics but displays behavior problems as well. Students with above average academics are often classified as gifted but are not exempt from dropping out of school (Rimm, 1995). In fact, Matthews (2006) asserts that 20% or more of high school dropouts could be considered academically gifted. The rationale behind this phenomena is that students that fall into the category of a high achieving pushout are often strongly influenced by issues outside the school environment, including family problems, substance abuse, and motivation issues (Kronick & Hargis, 1998).

Due to the consequences of dropping out, it is critical to know which dropout variables are directly related to an increased risk of dropping out. Policymakers, educational administrators, teachers, and counselors who are concerned with alleviating the problem of dropouts would benefit from identifying and examining key dropout variables. Moreover, identifying dropout variables may enable school level personnel to design effective intervention and prevention strategies.

A great deal of research has been conducted regarding dropout variables (Rumberger, 1995; Suh & Houston, 2007; Velez, 1989). LeCompte and Dworkin (1991) assert that several factors play a key role in influencing dropout behavior. They propose that dropouts from each racial subgroup may be influenced by pupil-related issues, school-related issues, or society-related issues. Each of these factors can increase the likelihood that a student will choose to withdraw from school prior to completing graduation requirements. These factors are discussed in the proceeding section.

High School Dropout Factors Categorized

Depending on the type of study and research completed or the sample population tested, the variables identified can differ greatly. Thus, it is necessary that research zero in on the most common of these variables. Pupil related factors pertain to the experiences and traits that the student brings with them to the school environment (such as the age of child, culture, economic status, and family background). Pupil-related factors are often completely out of the school system's sphere of influence (LeCompte & Dworkin, 1991; Marrs, Hemmert, & Jansen, 2007). Other individual or pupil-related factors may include the student's cognitive function, level of interest in the school environment, and even his

or her self identity. Gang influence and absenteeism rate may be regarded as individual factors as well (Carpenter & Ramirez, 2007).

School related issues, on the other hand, have a direct influence on the child's academic performance and attendance rate. Issues such as inadequate teaching climate, class sizes, school population, and an intimidating social school culture are factors that can negatively impact a student's desire to perform well or attend school regularly (LeCompte & Dworkin 1991; Lee & Burkam, 2003). When students that already have a history of negativity, poor grades, and grade retention are exposed to exposed negative school cultures, they are at greater risk of dropping out before completing their high school graduation requirements (Carpenter & Ramirez, 2007; Garnier, Stein, & Jacobs, 1997; Jimerson, Anderson, & Whipple, 2002).

Racial subgroups of high school dropouts

To complicate matters, students who fall in certain racial groups may have additional risk factors for dropping out. Greene and Winters (2005) asserted that nearly 30% of all students who enter high school each year will end up dropping out in four years and 50% of all African American and Latino students would fail to graduate within this four year time frame. Dropout rates among Black and Hispanic students are higher overall than dropout rates among Caucasian and Asian American students (Carpenter & Ramirez, 2007; Matthews, 2006). Ethnic minorities attending middle class high schools are more likely to graduate and maintain similar graduation rates as their Caucasian peers (Balfanz & Legters, 2006). Unfortunately, high schools located in low-income areas house nearly half of the nation's ethnic minorities (Balfanz & Legters, 2006; Frankenberg, Siegel-Hawley, & Wang, 2011).

The high dropout rate among urban high schools is a vexing problem that both educators and legislatures must face aggressively and strategically (Christenson & Thurlow, 2004). In 2008, the national dropout rate was 4.8% for Caucasian students, 9.9% for African American students, and 18.3% for Latino students (National Center for Education Statistics, 2010). Ironically, Sparks (2010) asserted that Blacks, Hispanics, and Native Americans made the largest gains in graduation rates among all racial subgroups since 2001. These minority groups, however, still maintain high dropout rates in America. In their research, Menzer and Hampel (2005) found that black males with excessive absences, low socioeconomic background, special education classification, and history of retention were more likely than any other prototype to dropout.

The profile of the dropout crosses beyond learning ability into ethnic groups as well. The dropout rate for American Indians and Alaska Natives was estimated at 15%, which is high in comparison to an extremely low dropout rate for Asian American dropouts (NCES, 2008; OERI, 1993). A study conducted by Matthews (2006) indicates that Asian American student dropout rates are even lower than the rates for Caucasian students. The vast difference between Caucasian and Asian American students could be attributed to the larger overall enrollment of Caucasian students in America's school districts (Matthews, 2006).

High school graduation rates nationwide have been reported at 75%-78% for Caucasian students; 50-56% for African American students; and 54% for Latino students (Murray & Naranjo, 2008; Singham, 2005). Bridgeland (2006) identifies one third of high school students, half of which are considered minority students, as dropouts each year. In a study conducted by the U.S. Department of Education in the early 1990s, the

dropout rate was 7.9% for white students, 13.6% for black students, and 27.5 % for Hispanic students (OERI, 1993). Alarming, Varlas (2005) found more black males had received a GED in prison than had graduated from a university.

High dropout rates and low graduation numbers are becoming the norm in many urban school districts (Almeida, Balfanz, & Steinberg, 2009; Jenkins, 2006; Rumberger & Rodriguez, 2002). Of particular interest is the growing number of poor, minority students that continue to fall in these rising dropout numbers (Patterson et al., 2008). In a recent study, between one-third and one-half of minority students fail to earn a high school diploma (Education Week, 2007).

In another study, Akos and Galassi (2004) found that compared to Caucasian and African American students, Latino students perceived the transition more difficult. This could be possibly linked to the language gap and lack of parental involvement, factors that have been identified as dropout variables. Hispanic students often suffer language problems, cultural differences, discrimination, and educational disadvantages in America (National Commission on Employment Policy, 1987; Ream & Rumberger, 2008). As a result, Hispanics have the lowest high school completion rates of any major race in the United States (Ream & Rumberger, 2008). Nearly one-third of all Hispanics ages 18-21 are classified as dropouts, according to the National Council of La Raza (1990). The dropout rate for Hispanics 16-24 years of age is 31%, compared to 18% for African Americans, and 10 % for Caucasians (U.S. General Accounting Office, 1994). These dismal statistics also show that Hispanic Americans are twice as likely as Caucasians to live in poverty or less likely to be employed in a professional or technical job (NCLR, 1990; Ream & Rumberger, 2008).

Gender of High School Dropouts

Aside from racial status, the gender of the dropout is most intriguing.

Goldschmidt and Wang (1999) found that female students were more likely than boys to drop out. Subsequent studies agree that females are more likely than males to leave school prior to completing their high school diploma (Croninger & Lee, 2001; Crowder & South, 2003). Female students often report family reasons for dropping out, while male students cited family reasons the least and experience more negative effects with regard to their academic achievement, employment opportunities, and future educational opportunities (Ekstrom, Goertz, Pollack, & Rock, 1986; Jordan, Lara, & McPartland, 1996).

Oddly enough, in more recent studies, male students were found to drop out at a higher rate than female students (Finnan & Chasin, 2007; National Center for Education Statistics, 2010; Swanson, 2004). Unlike their female counterparts, high school male dropouts reported suspension/and or expulsion as a primary reason for not completing their high school education (Jordan et al., 1996). This may suggest that discipline infractions that result in suspensions/expulsions may affect male high school dropouts in a different way than girl dropouts.

Rumberger (1983) discovered that female students tended to remain in school at higher rates as the educational attainment level of their mothers increased. Conversely, there was a tendency for males to graduate with a high school diploma as their fathers' level of education increased. Male dropouts report being disengaged from the school culture more often than female dropouts (Booker, 2006; Felner et al., 2007; Furrer & Skinner, 2003).

The research regarding which gender group is represented mostly is inconsistent. Obviously, gender alone cannot aptly predict the number of dropouts each year. Rather, it would seem that numerous factors and even a combination of these variables raise the probability that a student would elect to drop out of high school before completing the course requirements for a diploma (Gleason & Dynarski, 2002; Menzer & Hampel, 2005). Exploration of these variables may provide more insight into the dropout epidemic than gender and race alone.

High School Dropout Variables

Several variables are common in much of the literature on dropouts (Christenson, et al., 2001; Suh et al., 2007). Many of these variables have been found to have either a “push” or “pull effect” on students’ decision to remain in school (Stearns & Glennie, 2006). Poor attendance, low grade point average, low standardized scores, grade retention, excessive discipline referrals, educational level of parents, and socioeconomic status are very commonly identified indicators which may either push or pull a student to dropout (Wells, Bechard, Hamby, 1989).

Comparably, being socioeconomically disadvantaged is the most commonly identified variable among dropouts (Fine, 1991, Murray & Naranjo, 2008). By location, students attending schools in poverty–stricken, high crime areas are at greater risk of dropping out than students who attend schools that are surrounded by communities otherwise (Balfanz & Legters, 2004). Schools located in these high risk areas have been coined “dropout factories” (Sparks, 2010).

To be classified as a dropout factory, the senior class must have 60% fewer students than its entering freshmen class (Balfanz & Legters, 2004). According to

Balfanz and Legters (2004), a high concentration of these dropout factories can be found in fifteen states located in Northern, Western, and Southern parts of the United States. Although these dropout factories represent a small portion of schools in the U.S., they are responsible for producing nearly half of the nation's dropouts each year (Sparks, 2010).

Some states are better prepared to address the issue of dropout factories than others (Almeida et al., 2009). In an article written by Sparks (2010), the southern states were found to have made the most progress toward improving their graduation rates thus removing the 'dropout factory' label from many, with at least half of its low performing high schools located in two major cities, rose to the challenge of decreasing its dropout rate and thus increasing its graduation rate (Almeida et al., 2009; Burgette et al., 2011). After initiating major reform efforts, the state of Tennessee was given high regards for its effective use of 'exemplary educators' that coached in various high need high schools, for creating stringent improvement plans for its high-need schools, and implementing stronger graduation requirements (Sparks, 2010).

Some researchers proffer that another common variable, grade retention, is the best predictor for dropping out of school (Finn, Gerber, & Boyd-Zaharias, 2005; Marrs et al., 2007; Neild & Balfanz, 2001; Roderick, 1993; Rumberger, 1995; Suh et al., 2007). This suggestion that grade retention is the best dropout indicator was echoed in a study that found a growing number of freshmen unable to successfully transition to their sophomore status (Patterson, Beltyukova, Berman, & Francis, 2007). This phenomenon has been labeled as "freshman bulge." Roderick (1993) noted that students who are retained at an early grade often suffered during their adolescent years which impacted their social and emotional outlook toward school.

In research conducted by the Vermont Agency of Human Services (1999), six common variables were found to have been highly predictive in determining whether a student would likely be a dropout candidate. However, the results of a follow up study completed nearly eight years later found that only four of these variables remained critical to the decision to dropout -- failing final grade in mathematics, a failing final English grade, below eighty percent attendance rate, and a final unsatisfactory behavior mark. According to Menzer and Hampel (2009), high school dropouts reported grades of A's and B's but the bulk of their grades consisted of C's - 24%, D's - 27.3%, and F's - 24%. The failing marks were reported most frequently in English and mathematics. They added that the most salient indicator characteristics include failing marks in English and math, numerous disciplinary referrals, and nearly three times as many suspensions (Menzer & Hampel, 2009).

Failing academic performance at the sixth grade increased the likelihood of a student's decision to dropout of high school (Garnier et al., 1997). Even more compelling, measuring academic performance as early as the third grade serves as an accurate determinant of dropout status (Jimerson et al., 2000). The dropout variable most indicative of a dropout is whether the student has experienced a retention episode, according to Viadero (2006). Research conducted by Menzer and Hampel (2009) followed 155 non-graduating seniors who decided to withdraw during their last year. Additional findings from Menzer's study revealed 58% of the non-graduating seniors had also repeated at least one year in school.

Most frequently noted as a dropout indicator in literature is the academic performance of a student (Jimerson, Egeland, Sroufe, & Carlson, 2000; Menzer &

Hampel, 2009; Suh et al., 2007). According to Orr (1987) and Bradby, Owings, and Quinn (1992), another variable is the socioeconomic status of a student. In similar studies, researchers have found it more compelling to narrow the field of predictors to three variables – low grade point average, high suspension rate, and low socioeconomic background (Suh et al., 2007). In fact, one study proffered that when socioeconomic background and academic achievement are coupled, they become two of the strongest dropout predictors (Farmer & Payne, 1992).

The addition of third common variable, deviant behavior, increases the risk of dropping out threefold (Gruskin, Campbell, & Paulu, 1987). Behaviorally, dropouts receive twice as many behavioral infractions and nearly three times as many suspensions as graduating students (Menzer & Hampel, 2009). Consequently, increased deviant behavior often leads to long term suspensions which, in turn, lead to excessive absenteeism. Even moderate poor attendance during a student's freshman year can negatively impact the decision to remain in school all four years (Allensworth & Easton, 2007). The rationale for this phenomenon is that poor attendance often leads to poor academic performance.

While not necessarily an obvious variable, teen pregnancy also plays a role in influencing a student's decision to remain in school or not (Manlove, 1998). Students who give birth during their high school years constitute 32.8% of the dropout population (Neild & Balfanz, 2006). This particular variable has a greater impact upon female students than male students (Manlove, 1998).

On another note, Carpenter and Ramirez (2007) considered factors such as 8th grade reading and math achievement scores and 10th grade reading and math achievement

scores as critical dropout variables. Allensworth and Easton (2007) suggested that poor academic achievement facilitates the decision to withdraw from school prior to graduation. Even the amount of time a student spends watching television, the hours per week they work, and the level of gang influence have become and remain critical influences among high school dropouts (Carpenter & Ramirez, 2007).

A closer look at any of the dropout indicators could reveal an interaction of the variables. In fact, some researchers have asserted that there is a cause-effect relationship with many of the variables identified (Devine, 1996; Suh et al., 2007). Numerous variables when combined with one another raise the likelihood that a student will choose to drop out prior to completing his or her diploma (Gleason & Dynarski, 2002).

Devine (1996) speculated that dropouts might exhibit behavioral problems as a result of lack of interest in school and poor grades. Murray and Naranjo (2008) added that the interaction of socioeconomic status, academic performance, and special education placement only to discover that dropout rates were two to six times higher for low income students than for higher income students.

Goldschmidt and Wang (1999) identified students with backgrounds that included single-parent family structure, low family income, previous retention episodes, limited English proficiency, and/or history of misbehaviors and found that these students are more likely to dropout. Some researchers contend that poor grades, behavioral issues, and an inability to balance a school-work schedule are primary indicators of early school leavers (Rosenthal, 1998). Still, others posit that the decision to dropout is more akin to parental educational attainment, total number of household members, and lack of motivation (Coley, 1995; Devine, 1996; Ream & Rumberger, 2008). Other family

factors may include socioeconomic background, level of parent's education, instances of siblings dropping out, and family structure. Essentially, how students react to the transition phase depends largely upon their race, gender, and socioeconomic status (Akos & Galassi, 2004).

Coley (1995) included disliking school and not getting along with teachers as additional school related dropout variables. Students who are disengaged with school curriculum and activities are usually most likely to dropout (Caraway, Tucker, Reinke, Hall, 2003; Ream & Rumberger, 2008). The transition years may hold the key to understanding how best to save potential dropouts from the inevitable. Ninth grade is considered a critical turning point in a student's school career (Neild & Balfanz, 2006). In their research, Neild and Balfanz discovered that nearly two-thirds of the students who dropped out of public schools in Philadelphia were in grade 10 or below. Students fail the ninth grade more than any other high school grade (Herlihy, 2007). Moreover, Herlihy (2007) intimated that students who were retained in their ninth grade year subsequently dropped out prior to their senior year.

The effect of the transition period from middle to high school is so widespread that it affects students emotionally, academically, as well socially (Cohen & Smerdon, 2009). Academically, students experience academic loss due to the increased course demands and academic rigor of the high school curriculum. In addition to academic loss, students in transition to high school experience decreased engagement coupled with increased absenteeism by the end of the ninth grade year (Alspaugh, 1998; Rodriguez & Conchas, 2009). Rodrigues and Conchas (2009) suggest the implementation of a plan

that includes an incentives program, space that promotes peer communication, and social networking in order to foster a connection between the school and student.

Finn (1989) agrees that a student's withdrawal from school life is a root cause of student dropout. Moreover, students exposed to a combination of risk factors are at greater risk for dropping out (Farmer et al., 2004). Students who suffer a combination of risk factors are not as motivated to complete academic tasks and ultimately drop out of school (Suh & Suh, 2007). Regardless to which factors are considered, the key to addressing a falling graduation rate may be to identify key dropout indicators and examine how each variable impacts students according to their race and gender.

Summary

In summary, the ever complex issue of high school dropouts continues to boggle the minds of educational and political leaders in America. Its impact upon society as a whole is great and deserves the attention of all stakeholders, as the nation's future rests upon improving the present rate of dropouts. Although legislation has been enacted, dropout variables have been identified, and dropout rates are calculated by each state, a large body of research reveals the devastating impact dropouts continue to have upon the larger society. Thus, there remains a charge to further research the issue in an effort to develop effective prevention and intervention strategies that pinpoint the individual instead of the general population. The next chapter provides a detailed description of the data collection procedures and research design used in this study.

Chapter 3

Research Methodology

Introduction

Chapter Three describes the methodology that was used to conduct this study. The purpose of this study was to analyze the relationship between selected dropout variables and the race and gender of high school students attending a mid-south suburban school district. This chapter describes the quantitative design of this study and restates the statement of problem and research questions guiding the study. The chapter concludes with a summary of findings.

Statement of the Problem

Several challenges face the American school system. One particular dilemma has plagued the system for decades – dropout rates. For some school districts, identifying the factors that influence the decision to dropout is paramount to developing strategies that effectively address the problem of dropouts. For others, however, it is vital that administrators recognize how dropout variables may affect various subgroups, especially with regard to race and gender (Carpenter & Ramirez, 2007). This study will analyze the relationship between selected variables and the race and gender of high school students attending a mid-south suburban school district.

Research Questions

For purpose of this study, the following research questions were addressed:

1. Examined in the aggregate and as grouped by legal age of departure, how does a selection of demographic and institutional variables describe a population of students

who have dropped out of schools in a moderately-sized suburban district during the previous five years?

2. After pooling observations made on a comparable sample of graduates with those made on the dropout population, what relationships emerge between each of the selected variables taken individually and a student's status as a graduate or dropout?

3. What differences in the strength of such relationships are seen when observations made on the population of dropouts grouped by legal age of departure are compared?

4. After pooling observations made on the sample of graduates with those made on the dropout population, what institutional and demographic variables, when simultaneously examined, are observed to predict dropping out of school, both for the aggregate and as grouped by legal age of departure?

5. Examined in the aggregate and as grouped by legal age of departure, how does the selection of demographic and institutional variables describe the population of White students and Black students who have dropped out of school under the circumstances previously outline?

6. When the pooled observations made on graduates and on White and Black dropouts are analyzed, what relationships emerge between each of these selected variables taken individually and a student's status as a graduate or dropout, both for the aggregate and as grouped by legal age of departure?

7. What differences in the strength of such relationships are seen when observations made on the population of White and Black dropouts are compared, both in the aggregate and by legal age of departure?

8. After pooling observations made on graduates and dropouts, what institutional and demographic variables, when simultaneously examined, are observed to predict dropping out of school for White students and Black students, considered in the aggregate?

9. Examined in the aggregate and as grouped by legal age of departure, how does the selection of demographic and instructional variables describe the populations of a male and female students who have dropped out of school under the circumstances previously outlined?

10. When the pooled observations made on graduates and male and female dropouts are analyzed, what relationships emerge between each of these selected variables taken individually and a student's status as a graduate or dropout, both for the aggregate and as grouped by legal age of departure?

11. What differences in the strength of such relationships are seen when observations made on the populations of male and female dropouts are compared, both in the aggregate and by legal age of departure?

12. After pooling observations made on graduates and dropouts, what institutional and demographic variables, when simultaneously examined, are observed to predict dropping out of school for male and female students, considered in the aggregate?

13. In crossing the gender and ethnic characteristics of students in the dropout population, what relationships emerge between the remaining variables and a student's status as a dropout or graduate; how does the strength of such relationships compare across groups?

Methodology

According to Charles (1998), research is usually categorized in terms of the general methodology. He adds that in educational studies, the researcher may employ the use of qualitative, quantitative, experimental, or non-experimental methodology to frame his study. The quantitative approach utilizes data from human samples and places the data in predetermined categories for statistical analysis (Creswell, 2008). This method of research allows the researcher to study specific questions, collect quantifiable data from selected participants, and analyze the information gathered using statistical procedures. The result is an unbiased and objective interpretation of data (Creswell, 2008). Questionnaires, tests, records, and standardized observation instruments can serve as an appropriate source for data when utilizing the quantitative approach to research (Patton, 1997). For the purpose of this study, the researcher used a quantitative approach to organize the methodology.

The researcher submitted 13 questions to be answered by this study. In order to answer the research, this study used a quantitative methodology that allowed the researcher to analyze the relationship between selected dropout variables and race and gender of high school students. The quantitative methodology is a useful research design for explaining the relationship among variables (Creswell, 2008).

The researcher determined that a non-experimental study utilizing a descriptive and correlational approach with an explanatory design was most appropriate for this study. The goal of correlational design is to identify covariation or predictive relationships among the variables by using correlations (Leedy & Ormrod, 2001). In this study, the variables were seven common dropout indicators, race of students, and gender

of students. The only limitation the researcher encountered was the problem of interpreting casual relationships which were present.

Population and Sample

The target population for this study included all students in a mid-south school district that have been classified as a high school dropout. The dropout sample consisted of African American and Caucasian high school students who were previously enrolled in a mid-south suburban school district but were classified as a dropout between the years 2006-2011. Students in these two racial subgroups accounted for the largest percentage of dropouts in this mid-south suburban school district. From the district's data base, a random sample of African American and Caucasian graduates between the years 2006-2011 was also identified, selected, and utilized in this study.

Although noted in the limitations section, the sample in this study is representative of the target population. The sampling method was chosen due to the availability of data and number of participants in the selected subgroups. Currently, approximately 37.8% of the students in this district are African American and 52.3% are Caucasian.

The study focuses on the hierarchal ranking of each dropout variable and whether the relationship differences were significant. The rationale for selecting only African American and Caucasian high school dropouts from the school district in this study was because of the ample number of samples present in these sub groups. The amount of data for Hispanic and Asian high school dropouts was scarce in comparison. The data collected provided useful information that aided in answering the research questions.

Data Collection

Before the initiation of this study, the researcher obtained permission from the superintendent of the selected school district to collect and analyze data housed in the system's mainframe computer. Additionally, necessary approval was obtained from the University of Memphis' Internal Review Board (IRB). The required forms were submitted and approval was granted. The researcher forwarded a letter outlining the purpose of the study and the data that would be collected to the attention of the district's Superintendent, Assistant Superintendent of Student Services, and Director of Technology. A copy of this correspondence was included with the paperwork submitted to the IRB. The data was collected from the selected school district's data base system, PowerSchool. The data obtained from students' records was kept confidential and all personal identifiers such as names of students and mailing addresses were excluded from the information gathered. Students were assigned a random number; therefore, the researcher was never aware of the identity of any students used in the study. The results of the information gathered helped determine if a relationship exists between dropout variables, race, and gender.

Data Analysis

Data in this study was collected using one method. Data pertaining to high school dropouts in the school district in this study was secured, examined, and analyzed. The information gathered from student records was entered as data using the Statistical Package for the Social Sciences (SPSS) software for proper interpretative results. Data analysis was based on the research questions and research design of this study.

Additionally, there were seven dropout indicators selected for this study. They included absenteeism, retention, grade point average, age of student, socio-economic background, behavioral infractions, and special needs classification. These seven variables served as independent variables.

Data extracted from students' records was analyzed to identify the presence of one or more dropout variables. Dropout students identified in this mid-south school district would have been assigned to at least one of the system's ten high schools. The school district is one of the mid-south's highest performing school systems and maintains an otherwise high graduation rate. Additionally, a random selection of high school graduates was taken to compare to dropouts.

A descriptive analysis was performed on the sample group to obtain a clear understanding of the population of high school dropouts. Measures of central tendency and dispersion were computed. The researcher determined means, medians, and percentiles based on the data input. Standard deviations were determined during data analysis and reported as well. This quantitative study used correlation analysis and logistic regression analysis to analyze the data. In the correlation analysis, the researcher was able to determine the strength of direction of the relationships between selected dropout variables and race as well as dropout variables and gender. A logistic regression model was run as well in order to determine whether each of the set of independent variables had a unique predictive relationship to the dependent variable. The results of analysis procedures were interpreted and evaluated for implications. In the chapters that follow, the results were evaluated, conclusions were drawn, and recommendations were presented.

Summary

This chapter provides a description of the research design and rationale for selecting the research strategy used in this study. The chapter also examined the data collection procedures and method of analysis that was used to gather and interpret the information studied. The population for this study consisted of a representative sample of high school dropouts and graduates in a suburban school district located in the mid-south. The data collected from student records was compiled using a spreadsheet program and analyzed in this chapter. However, the next chapter presents the results of this study in graphic and narrative format.

Chapter 4

Analysis of Data

Given data collected from 2006-2011 on the population of high school dropouts and a representative sample of high school graduates in a suburban Tennessee school district, the fundamental purpose of this study was to determine the extent of relationship between students' dropout status and a set of demographic and institutional variables routinely collected by the district and to determine whether the extent of such relationships differed when examined by students' ethnicity and gender.

Through a mixture of descriptive and inferential procedures, answers to the 13 research questions articulated in preceding chapters are provided in four series of tables. Immediately following is an outline of what is included in the tables, grouped by whether the analytic focus of the question was all students (Research Questions 1 through 4), students by ethnicity (Research Questions 5 through 8), students by gender (Research Questions 9 through 12), or students "crossed" by ethnicity and gender (Research Question 13). Following this general outline of the chapter's contents, the results pertinent to each research question are detailed and a summary of major findings completes the presentation.

Chapter Outline

As previously mentioned, the 13 research questions posited about dropping out of/graduating from high school may be grouped by their analytic focus. As there are four such foci, there are four groups of research questions and four corresponding series of tables.

In the first series, answers pertinent to Research Question 1 through Research Question 4 are provided. Concerning the entire population of dropouts—whether considered in the aggregate ($N = 353$) or as grouped by legal age of departure ($n_{>18} = 149$, $n_{\leq 18} = 204$)—this set of four questions is as follows:

Question 1: *Examined in the aggregate and as grouped by legal age of departure, how does a selection of demographic and institutional variables describe a population of students who have dropped out of schools in a moderately-sized suburban district during the previous five years?*

Question 2: *After pooling observations made on a comparable sample of graduates with those made on the dropout population, what relationships emerge between each of the selected variables taken individually and a student's status as a graduate or dropout?*

Question 3: *What differences in the strength of such relationships are seen when observations made on the population of dropouts grouped by legal age of departure are compared?*

Question 4: *After pooling observations made on the sample of graduates with those made on the dropout population, what institutional and demographic variables, when simultaneously examined, are observed to predict dropping out of school, both for the aggregate and as grouped by legal age of departure?*

With regard to Question 1, frequencies and percentages pertinent to each predictor variable and dropping out of/graduating from high school are presented for the aggregate (Table 1) and for dropouts grouped by legal age of departure (Table 2). For the aggregate, zero order correlations pertinent to Question 2 are also provided in Table 1, while those

observed for the two student subgroups defined by legal age of departure are presented in Table 3. Also presented in Table 3 are the results of testing whether such correlations observed for these two dropout subgroups differ significantly in their strength of relationship apropos Question 3. Finally, regarding how well the set of indicator variables predict dropping out when such variables are examined simultaneously (Question 4), the results are presented in a series of three “hierarchical” or “block entry” logistic regression tables: the first dealing the entire dropout population (Table 4), the second dealing with just those students who were younger than 18 years old when they left school (Table 5), and the third dealing only with those students 18 years old or older when they left school (Table 6).

Whether or not a particular variable is a significant predictor of dropping out is provided in these tables by two sources of information: the first being the significance level observed for the *Wald* statistic, analogous to the *t* statistic in “OLS” regression, and the second being the value observed for the change in the odds ratio denoted by the value observed for $Exp(B)$. When $Exp(B)$ is at or near a value of 1.0 and the 95% confidence interval is seen to contain that value, there is no meaningful change in the odds with respect to the occurrence or non- occurrence of dropping out when the predictor is added to the model. However, to the extent that $Exp(B)$ for a given predictor either significantly exceeds 1.0 or significantly drops below 1.0, the odds of dropping out or not dropping out are either substantially improved or substantially diminished, respectively.

In a second series of tables concerning students’ dropout status by ethnicity, answers pertinent to Research Questions 5 through 9 are provided. Targeting the 156

White students and 197 Black students who dropped out of a district high school for the period 2006 to 2011, this set of four questions is as follows:

Question 5: Examined in the aggregate and as grouped by legal age of departure, how does the selection of demographic and institutional variables describe the population of a) White and b) Black students who have dropped out of school under the circumstances previously outlined?

Question 6: When the pooled observations made on graduates and on a) White and B) Black dropouts are analyzed, what relationships emerge between each of these selected variables taken individually and a student's status as a graduate or dropout, both for the aggregate and as grouped by legal age of departure?

Question 7: What differences in the strength of such relationships are seen when observations made on the population of a) White and b) Black dropouts are compared, both in the aggregate and by legal age of departure?

Question 8: After pooling observations made on graduates and dropouts, what institutional and demographic variables, when simultaneously examined, are observed to predict dropping out of school for a) White and b) Black students, considered in the aggregate?

In a manner similar to the presentation of the findings for Research Question 1, frequencies and percentages pertinent to all of the predictor variables—ethnicity excepted—and the instance of dropping out of/graduating from high school are presented for both White and Black students in the aggregate (Table 7), for White and Black students who left school before 18 years of age (Table 8), and for White and Black

students who left school at 18 years or age or older (Table 9) with respect to Research Question 5, the first in this series of questions.

With regard to Research Question 6, zero order correlations between each of the predictor variables—again, excepting ethnicity—and the instance of dropping out of/remaining in high school are presented separately for both White and Black students first in the aggregate (Table 10), then for White and Black students who were recorded as leaving school before 18 years of age (Table 11), and finally for White and Black students who were recorded as leaving school at 18 years of age or older (Table 12). Along with the correlations themselves, the results of statistically testing the difference between the correlations observed for Black and White students in the aggregate, for students younger than 18, and for students 18 years old or older are presented in these same three tables in response to Research Question 7.

As with Research Question 4, hierarchical logistic regression was the statistical procedure employed to answer Research Question 8, with the results for White students in the aggregate presented in Table 13 and the results for Black students in the aggregate presented in Table 14. Because of insufficient sample sizes, however, no supplementary logistic regressions were run on the two ethnic groups subdivided according to students' legal age of departure.

In a third series of tables, answers pertinent to Research Questions 9 through 12 are provided to questions concerning students' status as dropping out of/graduating from high school by the gender of the student. Having as their focus the 116 females and 237 males who dropped out of a district high school during the period, these four questions are as follows:

Question 9: *Examined in the aggregate and as grouped by legal age of departure, how does the selection of demographic and instructional variables describe the population of a) Male and b) Female students who have dropped out of school under the circumstances previously outlined?*

Question 10: *When the pooled observations made on graduates and a) Male and b) Female dropouts are analyzed, what relationships emerge between each of these selected variables taken individually and a student's status as a graduate or dropout, both for the aggregate and as grouped by legal age of departure?*

Question 11: *What differences in the strength of such relationships are seen when observations made on the population of a) Male and b) Female dropouts are compared, both in the aggregate and by legal age of departure?*

Question 12: *After pooling observations made on graduates and dropouts, what institutional and demographic variables, when simultaneously examined, are observed to predict dropping out of school for a) male and b) female students, considered in the aggregate?*

As these four research questions concerning students' genders and dropping out of/graduating from school parallel those asked about students' ethnicities and dropping out/graduating from school, the answers to these questions are presented in a similar manner. Thus, for the two genders, frequencies and percentages pertinent to Research Question 9 are presented for all students in the aggregate in Table 15, for students who left school before turning 18 in Table 16, and for students who left school after turning 18 in Table 17. With regard to Research Questions 10 and 11, zero order correlations are provided along with tests for differences in the strength of these correlations for all

students by gender in the aggregate in Table 18 and for the two genders subdivided according to legal age of departure in Tables 19 and 20, respectively. With regard to Research Question 12, the simultaneous examination of all predictor variables and dropping out of/graduating from high school is provided in separate hierarchical logistic regression tables: one for females (Table 21) and one for males (Table 22).

Posed for the sake of completeness, a final research question concerns the interaction of gender and ethnicity and dropping out of/graduating from high school. Concerning four groups of dropouts—White males ($n = 108$), White females ($n = 48$), Black males ($n = 129$), and Black females ($n = 68$)—this question is as follows:

Question 13: In crossing the gender and ethnic characteristics of students in the dropout population, what relationships emerge between the remaining variables and a student's status as a dropout or graduate and how does the strength of such relationships compare across groups?

With regard to this final question, frequencies and percentages pertinent to females by ethnicity are provided in Table 23, while those pertinent to males by ethnicity are provided in Table 24. Along with statistical tests for differences, zero order correlations between the predictor variables and dropping out are explored for White students by gender in Table 25 and for Black students by gender in Table 26. To avoid redundancy, only the results of comparing the correlations obtained for White females and Black females and for White males and Black males are provided in Table 27. As these groups are already very small, subdividing them once more by legal age of departure seemed not to provide useful additional information.

Findings by Research Question

The data this study included both the population of all dropouts and non-dropouts who attended a Tennessee suburban school district from the year 2006-2011. Data was mined from the school district mainframe computer which houses student data. The researcher requested access to the mainframe to extract the data needed; however, the district's director of technology elected to assign the task to a technology specialist to complete for the researcher. Once all information had been obtained, each student's name was deleted and replaced with a non-identifying number to ensure their anonymity. This information was then compressed into an Excel worksheet and forwarded to the researcher so that more complete answers to the research questions posited in this study could be answered via Statistical Package for the Social Sciences (SPSS). In four series of tables, answers to these research questions are provided below with respect to 1) all students in the aggregate, 2) students by ethnicity, 3) students by gender, and 4) students crossed by ethnicity and gender.

All Students in the Aggregate: Research Questions 1 to 4

Question 1: Examined in the aggregate and as grouped by legal age of departure, how does a selection of demographic and institutional variables describe a population of students who have dropped out of schools in a moderately-sized suburban district during the previous five years?

Shown in Table 1 are the frequencies and percentages pertinent to the demographic and institutional characteristics of the population of dropouts who exited the school district during the specified period. For comparative purposes, also provided in Table 1 are the same characteristics pertinent to a sample of students who graduated from the same district during the same period, along with the zero order correlation coefficient

between each demographic and institutional characteristic and a student's status as a graduate or a dropout. As each of these correlations proved to be statistically significant, all of the characteristics may be said to predict whether students dropped out or graduated from high school, although the strength of the prediction clearly varied.

Four of these predictor variables are categorical and dichotomous in nature: gender, ethnicity, special education status and free and reduced lunch. With respect to gender, inspection of Table 1 shows the population of dropouts to be more male (67.1%) than female (32.9%) when compared to the nearly equal distribution of males (52.2%) and females (47.8%) in the sample of graduates. In terms of ethnicity, there were somewhat more Black students (55.8%) than Whites (44.2%) among dropouts while almost obverse proportions of White students (55.4%) and Black (44.6%) were seen among graduates. Although students receiving free and reduced lunch were observed among both graduates (31.6%) and dropouts (48.7%), the proportion so noted was significantly higher among the latter than the former. Likewise, students who received special education accommodations were observed among both groups; however, the proportion of such students noted among dropouts (13.6%) was nearly twice that noted for graduates (7.3%).

In addition to these categorical data, numeric data concerning student retentions, absenteeism, behavioral infractions, and academic performance were made available for study, although these are presented in categorical form to enable ready comparison between groups of students. To enable a clearer picture of how absenteeism and behavioral infractions were related to dropping out, the former was computed both as a grand total across the years in question and as an annual average, while the latter was

indexed as three phenomena: in-school suspensions, out-of-school suspensions, and expulsions.

Regarding retention, analysis of the data showed that nearly 40% of all dropouts had been retained one time (21.5%) or more (18.2%), compared to the less than 10% who had been retained one time (7.9%) or more (1.3%) among graduates. Also higher among dropouts than graduates were the level of absences, the number of in-school and out-of-school suspensions, and the incidence of expulsions. Whether reckoned in terms of a sum or an average, dropouts appeared to be more frequently absent than graduates, with some 53% of the former having in all 30 or more total absences, compared to only 25.3% of the latter and nearly twice the proportion of dropouts having 10 or more annual absences (31.7%) compared with the same rate observed among graduates (14.6%). Similarly, dropouts appeared to be suspended at a rate of approaching twice that of graduates, with roughly 64% of the former having one or more in-school suspensions, compared to about 39% of the latter, and slightly more than 61% of the former having one or more out-of-school suspensions compared with roughly 24% of the latter. While comparatively few students in either group had ever been expelled, the proportion was still significantly higher among dropouts (13.6%) than graduates (2.2%).

Taken together, all of these variables add up to a profile that generally discriminates students who do not graduate from high school from those who do; however, inspection of the results for Grade Point Average suggests no other variable that so clearly distinguishes one group from the other. As seen in Table 1, some 98 graduates (31.0%) earned an academic average of more than 3.0 compared to only four dropouts with performing at the same level (1.1%), while conversely, only two graduates earned a

G.P.A. of 1.0 or less (0.6%) compared with some 106 dropouts (30.0%) who achieved at similar levels. In essence, regarding this variable, there is not merely some discrepancy between the proportion of graduates and non-graduates in each of achievement categories, but rather a top-to-bottom difference between the members of these two groups that is thoroughgoing and complete.

As data were extracted for the 353 dropouts observed, the codes denoting the age at which student left school—either younger than 18 years ($n = 149$, 42.2%) or 18 years or older ($n = 204$, 57.7%)—were retained so that the dynamics of dropping out at a higher could be explored at a higher level of precision. As Table 2 shows, the percentages observed for the two dropouts groups are similar with respect to all indicators except one: the ethnicity of the student. Where nearly equal proportions of Black (48.3%) and White students (51.7%) are observed to drop out of school before they are 18, the numbers are disproportionate among students who left school at or above 18 years of age. For that group, White students appear more likely to see high school through when they have reached a certain age (38.7%). For reasons that are not transparent, however, Black students, on the other hand, appear less willing or able to do so when they become of legal age (61.3%).

Table 1

Descriptive Statistics Pertinent to Eleven Variables that Predict Graduating or Dropping Out of School for the Entire Sample of Students (N = 669)

Predictor Variable	Graduates (N = 316)		Dropouts (N = 353)	
	<i>f</i>	%	<i>f</i>	%
Gender ($r = 0.152, p < .001$)				
Female	151	47.8	116	32.9
Male	165	52.2	237	67.1
Ethnicity ($r = 0.112, p < .01$)				
Black	141	44.6	197	55.8
White	175	55.4	156	44.2
Free/Reduced Lunch ($r = 0.174, p < .01$)				
No	216	68.4	181	51.3
Yes	100	31.6	172	48.7
Special Education Status ($r = 0.102, p = .01$)				
No	293	92.7	305	86.4
Yes	23	7.3	48	13.6
Retentions ($r = 0.356, p < .001$)				
None	287	90.8	213	60.3
One	25	7.9	76	21.5
More than One	4	1.3	64	18.2
Total Absences ($r = 0.269, p < .001$)				
Six or Fewer	79	25.0	60	17.0
B/W 7 & 18	89	28.2	49	13.9
B/W 19 & 30	68	21.5	57	16.1
More than 30	80	25.3	187	53.0
Average Annual Absences ($r = 0.244, p < .001$)				
Two or Fewer	98	31.0	67	19.0
B/W 2 & 5	103	32.6	77	21.8
B/W 5 & 10	69	21.8	97	27.5
More than 10	46	14.6	112	31.7

(Table 1 continues)

(Table 1 continued)

Predictor Variable	<u>Graduates</u> (<i>N</i> = 316)		<u>Dropouts</u> (<i>N</i> = 353)	
	<i>f</i>	%	<i>f</i>	%
In-School Suspensions ($r = 0.289, p < .001$)				
None	223	70.6	124	35.1
B/W 1 & 5	74	23.4	141	39.9
More than 5	19	6.0	88	24.9
Out of School Suspensions ($r = 0.335, p < .001$)				
None	241	76.3	137	38.8
B/W 1 & 5	71	22.5	163	46.2
More than 5	4	1.3	53	15.0
Expulsions ($r = 0.206, p < .001$)				
None	309	97.8	305	86.4
One or More	7	2.2	48	13.6
Grade Point Average ($r = -0.670, p < .001$)				
1.0 or Less	2	0.6	106	30.0
B/W 1.1 & 2.0	67	21.2	195	55.2
B/W 2.1 & 3.0	149	47.2	48	13.6
More than 3.0	98	31.0	4	1.1

Table 2

Descriptive Statistics Pertinent to Eleven Variables that Predict Dropping Out of School for Students Less than or Greater than or Equal to Eighteen Years Old (N = 353)

Predictor Variable	Dropouts < 18 (N = 149)		Dropouts >= 18 (N = 204)	
	<i>F</i>	%	<i>f</i>	%
Gender				
Female	50	33.6	66	32.4
Male	99	66.4	138	67.6
Ethnicity				
Black	72	48.3	125	61.3
White	77	51.7	79	38.7
Free/Reduced Lunch				
No	82	55.0	99	48.5
Yes	67	45.0	105	51.5
Special Education Status				
No	126	84.6	179	87.7
Yes	23	15.4	25	12.3
Retentions				
None	98	65.8	115	56.4
One	30	20.1	46	22.5
More than One	21	14.1	36	17.6
Total Absences				
Six or Fewer	31	20.8	29	14.2
B/W 7 & 18	19	12.8	30	14.7
B/W 19 & 30	27	18.1	30	14.7
More than 30	72	48.3	115	56.4
Average Annual Absences				
Two or Fewer	35	23.5	32	15.7
B/W 2 & 5	33	22.1	44	21.6
B/W 5 & 10	41	27.5	56	27.5
More than 10	40	26.8	72	35.3

(Table 2 continues)

(Table 2 continued)

Predictor Variable	<u>Dropouts > 18</u>		<u>Dropouts <= 18</u>	
	<i>(N = 149)</i>		<i>(N = 204)</i>	
	<i>F</i>	<i>%</i>	<i>f</i>	<i>%</i>
In-School Suspensions				
None	55	36.9	69	33.8
B/W 1 & 5	56	37.6	85	41.7
More than 5	38	25.5	50	24.5
Out of School Suspensions				
None	58	38.9	79	38.7
B/W 1 & 5	71	47.7	92	45.1
More than 5	20	13.4	33	16.2
Expulsions				
None	123	82.6	182	89.2
One or More	26	17.5	22	10.8
Grade Point Average				
1.0 or Less	57	38.3	49	24.0
B/W 1.1 & 2.0	67	45.0	128	62.7
B/W 2.1 & 3.0	24	16.1	24	11.8
More than 3.0	1	0.7	3	1.5

With respect to the entire population of dropouts and its two constituent subgroups, Research Questions 2 and 3 concern the correlation of each predictor variable with the instance of dropping out of/graduating from high school.

Question 2: After pooling observations made on a comparable sample of graduates with those made on the dropout population, what relationships emerge between each of the selected variables taken individually and a student's status as a graduate or dropout?

Question 3: What differences in the strength of such relationships are seen when observations made on the population of dropouts grouped by legal age of departure are compared?

As previously mentioned with respect to Research Question 2, all of the demographic and institutional variables appear to be significant predictors for all the population of dropouts (see, again, Table 1). While generally smaller correlations are observed for the categorical indicators, larger ones tend to be observed for such outcomes as retentions ($r = 0.36, p < .001$), total absences ($r = 0.27, p < .001$), out-of-school suspensions ($r = 0.34, p < .001$), and, above all, Grade Point Average ($r = -0.67, p < .001$). Relative to all other indicators, the correlation observed between dropping out and G.P.A. is distinguished not only by its magnitude but also by its negative direction: as G.P.A. decreases the chance that in this district a student will drop out of a high school substantially increase.

Provided in Table 3 and also pertinent to Research Question 2 are the correlation coefficients between each predictor variable and whether or not a student dropped out by legal age of departure. For both dropout subgroups, inspection of the outcomes indicates

that all of the correlation coefficients were statistically significant predictors of dropping out with two exceptions: student ethnicity within the younger than 18 years age group ($r = 0.04, p = .46$) and special education status within the 18 years or older age group ($r = 0.08, p = 0.06$).

With regard to Research Question 3 and any observed differences in the strength of the correlations obtained for the two groups, the results of testing indicate only one statistically significant difference. Consistent with what was said earlier about the disproportion number of Black students in the 18 years or older group of dropouts, a difference between the magnitude of the correlations is observed with respect to ethnicity ($Z = -2.02, p = .043$). Specifically, the relationship between ethnicity and dropping out of high school was stronger for students in the 18 or older age group ($r = 0.16, p < .001$), than it was for the younger than 18 years age group ($r = .04, p = .46$).

While all of these variables taken individually predict dropping out of/graduating from high school in the aggregate, it is unclear how much predictive power these variables have as a unit. Research Question 4 attempts to address this concern by way of logistic regression:

Question 4: After pooling observations made on the sample of graduates with those made on the dropout population, what institutional and demographic variables, when simultaneously examined, are observed to predict dropping out of school, both for the aggregate and as grouped by legal age of departure?

Because of the magnitude of the relationship between Grade Point Average and dropping out was so large relative to all other indicators, two-step hierarchical or “block entry” logistic regressions were conducted for all students in the aggregate (Table 4), for just

those students who dropped out of school before they were 18 (Table 5), and for just those students who dropped out of school after they turned 18 (Table 6), so that the contributions of other predictors could be explored outside the powerful influence of G.P.A.

Regarding all dropouts, irrespective of their age of departure, all variables other than G.P.A. were added into the model in the first block. As shown in Table 5, the results based on this set of variables indicate that the model fit the data well enough ($\chi^2(9, N = 699) = 179.08, p < .001$), correctly classifying 73.9% of the observations. More specifically, four out of the nine variables attained statistical significance, including total number of absences ($Wald = 6.00, p < .05$) number of retentions ($Wald = 30.64, p < .001$) number of out-of-school suspensions ($Wald = 13.19, p < .0001$) and number of expulsions ($Wald = 5.13, p < .05$). The odds ratios indicate that having more absences, more retentions, more out-of-school suspensions, and more expulsions were statistically significantly associated with dropping out of high school.

In the second step of the analysis, Grade Point Average was added into the model. The results for the second step indicate a statistically significant improvement in the “fit” of the model to the data ($\chi^2(1, N = 699) = 222.11, p < .001$), coupled with a large increase in the proportion of students correctly classified by the model (83.9%) In addition to academic achievement ($Wald = 128.50, p < .001$), three out of the nine other variables reached statistical significance: gender ($Wald = 4.01, p < .05$), ethnicity ($Wald = 11.26, p < .01$), and number of expulsions ($Wald = 4.92, p < .05$). The odds ratios suggest that being male, being Black, having more expulsions, and having a lower grade point average enhances the chance that one would be a dropout for the district in question.

Table 3

Correlations and Tests for Differences between Correlations Pertinent to Eleven Variables that Predict Dropping Out of School for Students Less than Eighteen and Greater than or Equal to Eighteen Years Old (N = 699)

Predictor Variable	Dropouts < 18 (N = 465)		Dropouts >= 18 (N = 520)		Test Statistics	
	r_1	p	r_2	p	Z	P
Gender	0.13	0.004	0.15	0.000	-0.3	0.764
Ethnicity	0.04	0.456	0.16	0.000	-2.02	0.043
Free/Reduced Lunch	0.13	0.005	0.20	0.000	-1.09	0.276
Special Education	0.13	0.006	0.08	0.056	0.7	0.484
Retentions	0.33	0.000	0.42	0.000	-1.53	0.126
Total Absences	0.22	0.000	0.32	0.000	-1.72	0.085
Average Absences	0.19	0.000	0.29	0.000	-1.69	0.091
IS Suspensions	0.29	0.000	0.31	0.000	-0.45	0.653
OS Suspensions	0.36	0.000	0.36	0.000	-0.07	0.944
Expulsions	0.28	0.000	0.19	0.000	1.49	0.136
Grade Point Average	-0.65	0.000	-0.64	0.000	0.24	0.810

Table 4

Hierarchical Logistic Regression Summary for Sampled Students Who Graduated and All Students Categorized as Dropouts, 2006 to 2011(N= 699)

Variables	<i>B</i>	<i>SE</i>	<i>Wald</i>	95% CI for Odds Ratio		
				Lower	Odds Ratio	Upper
$(\chi^2 (9) = 179.08, p < .001; R^2_{CS} = .235, R^2_N = .313; \text{Classified} = 73.1\%)$						
Constant	-0.95	0.18	26.48 ***		0.39	
Gender	0.23	0.18	1.55	0.88	1.26	1.80
Ethnicity	-0.33	0.21	2.56	0.48	0.72	1.08
Special Education	0.03	0.32	0.01	0.55	1.03	1.92
Total Absences	0.01	0.00	6.00 *	1.00	1.01	1.01
Retentions	1.07	0.19	30.64 ***	1.99	2.90	4.23
IS Suspensions	0.02	0.03	0.38	0.95	1.02	1.09
OS Suspensions	0.25	0.07	13.19 ***	1.12	1.28	1.47
Expulsions	0.97	0.43	5.13 *	1.14	2.63	6.05
Free/Reduced Lunch	0.34	0.21	2.65	0.93	1.41	2.12
$(\chi^2 (1) = 222.107, p < .001; R^2_{CS} = .451, R^2_N = .602; \text{Classified} = 83.9\%)$						
Constant	4.96	0.55	80.76 ***			
Gender	-0.48	0.24	4.01 *	0.39	0.62	0.99
Ethnicity	-0.89	0.27	11.26 **	0.24	0.41	0.69
Special Education	-0.32	0.39	0.68	0.34	0.73	1.55
Total Absences	0.00	0.00	0.92	1.00	1.00	1.01
Retentions	0.37	0.21	3.21	0.97	1.45	2.17
IS Suspensions	-0.02	0.04	0.32	0.92	0.98	1.05
OS Suspensions	0.10	0.07	2.18	0.97	1.10	1.25
Expulsions	1.08	0.49	4.92 *	1.13	2.96	7.70
Free/Reduced Lunch	0.23	0.25	0.80	0.76	1.25	2.06
Grade Point Average	-2.34	0.21	128.50 ***	0.06	0.10	0.14

* $p < .05$. ** $p < .01$. *** $p < .001$.

When a logistic regression was conducted on the group of dropouts who left school before they were 18 years old (see Table 5), the differences between the results observed for the aggregate and this particular subgroup proved to be minor. As before, when the initial set of variables was added, the model appeared to provide an adequate “fit” to the data ($\chi^2(9, N = 465) = 96.82, p < .001$), correctly classifying 76.8% of the observations. As with the previous model, three out of the nine variables attained statistical significance, including total number of retentions ($Wald = 12.75, p < .001$) number of out-of-school suspensions ($Wald = 11.19, p < .001$), and number of expulsions ($Wald = 9.93, p < .01$), with the odds ratios indicating that more retentions, more out-of-school suspensions, and more expulsions were linked, for this group, with an increased likelihood of dropping out.

Upon adding G.P.A. to the model, there was a statistically significant improvement in the fit of the model to the data, ($\chi^2(1, N = 465) = 177.31, p < .001$) and a sizable increase in the percentage of students correctly classified (85.8%). Given the addition of G.P.A., ($Wald = 90.81, p < .001$), the same three variables as were observed for the aggregate were also observed for this subset of dropouts: specifically, gender ($Wald = 3.91, p < .05$), ethnicity ($Wald = 10.52, p < .01$), and number of expulsions ($Wald = 11.27, p < .01$). Once again, the odds ratios suggest that being male, being Black, having more expulsions, and having a lower grade point average would enhance the probability that one would be a dropout for the district in question

With respect to the older subset of dropouts, inspection of the logistic regression results that appear in Table 6 reveal some interesting departures from the results observed for the two previous models. As before, the beginning model adequately fits the data,

correctly classifying about 76.4% of the observations. Three out of the nine variables attained statistical significance, but in this model the significant predictors were total number of absences ($Wald = 12.58, p < .001$), number of retentions ($Wald = 12.58, p < .001$), and—rather than expulsions—number of out-of-school suspensions, ($Wald = 6.57, p < .05$). The odds ratios indicate that more absences, more retentions, and more out-of-school suspensions were, for this subset, statistically significantly associated with dropping out of high school.

Regarding the second step in the model, the addition of G.P A. enhanced the fit of the model ($\chi^2(1, N = 520) = 131.09, p < .001$) and improved the percentage of observations correctly classified (85.2%). However, for this group of dropouts, neither gender nor ethnicity proved to be significant predictors of dropping out once academic achievement had been taken into account ($Wald = 85.82, p < .001$). Rather, for this group of older dropouts, the significant predictors included total number of absences ($Wald = 4.58, p < .05$) and number of retentions ($Wald = 7.09, p < .01$). Thus, for those students who dropped out of school later in their academic careers, having more absences, more retentions, and a lower grade point average proved to be those factors that increased the odds that a student would leave high school without graduating.

Table 5

Hierarchical Logistic Regression Summary for Sampled Students Who Graduated and All Students Younger than 18 Years Old Who Dropped Out, 2006 to 2011(N= 465)

Variables	<i>B</i>	<i>SE</i>	<i>Wald</i>	95% CI for Odds Ratio		
				Lower	Odds Ratio	Upper
($\chi^2(9) = 96.821, p < .001; R^2_{CS} = .188, R^2_N = .263; \text{Classified} = 76.8\%$)						
Constant	-1.43	0.23	37.94 ***		0.24	
Gender	0.09	0.24	0.15	0.69	1.10	1.74
Ethnicity	-0.50	0.27	3.55	0.36	0.60	1.02
Special Education	0.02	0.39	0.00	0.47	1.02	2.19
Total Absences	0.00	0.00	0.20	0.99	1.00	1.01
Retentions	0.85	0.24	12.75 ***	1.47	2.34	3.72
IS Suspensions	0.00	0.04	0.00	0.92	1.00	1.09
OS Suspensions	0.27	0.08	11.19 **	1.12	1.32	1.55
Expulsions	1.46	0.46	9.93 **	1.74	4.30	10.63
Free/Reduced Lunch	0.43	0.27	2.59	0.91	1.54	2.62
($\chi^2(1) = 177.305, p < .001; R^2_{CS} = .445, R^2_N = .632; \text{Classified} = 85.8\%$)						
Constant	5.47	0.74	54.59 ***		236.72	
Gender	-0.63	0.32	3.91 *	0.28	0.53	0.99
Ethnicity	-1.14	0.35	10.52 **	0.16	0.32	0.64
Special Education	-0.75	0.47	2.50	0.19	0.47	1.20
Total Absences	-0.01	0.01	0.93	0.98	0.99	1.01
Retentions	-0.18	0.28	0.39	0.48	0.84	1.46
IS Suspensions	0.00	0.05	0.00	0.91	1.00	1.09
OS Suspensions	0.04	0.08	0.32	0.90	1.04	1.22
Expulsions	1.86	0.55	11.27 **	2.17	6.41	18.97
Free/Reduced Lunch	0.47	0.34	1.92	0.82	1.59	3.08
Grade Point Average	-2.81	0.29	90.81 ***	0.03	0.06	0.11

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 6

Hierarchical Logistic Regression Summary for Sampled Students Who Graduated and All Students 18 Years Old and Older Who Dropped Out, 2006 to 2011(N= 520)

Variables	<i>B</i>	<i>SE</i>	<i>Wald</i>	95% CI for Odds Ratio		
				Lower	Odds Ratio	Upper
$(\chi^2 (9) = 184.221, p < .001; R^2_{CS} = .292, R^2_N = .394; \text{Classified} = 76.4\%)$						
Constant	-1.82	0.22	69.07 ***		0.16	
Gender	0.35	0.22	2.53	0.92	1.42	2.19
Ethnicity	0.01	0.01	1.39	1.00	1.01	1.02
Special Education	-0.18	0.39	0.20	0.39	0.84	1.81
Total Absences	0.01	0.00	12.58 ***	1.01	1.01	1.02
Retentions	1.20	0.21	33.81 ***	2.21	3.32	4.97
IS Suspensions	0.03	0.04	0.60	0.96	1.03	1.10
OS Suspensions	0.18	0.07	6.57 *	1.04	1.20	1.37
Expulsions	0.30	0.51	0.36	0.50	1.35	3.64
Free/Reduced Lunch	0.21	0.23	0.88	0.79	1.24	1.94
$(\chi^2 (1) = 131.091, p < .001; R^2_{CS} = .446, R^2_N = .601; \text{Classified} = 85.2\%)$						
Constant	3.56	0.58	37.48 ***		35.25	
Gender	-0.21	0.27	0.64	0.48	0.81	1.36
Ethnicity	0.01	0.01	0.99	0.99	1.01	1.02
Special Education	-0.42	0.44	0.92	0.28	0.66	1.55
Total Absences	0.01	0.00	4.58 *	1.00	1.01	1.02
Retentions	0.56	0.21	7.09 **	1.16	1.76	2.66
IS Suspensions	-0.02	0.04	0.49	0.91	0.98	1.05
OS Suspensions	0.06	0.06	0.97	0.94	1.06	1.21
Expulsions	0.16	0.53	0.09	0.41	1.17	3.34
Free/Reduced Lunch	-0.19	0.27	0.52	0.49	0.82	1.39
Grade Point Average	-2.18	0.24	85.82 ***	0.07	0.11	0.18

* $p < .05$. ** $p < .01$. *** $p < .001$.

Dropouts by Ethnicity: Research Questions 5 to 8

The second set of Research Questions concerns dropout phenomena when the data are organized by the ethnicity of the student. As with the previous questions, data pertinent to the age at which students dropped out facilitate a more fine-grained analysis of the results; however, as the size of the groups examined shrinks, carrying out logistic regressions on these subsets of observations within subsets of observations becomes unwise. As a result, Research Question 8 makes no reference to students' "legal age of departure."

Question 5: Examined in the aggregate and as grouped by legal age of departure, how does the selection of demographic and institutional variables describe the population of a) White and b) Black students who have dropped out of school under the circumstances previously outlined?

Presented in Table 7 are the frequencies and percentages obtained across the ten predictor variables for graduates and dropouts, considered by the students' ethnicity as either White or Black. With respect to the proportion of students who dropped out by gender, inspection of the table indicates that the percentage of White females (30.8%) and White males (69.2%) who in the aggregate dropped out were similar to the percentage of Blacks females (34.5%) and Black males (65.5%) who in the aggregate dropped out. At the same time, especially sharp differences among Black and White dropouts appear with respect to the proportion of students receiving free and reduced lunch (65.0% to 28.2%, respectively), being retained one or more times (47.2% to 30.2%, respectively), having been suspended either in-school (76.1% to 50.6%, respectively) or out-of-school (77.1% to 41.0%, respectively), and having been expelled (18.2% to 7.7%).

Most of these differences persist when results pertinent to Black and White students who dropped out prior to turning 18 (see Table 8) and those pertinent to Black and White students who dropped out at age 18 or older (see Table 9) are analyzed.

Results pertinent to the two Research Questions following are presented in Tables 10 through 12.

Question 6: *When the pooled observations made on graduates and on a) White and b) Black dropouts are analyzed, what relationships emerge between each of these selected variables taken individually and a student's status as a graduate or dropout, both for the aggregate and as grouped by legal age of departure?*

Question 7: What differences in the strength of such relationships are seen when observations made on the population of a) White and b) Black dropouts are compared, both in the aggregate and by legal age of departure?

As Table 10 indicates, with respect to all 156 White dropouts irrespective of legal age of departure, all ten variables appear to be statistically significant predictors of dropping out, with Grade Point Average indicated as the strongest of these ($r = -0.70$, $p < .001$). However, with respect to all 197 Black dropouts irrespective of legal age of departure, neither a student's free and reduced lunch status ($r = 0.04$, $p = 0.46$) nor his or her special education status ($r = 0.06$, $p = 0.27$) proved to be significantly linked to dropping out.

Table 7

Descriptive Statistics Pertinent to Ten Variables that Predict Graduating or Dropping Out of School by Student Ethnicity (N = 669)

Predictor Variable	<u>White</u>				<u>Black</u>			
	Graduate (N = 175)		Dropout (N = 156)		Graduate (N = 141)		Dropout (N = 197)	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
Gender								
Female	85	48.6	48	30.8	66.0	46.8	68	34.5
Male	90	51.4	108	69.2	75.0	53.2	129	65.5
Free/Reduced Lunch								
No	161	92.0	112	71.8	55.0	39.0	69	35.0
Yes	14	8.0	44	28.2	86.0	61.0	128	65.0
Special Education Status								
No	167	95.4	137	87.8	126.0	89.4	168	85.3
Yes	8	4.6	19	12.2	15.0	10.6	29	14.7
Retentions								
None	167	95.4	109	69.9	120.0	85.1	104	52.8
One	8	4.6	24	15.4	17.0	12.1	52	26.4
Two or More	0	0.0	23	14.8	4.0	2.8	41	20.8
Total Absences								
Six or Fewer	42	24.0	42	26.9	37.0	26.2	18	9.1
B/W 7 & 18	58	33.1	10	6.4	31.0	22.0	39	19.8
B/W 19 & 30	32	18.3	28	17.9	36.0	25.5	29	14.7
More than 30	43	24.6	76	48.7	37.0	26.2	111	56.3
Average Annual Absences								
Two or Fewer	52	29.7	44	26.9	46.0	32.6	23	11.7
B/W 2 & 5	65	37.1	24	6.4	38.0	27.0	53	26.9
B/W 5 & 10	34	19.4	47	17.9	35.0	24.8	50	25.4
More than 10	24	13.7	41	48.7	22.0	15.6	71	36.0

(Table 7 continues)

(Table 7 continued)

Predictor Variable	<u>White</u>				<u>Black</u>			
	Graduate (<i>N</i> = 175)		Dropout (<i>N</i> = 156)		Graduate (<i>N</i> = 141)		Dropout (<i>N</i> = 197)	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
In-School Suspensions								
None	139	79.4	77	49.4	84.0	59.6	47	23.9
B/W 1 & 5	34	19.4	59	37.8	40.0	28.4	82	41.6
More than 5	2	1.1	20	12.8	17.0	12.1	68	34.5
Out of School Suspensions								
None	150	85.7	92	59.0	91.0	64.5	45	22.8
B/w 1 & 5	24	13.7	56	35.9	47.0	33.3	107	54.3
More than 5	1	0.6	8	5.1	3.0	2.1	45	22.8
Expulsions								
None	175	0.0	144	92.3	134.0	95.0	161	81.7
One or More	0	0.0	12	7.7	7.0	5.0	36	18.2
Grade Point Average								
1.0 or Less	0	0.0	40	25.6	2.0	1.4	66	33.5
B/w 1.1 & 2.0	21	12.0	84	53.8	46.0	32.6	111	56.3
B/w 2.1 & 3.0	77	44.0	29	18.6	72.0	51.1	19	9.6
More than 3.0	77	44.0	3	1.9	21.0	14.9	1	0.5

Table 8

Descriptive Statistics Pertinent to Ten Variables that Predict Dropping Out of School for Students Less than Eighteen Years Old by Student Ethnicity (N =465)

Predictor Variable	<u>White < 18</u>				<u>Black < 18</u>				
	Graduate (N = 175)		Dropout (N = 77)		Graduate (N = 141)		Dropout (N = 72)		
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%	
Gender									
Female	85	48.6	24	31.2	66	46.8	26	36.1	
Male	90	51.4	53	68.8	75	53.2	46	63.9	
Free/Reduced Lunch									
No	161	92.0	54	70.1	55	39.0	28	38.9	
Yes	14	8.0	23	29.9	86	61.0	44	61.1	
Special Education Status									
No	167	95.4	67	87.0	126	89.4	59	81.9	
Yes	8	4.6	10	13.0	15	10.6	13	18.1	
Retentions									
None	167	95.4	55	71.4	120	85.1	43	59.7	
One	8	4.6	11	14.3	17	12.1	19	26.4	
Two or More	0	0.0	11	14.3	4	2.8	10	13.9	
Total Absences									
Six or Fewer	42	24.0	19	24.7	37	26.2	12	16.7	
B/W 7 & 18	58	33.1	5	6.5	31	22.0	14	19.4	
B/W 19 & 30	32	18.3	16	20.8	36	25.5	11	15.3	
More than 30	43	24.6	37	48.1	37	26.2	35	48.6	
Average Annual Absences									
Two or Fewer	52	29.7	20	26.0	46	32.6	15	20.8	
B/W 2 & 5	65	37.1	14	18.2	38	27.0	19	26.4	
B/W 5 & 10	34	19.4	23	29.9	35	24.8	18	25.0	
More than 10	24	13.7	20	26.0	22	15.6	20	27.8	

(Table 8 continues)

(Table 8 continued)

Predictor Variable	White < 18				Black < 18			
	Graduate (N = 175)		Dropout (N = 77)		Graduate (N = 141)		Dropout (N = 72)	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
In-School Suspensions								
None	139	79.4	32	41.6	84	59.6	23	31.9
B/W 1 & 5	34	19.4	30	39.0	40	28.4	26	36.1
More than 5	2	1.1	15	19.5	17	12.1	23	31.9
Out of School Suspensions								
None	150	85.7	38	49.4	91	64.5	20	27.8
B/W 1 & 5	24	13.7	34	44.2	47	33.3	37	51.4
More than 5	1	0.6	5	6.5	3	2.1	15	20.8
Expulsions								
None	175	0.0	67	87.0	134	95.0	56	77.8
One or More	0	0.0	10	13.0	7	5.0	16	22.2
Grade Point Average								
1.0 or Less	0	0.0	26	33.8	2	1.4	31	43.1
B/W 1.1 & 2.0	21	12.0	38	49.4	46	32.6	29	40.3
B/W 2.1 & 3.0	77	44.0	12	15.6	72	51.1	12	16.7
More than 3.0	77	44.0	1	1.3	21	14.9	0	0.0

Table 9

Descriptive Statistics Pertinent to Ten Variables that Predict Dropping Out of School for Students Greater than or Equal to Eighteen Years Old by Student Ethnicity (N = 520)

Predictor Variable	<u>White >= 18</u>				<u>Black >= 18</u>			
	Graduate (N = 175)		Dropout (N = 79)		Graduate (N = 141)		Dropout (N = 125)	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
Gender								
Female	85	48.6	24	30.4	66	46.8	42	33.6
Male	90	51.4	55	69.6	75	53.2	83	66.4
Free/Reduced Lunch								
No	161	92.0	58	73.4	55	39.0	41	32.8
Yes	14	8.0	21	26.6	86	61.0	84	67.2
Special Education Status								
No	167	95.4	70	88.6	126	89.4	109	87.2
Yes	8	4.6	9	11.4	15	10.6	16	12.8
Retentions								
None	167	95.4	54	68.4	120	85.1	61	48.8
One	8	4.6	13	16.5	17	12.1	33	26.4
Two or More	0	0.0	12	15.2	4	2.8	31	24.8
Total Absences								
Six or Fewer	42	24.0	23	29.1	37	26.2	6	4.8
B/W 7 & 18	58	33.1	5	6.3	31	22.0	25	20.0
B/W 19 & 30	32	18.3	12	15.2	36	25.5	18	14.4
More than 30	43	24.6	39	49.4	37	26.2	76	60.8
Average Annual Absences								
Two or Fewer	52	29.7	24	30.4	46	32.6	8	6.4
B/W 2 & 5	65	37.1	10	12.7	38	27.0	34	27.2
B/W 5 & 10	34	19.4	24	30.4	35	24.8	32	25.6
More than 10	24	13.7	21	26.6	22	15.6	51	40.8

(Table 9 continues)

(Table 9 continued)

Predictor Variable	<u>White >= 18</u>				<u>Black >= 18</u>			
	Graduate (N = 175)		Dropout (N = 79)		Graduate (N = 141)		Dropout (N = 125)	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
In-School Suspensions								
None	139	79.4	45	57.0	84	59.6	24	19.2
B/W 1 & 5	34	19.4	29	36.7	40	28.4	56	44.8
More than 5	2	1.1	5	6.3	17	12.1	45	36.0
Out of School Suspensions								
None	150	85.7	54	68.4	91	64.5	25	20.0
B/W 1 & 5	24	13.7	22	27.8	47	33.3	56	56.0
More than 5	1	0.6	3	3.8	3	2.1	45	24.0
Expulsions								
None	175	100.0	77	97.5	134	95.0	105	84.0
One or More	0	0.0	2	2.5	7	5.0	20	16.0
Grade Point Average								
1.0 or Less	0	0.0	14	17.7	2	1.4	35	28.0
B/W 1.1 & 2.0	21	12.0	46	58.2	46	32.6	82	65.6
B/W 2.1 & 3.0	77	44.0	17	21.5	72	51.1	7	5.6
More than 3.0	77	44.0	2	2.5	21	14.9	1	0.8

For the 72 Black and 77 White dropouts who left school before turning 18, similar results were obtained. As Table 11 reveals, all ten variables were to some degree associated with dropping out among Whites, the most pronounced of these being Grade Point Average ($r = -0.71, p < .001$). At the same time, dropping out among younger Black students was not predicted by either their free and reduced lunch status ($r = .00, p = .987$) or their special education status ($r = 0.10, p = 0.13$). While gender proved to be only a marginally significant predictor for Black dropouts in the aggregate ($r = 0.12, p = 0.02$), it proved not to be statistically significant when only this subset of dropouts was considered ($r = 0.10, p = 0.14$). Interestingly, as shown in Table 12, gender returns as a marginally significant predictor of dropping out among the 125 Black students who dropped out at or above the age of 18 ($r = 0.13, p = 0.29$), but remaining non-predictors for this group are both free and reduced lunch status ($r = 0.06, p = .30$) and special education status ($r = 0.03, p = 0.59$). For the 79 White students who left school without graduating at 18 age or older, the relationships between all ten variables and dropping out remain statistically significant.

With respect to Research Question 7 concerning differences in the strength of the correlations, a difference was observed for free and reduced lunch status in comparing across all Black and White dropouts ($Z = 2.97, p = .003$), with that variable proving to be a better predictor for the latter group than the former group (see, again, Table 10). However, considering the correlations obtained for Black and White dropouts who left school before their 18th birthday, to the difference seen for free and reduced lunch ($Z = 3.12, p = .002$), additional differences in the strength of the relationships were observed between dropping out and in-school suspensions ($Z = 2.36, p = 0.018$) and between

dropping out and Grade Point Average ($Z = -2.05, p = 0.04$). In each case, the variable in question tended to be a better predictor for White dropouts who left school before turning 18 than for Black dropouts who left school before turning 18.

Among dropouts who left school on or after their 18th birthday, not only were there more differences in the strength of the correlations seen across ethnic groups but in three instances the difference in strength inclined towards Black dropouts rather than White dropouts. As Table 12 shows, a statistically significant difference in the strength of the correlation for free and reduced lunch and dropping out was once again observed ($Z = 2.16, p = 0.03$), with the difference between correlations favoring dropping out and being White ($r = 0.25$) as opposed to dropping out and being Black ($r = 0.06$). At the same time, three other differences in the strength of the correlations were observed, all three favoring dropping out and being Black. While absenteeism appears to be a robust predictor of dropping out for both White students (total absences $r = 0.18, p = 0.004$; average absences, $r = 0.15, p = .015$) and Black students (total absences $r = 0.38, p < 0.000$; average absences, $r = 0.35, p < .000$), its predictive power would seem to be greater for the latter group of dropouts as opposed to the former (total absences $Z = -2.47, p = 0.014$; average absences $Z = -2.42, p = 0.016$). Similarly, while out-of-school suspensions appears to be a significant predictor of dropping out for both White dropouts ($r = 0.20, p = 0.002$) and Black dropouts ($r = 0.41, p < .001$), receiving such suspensions appears to be more decisive in moving older students who are Black rather than White to leave high school before graduating ($Z = -2.69, p = 0.007$).

Table 10

Correlations and Tests for Differences between Correlations Pertinent to Eleven Variables that Predict Dropping Out of School by Student Ethnicity (N = 699)

Predictor Variable	White Total (N = 331)		Black Total (N = 338)		Test Statistics	
	r_1	p	r_2	p	Z	p
Gender	0.18	0.001	0.12	0.023	0.74	0.459
Free/Reduced Lunch	0.27	0.000	0.04	0.455	2.97	0.003
Special Education	0.14	0.012	0.06	0.273	1.03	0.303
Retentions	0.35	0.000	0.34	0.000	0.09	0.928
Total Absences	0.21	0.000	0.30	0.000	-1.34	0.180
Average Absences	0.18	0.001	0.28	0.000	-1.27	0.204
IS Suspensions	0.32	0.000	0.27	0.000	0.72	0.472
OS Suspensions	0.29	0.000	0.36	0.000	-1.08	0.280
Expulsions	0.20	0.000	0.20	0.000	-0.09	0.928
Grade Point Average	-0.70	0.000	-0.64	0.000	-1.42	0.156

Table 11

Correlations and Tests for Differences between Correlations Pertinent to Ten Variables that Predict Dropping Out of School for Students Less than Eighteen Years Old by Ethnicity (N = 465)

Predictor Variable	White < 18 (N = 252)		Black < 18 (N = 213)		Test Statistics	
	r_1	p	r_2	p	Z	p
Gender	0.16	0.010	0.10	0.137	0.65	0.516
Free/Reduced Lunch	0.28	0.000	0.00	0.987	3.12	0.002
Special Education	0.15	0.017	0.10	0.131	0.51	0.610
Retentions	0.37	0.000	0.30	0.000	0.91	0.363
Total Absences	0.23	0.000	0.21	0.003	0.30	0.764
Average Absences	0.21	0.001	0.17	0.016	0.49	0.624
IS Suspensions	0.40	0.000	0.20	0.003	2.36	0.018
OS Suspensions	0.39	0.000	0.35	0.000	0.50	0.617
Expulsions	0.29	0.000	0.27	0.000	0.22	0.826
Grade Point Average	-0.71	0.000	-0.60	0.000	-2.05	0.040

Table 12

Correlations and Tests for Differences between Correlations Pertinent to Ten Variables that Predict Dropping Out of School for Students Eighteen Years or Older by Ethnicity (N = 520)

Predictor Variable	White ≥ 18 (N = 254)		Black ≥ 18 (N = 266)		Test Statistics	
	r_1	p	r_2	p	Z	p
Gender	0.17	0.007	0.13	0.029	0.42	0.675
Free/Reduced Lunch	0.25	0.000	0.06	0.295	2.16	0.031
Special Education	0.13	0.044	0.03	0.585	1.05	0.294
Retentions	0.39	0.000	0.41	0.000	-0.20	0.842
Total Absences	0.18	0.004	0.38	0.000	-2.47	0.014
Average Absences	0.15	0.015	0.35	0.000	-2.42	0.016
IS Suspensions	0.27	0.000	0.31	0.000	-0.56	0.576
OS Suspensions	0.20	0.002	0.41	0.000	-2.69	0.007
Expulsions	0.13	0.035	0.19	0.001	-0.72	0.472
Grade Point Average	-0.63	0.000	-0.64	0.000	0.17	0.865

Question 8: After pooling observations made on graduates and dropouts, what institutional and demographic variables, when simultaneously examined, are observed to predict dropping out of school for a) White and b) Black students, considered in the aggregate?

Provided in Table 13 are the hierarchical logistic regression results for predicting dropping out for White students. Adding all relevant predictor variables except Grade Point Average in the first block resulted in a model that provided an adequate fit to the data ($\chi^2(8, N = 331) = 100.00, p < .001$) and correctly classified about 71% of the observations. Three out of the nine variables in the block attained statistical significance, including total number of retentions (Wald = 13.47, $p < .001$), number of in-school suspensions (Wald = 5.82, $p < .05$) and free/reduced lunch status (Wald = 12.33, $p < .05$). The odds ratios suggest that having been retained more frequently, having more in-school suspensions, and receiving free/reduced lunch were for Whites significantly associated with dropping out of high school.

In the second step of the model, the addition of Grade Point Average overwhelmed whatever predictive power the three variables brought to bear. Adding this single variable continued to improve the fit of the model to the data ($\chi^2(1, N = 331) = 122.89, p < .001$) and resulted in correctly classifying nearly 85% of the observations correctly. For G.P.A, the Wald statistic was highly significant (Wald = 67.12, $p < .001$) and was associated with an odds ratio that indicated a strong association with having a lower G.P.A. and dropping out of high school.

As shown in Table 14, the hierarchical logistic regression conducted only on the data for Black students initially suggested the usefulness of several variables in predicting

whether students in this group would drop out of/graduate from high school. Adding the first block of nine variables into the model resulted in a good fit to the data ($\chi^2(8, N = 338) = 99.64, p < .001$) and provided for the correct classification of nearly 75% of the observations (74.9%). In this block, three out of the nine potential predictor variables attained statistical significance, including total number of absences ($Wald = 7.09, p < .01$), number of retentions, ($Wald = 13.47, p < .001$), and number of out-of-school suspensions ($Wald = 12.06, p < .001$). The odds ratios indicate that being absent and retained more often and having more out-of-school suspensions were significantly associated with dropping out of high school.

In the second step, Grade Point Average was added as a predictor, the result being a good fitting model $\chi^2(1, N = 338) = 81.42, p < .001$ that correctly classified 84% of the observations. Similar to the outcomes observed for White students, the addition of G.P.A. overwhelmed whatever predictive power student absences and retentions had among Black students. The remaining model consisted only of out-of-school suspensions ($Wald = 4.51, p < .05$) and, more powerfully, Grade Point Average ($Wald = 53.06, p < .001$). The odds ratios linked to these variables indicated that having more out-of-school suspensions and having a lower grade point average were, for Black students, significantly associated with dropping out of high school.

Table 13

Hierarchical Logistic Regression Summary for White Sampled Students Who Graduated and White Students Who Dropped Out, 2006 to 2011(N= 331)

Variables	<i>B</i>	<i>SE</i>	<i>Wald</i>	95% CI for Odds Ratio		
				Lower	Odds Ratio	Upper
$(\chi^2 (8) = 100.003, p < .001; R^2_{CS} = .261, R^2_N = .348; \text{Classified} = 71.0\%)$						
Constant	-1.21	0.25	24.06 ***		0.30	
Gender	0.39	0.26	2.16	0.88	1.48	2.48
Special Education	0.63	0.52	1.50	0.68	1.89	5.22
Total Absences	0.00	0.00	0.08	0.99	1.00	1.01
Retentions	1.38	0.38	13.47 ***	1.90	3.96	8.27
IS Suspensions	0.24	0.10	5.82 *	1.05	1.28	1.56
OS Suspensions	0.08	0.14	0.29	0.82	1.08	1.42
Expulsions	19.11	9137.99	0.00	0.00	2.00E+08	
Free/Reduced Lunch	1.28	0.36	12.33 *	1.76	3.58	7.30
$(\chi^2 (1) = 122.892, p < .001; R^2_{CS} = .490, R^2_N = .654; \text{Classified} = 84.6\%)$						
Constant	5.28	0.81	42.62 ***		196.62	
Gender	-0.53	0.36	2.11	0.29	0.59	1.20
Special Education	-0.52	0.65	0.65	0.17	0.59	2.11
Total Absences	0.00	0.01	0.01	0.99	1.00	1.01
Retentions	0.66	0.42	2.47	0.85	1.94	4.41
IS Suspensions	0.17	0.11	2.39	0.96	1.19	1.47
OS Suspensions	-0.25	0.17	2.24	0.56	0.78	1.08
Expulsions	18.87	8902.63	0.00	0.00	1.57E+08	
Free/Reduced Lunch	0.63	0.43	2.09	0.80	1.87	4.39
Grade Point Average	-2.48	0.30	67.12 ***	0.05	0.08	0.15

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 14

Hierarchical Logistic Regression Summary for Black Sampled Students Who Graduated and Black Students Who Dropped Out, 2006 to 2011(N= 331)

Variables	<i>B</i>	<i>SE</i>	<i>Wald</i>	95% CI for Odds Ratio		
				Lower	Odds Ratio	Upper
$(\chi^2 (8) = 99.640, p < .001; R^2_{CS} = .2551, R^2_N = .344; \text{Classified} = 74.9\%)$						
Constant	-0.80	0.27	8.62 **		0.45	
Gender	-0.01	0.27	0.00	0.59	0.99	1.67
Special Education	-0.30	0.42	0.52	0.32	0.74	1.69
Total Absences	0.01	0.00	7.09 **	1.00	1.01	1.02
Retentions	0.94	0.23	16.36 ***	1.63	2.57	4.05
IS Suspensions	-0.01	0.04	0.09	0.92	0.99	1.06
OS Suspensions	0.28	0.08	12.06 **	1.13	1.33	1.56
Expulsions	0.65	0.46	1.96	0.77	1.91	4.73
Free/Reduced Lunch	-0.24	0.27	0.78	0.46	0.79	1.34
$(\chi^2 (1) = 81.415, p < .001; R^2_{CS} = .415, R^2_N = .558; \text{Classified} = 84.0\%)$						
Constant	3.80	0.69	29.94 ***		44.69	
Gender	-0.45	0.33	1.92	0.34	0.64	1.21
Special Education	-0.18	0.49	0.13	0.32	0.84	2.19
Total Absences	0.01	0.01	1.49	1.00	1.01	1.02
Retentions	0.29	0.25	1.44	0.83	1.34	2.17
IS Suspensions	-0.04	0.04	1.17	0.89	0.96	1.03
OS Suspensions	0.16	0.08	4.51 *	1.01	1.18	1.37
Expulsions	0.67	0.53	1.61	0.69	1.96	5.52
Free/Reduced Lunch	-0.08	0.32	0.06	0.49	0.93	1.74
Grade Point Average	-2.14	0.29	53.06 ***	0.07	0.12	0.21

* $p < .05$. ** $p < .01$. *** $p < .001$.

Dropouts by Gender: Research Questions 9 to 12

The third set of Research Questions concerns dropout phenomena when the data are organized by the gender of the student. As with the previous questions, data pertinent to the age at which students dropped out facilitate a more fine-grained analysis of the results; however, as the size of the groups examined shrinks, carrying out logistic regressions on these subsets of observations within subsets of observations becomes unwise. As a result, Research Question 12, like Research Question 8, makes no reference to students' "legal age of departure."

Question 9: Examined in the aggregate and as grouped by legal age of departure, how does the selection of demographic and institutional variables describe the population of a) Male and b) Female students who have dropped out of school under the circumstances previously outlined?

Presented in Table 15 are the frequencies and percentages obtained across the ten predictor variables for graduates and dropouts, considered by the students' gender as either male or female. Inspection of the table suggests that the proportion of graduates to dropouts was relatively similar for the two genders with regard to ethnicity, free/reduced lunch, and absences. For both males (54.4%) and females (54.4%), Black students were somewhat more likely to be dropouts than graduates, and only slightly fewer female dropouts were observed to be receiving free or reduced lunch (45.7%) than were male dropouts (50.2). In terms of total and average annual absences, roughly 56% of female dropout and 51.5% of male dropouts were counted as having more than 30 absences across the years examined, while roughly 33.6% of female dropouts and 30.8% of male dropouts were observed to average more than 10 days absence per year. Regarding other

variables, differences between female and male dropouts tend, in broad outline, to mirror those found in the literature how the two genders generally behave in school and how they perform academically. For example, for female dropouts, having one or more in-school suspensions (54.3%) and one or more out of school suspensions (49.1%) occurred somewhat more rarely than was observed for male dropouts, the latter being suspended at rates of 70.1% (in-school) and 67.1% (out-of-school), respectively. Similarly, the proportion of female dropouts who were expelled one or more times occurred at a rate of that was considerably less than 1 in 10 (6%), compared to a rate of expulsion for male dropouts that approached 2 to 10 (17.3%). Given these tendencies towards committing minor or serious behavioral infractions, it would seem thus to follow that a somewhat higher percentage of male dropouts (35.0%) would have very low Grade Point Averages compared to the percentage of their female counterparts (19.8%), while a higher percentage of female dropouts (22.4%) would conversely seem to have above average G.P.A.s than their male counterparts (10.9%). Indeed, it is perhaps this confluence of poorer behavior and academic performance that explains why some 16% of male dropouts receive as special education accommodations, compared to only 8.6% of female dropouts.

Among students who dropped out of school prior to their 18th birthday (see Table 16), the percentages observed among males and females across the predictor variables were similar in almost all cases to those observed for the aggregate; however, close inspection of the percentages suggest that the percentage of male dropouts who were less than 18 years of age were roughly 10% more likely (at 48.5%) to be on free and reduced lunch than their female counterparts (38.0%). A general similarity with the aggregate

percentages also characterizes what was observed with respect to male and female dropouts who left school after turning 18 years old with one major exception (see Table 17): where female dropouts in this age category are much more likely to be White (63.6%) than Black (36.4%), male dropouts in this category tend more often to be Black (60.1%) than White (39.9%).

Results pertinent to the two Research Questions following are presented in Tables 18 through 20.

Question 10: *When the pooled observations made on graduates and on a) male and B) female dropouts are analyzed, what relationships emerge between each of these selected variables taken individually and a student's status as a graduate or dropout, both for the aggregate and as grouped by legal age of departure?*

Question 11: What differences in the strength of such relationships are seen when observations made on the population of a) male and b) female dropouts are compared, both in the aggregate and by legal age of departure?

As Table 18 indicates, with respect to all 116 female dropouts irrespective of legal age of departure, all variables except special education status ($r = 0.07$, $p = .285$) appear to be statistically significant predictors of dropping out, while among the 237 male dropouts all variables save ethnicity ($r = 0.09$, $p = .077$) seem to predict dropping out. Despite these between-group differences in the statistical significance of the two aforementioned predictors, no statistically significant differences were observed when the strength of the correlations were compared for the aggregate of all male and female dropouts.

Table 15

Descriptive Statistics Pertinent to Ten Variables that Predict Graduating or Dropping Out of School by Student Gender (N = 669)

Predictor Variable	<u>Female</u>				<u>Male</u>			
	Graduate (N = 151)		Dropout (N = 116)		Graduate (N = 165)		Dropout (N = 237)	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
Ethnicity								
White	85	56.3	48	41.4	90	54.5	108	45.6
Black	66	43.7	68	58.6	75	45.5	129	54.4
Free/Reduced Lunch								
No	101	66.9	63	54.3	115	69.7	118	49.8
Yes	50	33.1	53	45.7	50	30.3	119	50.2
Special Education Status								
No	143	94.7	106	91.4	150	90.9	199	84.0
Yes	8	5.3	10	8.6	15	9.1	38	16.0
Retentions								
None	142	94.0	82	70.7	145	87.9	131	55.3
One	9	6.0	19	16.4	16	9.7	57	24.1
Two or More	0	0.0	15	13.0	4	2.4	49	20.7
Total Absences								
Six or Fewer	37	24.5	18	15.5	42	25.5	42	17.7
B/W 7 & 18	41	27.2	15	12.9	48	29.1	34	14.3
B/W 19 & 30	32	21.2	18	15.5	36	21.8	39	16.5
More than 30	41	27.2	65	56.0	39	23.6	122	51.5
Average Annual Absences								
Two or Fewer	44	29.1	21	18.1	54	32.7	46	19.4
B/W 2 & 5	47	31.1	21	18.1	56	33.9	56	23.6
B/W 5 & 10	38	25.2	35	30.2	31	18.8	62	26.2
More than 10	22	14.6	39	33.6	24	14.5	73	30.8

(Table 15 continues)

(Table 15 continued)

Predictor Variable	<u>Female</u>				<u>Male</u>			
	Graduate (<i>N</i> = 151)		Dropout (<i>N</i> = 116)		Graduate (<i>N</i> = 165)		Dropout (<i>N</i> = 237)	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
In-School Suspensions								
None	119	78.8	53	45.7	104	63.0	71	30.0
B/W 1 & 5	27	17.9	42	36.2	47	28.5	99	41.8
More than 5	5	3.3	21	18.1	14	8.5	67	28.3
Out of School Suspensions								
None	132	87.4	59	50.9	109	66.1	78	32.9
B/W 1 & 5	18	11.9	49	42.2	53	32.1	114	48.1
More than 5	1	0.7	8	6.9	3	1.8	45	19.0
Expulsions								
None	149	98.7	109	94.0	160	97.0	196	82.7
One or More	2	1.3	7	6.0	5	3.0	41	17.3
Grade Point Average								
1.0 or Less	0	0.0	23	19.8	2	1.2	83	35.0
B/W 1.1 & 2.0	20	13.2	67	57.8	47	28.5	128	54.0
B/W 2.1 & 3.0	73	48.3	23	19.8	76	46.1	25	10.5
More than 3.0	58	38.4	3	2.6	40	24.2	1	0.4

Table 16

Descriptive Statistics Pertinent to Ten Variables that Predict Dropping Out of School for Students Less than Eighteen Years Old by Student Gender (N = 465)

Predictor Variable	<u>Female < 18</u>				<u>Male < 18</u>			
	Graduate (N = 151)		Dropout (N = 50)		Graduate (N = 165)		Dropout (N = 99)	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
Ethnicity								
White	85	56.3	26	52.0	90	54.5	53	53.5
Black	66	43.7	24	48.0	75	45.5	46	46.5
Free/Reduced Lunch								
No	101	66.9	31	62.0	115	69.7	51	51.5
Yes	50	33.1	19	38.0	50	30.3	48	48.5
Special Education Status								
No	143	94.7	46	92.0	150	90.9	80	80.8
Yes	8	5.3	4	8.0	15	9.1	19	19.2
Retentions								
None	142	94.0	39	78.0	145	87.9	59	59.6
One	9	6.0	8	16.0	16	9.7	22	22.2
Two or More	0	0.0	3	6.0	4	2.4	18	18.2
Total Absences								
Six or Fewer	37	24.5	8	16.0	42	25.5	23	23.2
B/W 7 & 18	41	27.2	9	18.0	48	29.1	10	10.1
B/W 19 & 30	32	21.2	9	18.0	36	21.8	18	18.2
More than 30	41	27.2	24	48.0	39	23.6	48	48.5
Average Annual Absences								
Two or Fewer	44	29.1	10	20.0	54	32.7	25	25.3
B/W 2 & 5	47	31.1	12	24.0	56	33.9	21	21.2
B/W 5 & 10	38	25.2	15	30.0	31	18.8	26	26.3
More than 10	22	14.6	13	26.0	24	14.5	27	27.3

(Table 16 continues)

(Table 16 continued)

Predictor Variable	<u>Female < 18</u>				<u>Male < 18</u>			
	Graduate (N = 151)		Dropout (N = 50)		Graduate (N = 165)		Dropout (N = 99)	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
In-School Suspensions								
None	119	78.8	23	46.0	104	63.0	32	32.3
B/W 1 & 5	27	17.9	20	40.0	47	28.5	36	36.4
More than 5	5	3.3	7	14.0	14	8.5	31	31.3
Out of School Suspensions								
None	132	87.4	28	56.0	109	66.1	30	30.3
B/W 1 & 5	18	11.9	18	36.0	53	32.1	53	53.5
More than 5	1	0.7	4	8.0	3	1.8	16	16.2
Expulsions								
None	149	98.7	47	94.0	160	97.0	76	76.8
One or More	2	1.3	3	6.0	5	3.0	23	23.2
Grade Point Average								
1.0 or Less	0	0.0	13	26.0	2	1.2	44	44.4
B/W 1.1 & 2.0	20	13.2	24	48.0	47	28.5	43	43.4
B/W 2.1 & 3.0	73	48.3	12	24.0	76	46.1	12	12.1
More than 3.0	58	38.4	1	2.0	40	24.2	0	0.0

Table 17

Descriptive Statistics Pertinent to Ten Variables that Predict Dropping Out of School for Students Greater than or Equal to Eighteen Years Old by Student Gender (N = 520)

Predictor Variable	Female >= 18				Male >= 18			
	Graduate (N = 151)		Dropout (N = 66)		Graduate (N = 165)		Dropout (N = 138)	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
Ethnicity								
White	85	56.3	24	63.6	90	54.5	55	39.9
Black	66	43.7	42	36.4	75	45.5	83	60.1
Free/Reduced Lunch								
No	101	66.9	32	48.5	115	69.7	67	48.6
Yes	50	33.1	34	51.5	50	30.3	71	51.4
Special Education Status								
No	143	94.7	60	90.9	150	90.9	119	86.2
Yes	8	5.3	6	9.1	15	9.1	19	13.8
Retentions								
None	142	94.0	43	65.2	145	87.9	72	52.2
One	9	6.0	11	16.7	16	9.7	35	25.4
Two or More	0	0.0	12	18.2	4	2.4	31	22.4
Total Absences								
Six or Fewer	37	24.5	10	15.2	42	25.5	19	13.8
B/W 7 & 18	41	27.2	6	0.1	48	29.1	24	17.4
B/W 19 & 30	32	21.2	9	13.6	36	21.8	21	15.2
More than 30	41	27.2	41	62.1	39	23.6	74	53.6
Average Annual Absences								
Two or Fewer	44	29.1	11	16.7	54	32.7	21	15.2
B/W 2 & 5	47	31.1	9	13.6	56	33.9	35	25.4
B/W 5 & 10	38	25.2	20	30.3	31	18.8	36	26.1
More than 10	22	14.6	26	39.4	24	14.5	46	33.3

(Table 17 continues)

(Table 17 continued)

Predictor Variable	Female >= 18				Male >= 18			
	Graduate (N = 151)		Dropout (N = 66)		Graduate (N = 165)		Dropout (N = 138)	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
In-School Suspensions								
None	119	78.8	30	45.5	104	63.0	39	28.3
B/W 1 & 5	27	17.9	22	33.3	47	28.5	63	45.7
More than 5	5	3.3	14	21.2	14	8.5	36	26.1
Out of School Suspensions								
None	132	87.4	31	47.0	109	66.1	48	34.8
B/W 1 & 5	18	11.9	31	47.0	53	32.1	61	44.2
More than 5	1	0.7	4	61.0	3	1.8	29	21.0
Expulsions								
None	149	98.7	62	93.9	160	97.0	120	87.0
One or More	2	1.3	4	6.1	5	3.0	18	13.0
Grade Point Average								
1.0 or Less	0	0.0	10	15.2	2	1.2	39	28.3
B/W 1.1 & 2.0	20	13.2	43	65.2	47	28.5	85	61.6
B/W 2.1 & 3.0	73	48.3	11	16.7	76	46.1	13	9.4
More than 3.0	58	38.4	2	3.0	40	24.2	1	0.7

With respect to the 99 males who dropped out of school before their 18th birthday, the results presented in Table 19 are similar to those observed for all 237 male dropouts. With Grade Point Average being the strongest indicator ($r = -0.67, p < .001$), all variables save ethnicity ($r = 0.01, p = 0.87$) appear to predict whether a male younger than 18 years old will drop out of a district high school. However, for the 50 females who dropped out of school before they were 18 years old, three variables in addition to special education status ($r = .05, p = 0.49$) failed to predict dropping out. Contrary to results seen for all 116 female dropouts in Table 18, Table 19 shows that neither ethnicity ($r = 0.07, p = 0.31$), nor free and reduced lunch ($r = 0.04, p = 0.53$), nor expulsions ($r = 0.13, p = 0.07$) proved to be significantly related to dropping out among younger females. Nevertheless, despite these within-gender differences in the number of variables that were significantly related to dropping out, only one pair of correlations differed in its strength of association when the ten pairs of correlations with the outcome were compared. As previously mentioned, while expulsions fell short of statistical significance as a predictor for female dropouts under 18 ($r = 0.13, p = 0.07$), it proved to be one of the stronger ones for their male counterparts ($r = 0.32, p < .000$). As a result, when the pair of correlations was contrasted using the Fisher's r to z transformation, the statistical outcome was shown to be marginally significant ($Z = -2.11, p = 0.04$).

For the 138 male and 66 female dropouts who left school on or after becoming 18 years old, almost all variables were observed to correlate with dropping out, but no statistically significant difference emerged when pairs of correlations were contrasted. For both groups, special education status proved not to be a predictor for either female ($r = 0.07, p = .30$) students or their male counterparts ($r = 0.07, p = .20$). Among females

Table 18

Correlations and Tests for Differences between Correlations Pertinent to Ten Variables that Predict Dropping Out of School for Students by Gender (N =669)

Predictor Variable	Female Total (N =267)		Male Total (N = 402)		Test Statistics	
	r_1	p	r_2	p	Z	p
Ethnicity	0.15	0.016	0.09	0.077	0.77	0.441
Free/Reduced Lunch	0.13	0.036	0.20	0.000	-0.91	0.363
Special Education	0.07	0.285	0.10	0.043	-0.44	0.660
Retentions	0.34	0.000	0.35	0.000	-0.16	0.873
Total Absences	0.28	0.000	0.26	0.000	0.16	0.873
Average Absences	0.25	0.000	0.24	0.000	0.21	0.834
IS Suspensions	0.31	0.000	0.26	0.000	0.67	0.503
OS Suspensions	0.32	0.000	0.33	0.000	-0.04	0.968
Expulsions	0.13	0.035	0.22	0.000	-1.18	0.238
Grade Point Average	-0.66	0.000	-0.66	0.000	0.11	0.912

Table 19

Correlations and Tests for Differences between Correlations Pertinent to Ten Variables that Predict Dropping Out of School for Students Less than Eighteen Years Old by Gender (N = 465)

Predictor Variable	Female < 18 (N = 201)		Male < 18 (N = 264)		Test Statistics	
	r_1	p	r_2	p	Z	p
Ethnicity	0.07	0.310	0.01	0.874	0.66	0.509
Free/Reduced Lunch	0.04	0.530	0.18	0.003	-1.49	0.136
Special Education	0.05	0.487	0.15	0.018	-1.05	0.294
Retentions	0.26	0.000	0.35	0.000	-0.98	0.327
Total Absences	0.19	0.006	0.24	0.000	-0.50	0.617
Average Absences	0.17	0.018	0.20	0.001	-0.42	0.675
IS Suspensions	0.26	0.000	0.28	0.000	-0.20	0.842
OS Suspensions	0.27	0.000	0.38	0.000	-1.32	0.187
Expulsions	0.13	0.066	0.32	0.000	-2.11	0.035
Grade Point Average	-0.61	0.000	-0.67	0.000	1.02	0.308

Table 20

Correlations and Tests for Differences between Correlations Pertinent to Ten Variables that Predict Dropping Out of School for Students Eighteen Years or Older by Gender (N = 520)

Predictor Variable	Female >= 18 (N = 217)		Male >= 18 (N = 303)		Test Statistics	
	r_1	p	r_2	p	Z	p
Ethnicity	0.18	0.007	0.15	0.011	0.43	0.667
Free/Reduced Lunch	0.17	0.010	0.22	0.000	-0.48	0.631
Special Education	0.07	0.298	0.07	0.200	-0.03	0.976
Retentions	0.41	0.000	0.40	0.000	0.15	0.881
Total Absences	0.33	0.000	0.32	0.000	0.09	0.928
Average Absences	0.30	0.000	0.29	0.000	0.17	0.865
IS Suspensions	0.34	0.000	0.28	0.000	0.79	0.430
OS Suspensions	0.35	0.000	0.36	0.000	-0.10	0.920
Expulsions	0.13	0.051	0.20	0.001	-0.72	0.472
Grade Point Average	-0.62	0.000	-0.64	0.000	0.22	0.826

expulsions also proved not be a statistically significant predictor of dropping out at the conventional level for rejecting the null ($r = 0.13, p = 0.05$), although its status as such clearly approached that level.

Question 12: After pooling observations made on graduates and dropouts, what institutional and demographic variables, when simultaneously examined, are observed to predict dropping out of school for a) male and b) female students, considered in the aggregate?

Provided in Table 21 are the hierarchical logistic regression results for predicting dropping out for female students. Adding all relevant predictor variables except Grade Point Average in the first block resulted in a model that provided an adequate fit to the data ($\chi^2(8, N = 267) = 64.13, p < .001$) and correctly classified 73.4% of the observations. Three out of the nine variables in the block attained statistical significance, including total absences ($Wald = 4.02, p < .05$), total number of retentions ($Wald = 12.22, p < .001$), number of out-of-school suspensions ($Wald = 5.36, p < .05$). The odds ratios suggest that being absent more often, being retained more frequently, and having more out-of-school suspensions were, for females, significantly associated with dropping out of high school.

In the second step of the model, the addition of Grade Point Average overwhelmed whatever predictive power the three other variables brought to bear. Adding this single variable continued to improve the fit of the model to the data ($\chi^2(1, N = 267) = 84.85, p < .001$) and resulted in correctly classifying some 82.4% of the observations correctly. For G.P.A, the Wald statistic was highly significant ($Wald =$

52.32, $p < .001$) and was associated with an odds ratio that indicated a strong association with having a lower G.P.A. and dropping out of high school.

As shown in Table 22, the hierarchical logistic regression conducted only on the data for male students initially suggested the usefulness of several variables in predicting whether students in this group would drop out of/graduate from high school. Adding the first block of nine variables into the model resulted in a good fit to the data ($\chi^2(8, N = 402) = 110.42, p < .001$) and provided for the correct classification of slightly more than 74% of the observations (74.4%). In this block, fully five out of the nine potential predictor variables attained statistical significance, including ethnicity ($Wald = 6.37, p < .05$), number of retentions, ($Wald = 20.31, p < .001$), number of out-of-school suspensions ($Wald = 7.89, p < .05$), number of expulsions ($Wald = 6.58, p < .05$), and free/reduced lunch status ($Wald = 6.32, p < .05$). The odds ratios indicate that being non-White, being retained more often, having more out-of-school suspensions, being expelled more often, and receiving free and reduced lunch were, for males, significantly associated with dropping out of high school.

In the second block, Grade Point Average was added to the set, resulting in a good fitting model $\chi^2(1, N = 402) = 131.80, p < .001$) that correctly classified 84.8% of the observations. While the addition of G.P.A. overwhelmed three of the five previous predictors, both ethnicity ($Wald = 9.82, p < .01$) and expulsions ($Wald = 6.32, p < .01$) remained, along the more powerful predictor of Grade Point Average ($Wald = 73.24, p < .001$) The odds ratios linked to these variables indicated that being non-white, having more expulsions, and having a lower G.P.A. were, for male students, significantly associated with dropping out of high school.

Table 21

Hierarchical Logistic Regression Summary for Female Sampled Students Who Graduated and Female Students Who Dropped Out, 2006 to 2011(N = 267)

Variables	<i>B</i>	<i>SE</i>	<i>Wald</i>	95% CI for Odds Ratio		
				Lower	Odds Ratio	Upper
$(\chi^2 (8) = 64.133, p < .001; R^2_{CS} = .214, R^2_N = .286; \text{Classified} = 73.4\%)$						
Constant	-1.15	0.24	22.96 ***		0.32	
Ethnicity	0.23	0.32	0.49	0.66	1.25	2.37
Special Education	-0.09	0.58	0.02	0.30	0.92	2.85
Total Absences	0.01	0.00	4.02 *	1.00	1.01	1.02
Retentions	1.28	0.37	12.22 ***	1.75	3.59	7.34
IS Suspensions	0.06	0.08	0.58	0.91	1.06	1.24
OS Suspensions	0.34	0.15	5.36 *	1.05	1.40	1.87
Expulsions	-0.31	1.10	0.08	0.08	0.73	6.34
Free/Reduced Lunch	-0.26	0.34	0.55	0.39	0.77	1.52

$(\chi^2 (1) = 84.853, p < .001; R^2_{CS} = .428, R^2_N = .574; \text{Classified} = 82.4\%)$

Constant	4.63	0.81	32.33 ***		102.66	
Ethnicity	-0.57	0.41	1.98	0.25	0.56	1.25
Special Education	-0.17	0.68	0.06	0.22	0.84	3.18
Total Absences	0.00	0.01	0.20	0.99	1.00	1.01
Retentions	0.55	0.39	1.93	0.80	1.73	3.73
IS Suspensions	0.01	0.08	0.01	0.86	1.01	1.18
OS Suspensions	0.09	0.15	0.35	0.81	1.09	1.47
Expulsions	-0.62	1.19	0.28	0.05	0.54	5.47
Free/Reduced Lunch	-0.22	0.40	0.31	0.36	0.80	1.75
Grade Point Average	-2.18	0.30	52.32 ***	0.06	0.11	0.20

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 22

Hierarchical Logistic Regression Summary for Male Sampled Students Who Graduated and Male Students Who Dropped Out, 2006 to 2011(N= 402)

Variables	<i>B</i>	<i>SE</i>	<i>Wald</i>	95% CI for Odds Ratio		
				Lower	Odds Ratio	Upper
$(\chi^2 (8) = 110.423, p < .001; R^2_{CS} = .240, R^2_N = .324; \text{Classified} = 74.4\%)$						
Constant	-0.60	0.19	10.00 **		0.55	
Ethnicity	-0.70	0.28	6.37 *	0.29	0.50	0.86
Special Education	-0.01	0.39	0.00	0.46	0.99	2.12
Total Absences	0.01	0.00	2.18	1.00	1.01	1.02
Retentions	1.04	0.23	20.31 ***	1.80	2.82	4.42
IS Suspensions	0.01	0.04	0.11	0.94	1.01	1.09
OS Suspensions	0.22	0.08	7.89 **	1.07	1.25	1.46
Expulsions	1.28	0.50	6.58 *	1.35	3.60	9.60
Free/Reduced Lunch	0.69	0.27	6.32 *	1.16	1.99	3.42
$(\chi^2 (1) = 131.801, p < .001; R^2_{CS} = .423, R^2_N = .610; \text{Classified} = 84.8\%)$						
Constant	4.76	0.65	53.16 ***		117.11	
Ethnicity	-1.12	0.36	9.82 **	0.16	0.33	0.66
Special Education	-0.45	0.47	0.90	0.25	0.64	1.62
Total Absences	0.01	0.01	0.91	0.99	1.01	1.02
Retentions	0.33	0.25	1.79	0.86	1.39	2.26
IS Suspensions	-0.03	0.04	0.53	0.90	0.97	1.05
OS Suspensions	0.10	0.08	1.74	0.95	1.11	1.28
Expulsions	1.44	0.57	6.33 *	1.37	4.20	12.86
Free/Reduced Lunch	0.53	0.34	2.41	0.87	1.69	3.28
Grade Point Average	-2.51	0.29	73.24 ***	0.05	0.08	0.14

* $p < .05$. ** $p < .01$. *** $p < .001$.

Dropouts by Gender and Ethnicity: Research Question 13

The final Research Question concerns dropout phenomena when the data are organized by the student's gender crossed with his or her ethnicity. Posed for the sake of completeness, this question is as follows:

Question 13: In crossing the gender and ethnic characteristics of students in the dropout population, what relationships emerge between the remaining variables and a student's status as a dropout or graduate and how does the strength of such relationships compare across groups?

The frequencies and percentages for the demographic and variables for the two female groups by gender and for the two male groups by gender are shown in Table 23 and Table 24, respectively. Inspection of the results for females indicates especially noticeable differences between the 48 White female dropouts and the 68 Black female dropouts on such variables as free/reduced lunch and suspensions. While only 20.8% of White female dropouts were on free and reduced lunch 36.8% of Black female dropouts were receiving that service. In terms of in-school suspensions and out-of-school suspensions, the percentage of White female dropouts who had ever received one of the former disciplinary measures was only 37.5%, compared to 66.1% of all Black Female dropouts, and only 27.1% of the latter disciplinary measure, compared to 64.7% of all Black female dropouts. For these variables, similar differences were observed for male students, with only 31.5% of White males on free and reduced lunch, compared to 65.9% of Black males, 56.5% of White male dropouts having one or more in-school suspensions, compared to 81.4% of all Black male dropouts, and 47.2% of all White male

dropouts having one or more out-of-school suspensions, compared to 83.8% of all Black male dropouts.

As shown in Tables 25 through 27, the only observed difference in the strength of the correlations among these four groups of dropouts was for White male dropouts and Black male dropouts with regard to free and reduced lunch ($Z= 2.45, p = 0.01$), with the correlation for the former group seen to be significant ($r = 0.31, p < 0.001$) and the correlation for the latter group seen to be non-significant ($r = 0.07, p = 0.304$). Regarding the individual correlations themselves by student gender and ethnicity, all variables were significant predictors of dropping out except free/reduced lunch status ($r = 0.16, p = 0.07$), special education status ($r = 0.10, p = 0.24$), and expulsions ($r = 0.12, p = 0.18$) for the group of 153 White females; free/reduced lunch status ($r = 0.00, p = .962$), special education status ($r = 0.02, p = 0.79$), and expulsions ($r = 0.12, p = .16$) for the group of 134 Black females; special education status for the group of 198 White males ($r = 0.14, p = .053$); and free/reduced lunch status ($r = 0.07, p = .30$) and special education status ($r = 0.06, p = 0.40$) for the group of 204 Black males.

Table 23

Descriptive Statistics Pertinent to Nine Variables that Predict Dropping Out of School for Female Students by Ethnicity (N = 267)

Predictor Variable	<u>White Females</u>				<u>Black Females</u>			
	Graduate (N = 85)		Dropout (N = 48)		Graduate (N = 66)		Dropout (N = 68)	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
Free/Reduced Lunch								
No	77	90.6	38.0	79.2	24	36.4	25	36.8
Yes	8	9.4	10.0	20.8	42	63.6	43	63.2
Special Education Status								
No	82	96.5	44.0	91.7	61	92.4	62	91.2
Yes	3	3.5	4.0	8.3	5	7.6	6	8.8
Retentions								
None	83	97.6	37.0	77.1	59	89.4	45	66.2
One	2	2.4	5.0	10.4	7	10.6	14	20.6
Two or More	0	0.0	6.0	12.5	0	0	9	13.3
Total Absences								
Six or Fewer	18	21.2	9.0	18.8	19	28.8	9	13.2
B/W 7 & 18	27	31.8	3.0	6.3	14	21.2	12	17.6
B/W 19 & 30	17	20.0	12.0	25.0	15	22.7	6	8.8
More than 30	23	27.1	24.0	50.0	18	27.3	41	60.3
Average Annual Absences								
Two or Fewer	22	25.9	10.0	20.8	22	33.3	11	16.2
B/W 2 & 5	31	36.5	9.0	18.8	16	24.2	12	17.6
B/W 5 & 10	22	25.9	12.0	25.0	16	24.2	23	33.8
More than 10	10	11.8	17.0	35.4	12	18.2	22	32.4

(Table 23 continues)

(Table 23 continued)

Predictor Variable	White Females				Black Females			
	Graduate (N = 85)		Dropout (N = 48)		Graduate (N = 66)		Dropout (N = 68)	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
In-School Suspensions								
None	74	87.1	30.0	62.5	45	68.2	23	33.8
B/W 1 & 5	10	11.8	13.0	27.1	17	25.8	29	42.6
More than 5	1	1.2	5.0	10.4	4	6.1	16	23.5
Out of School Suspensions								
None	79	92.9	35.0	72.9	53	80.3	24	35.3
B/W 1 & 5	6	7.1	12.0	25.0	12	18.2	37	54.4
More than 5	0	0.0	1.0	2.1	1	1.5	7	10.3
Expulsions								
None	85	100.0	47.0	97.9	64	97	62	91.2
One or More	0	0.0	1.0	2.1	2	3	6	8.8
Grade Point Average								
1.0 or Less	0	0.0	6.0	12.5	0	0	17	25.0
B/W 1.1 & 2.0	4	4.7	27.0	56.3	16	24.2	40	58.8
B/W 2.1 & 3.0	34	40.0	12.0	25.0	39	59.1	11	16.2
More than 3.0	47	55.3	3.0	6.3	11	16.7	0	0.0

Table 24

Descriptive Statistics Pertinent to Nine Variables that Predict Dropping Out of School for Male Students by Ethnicity (N = 402)

Predictor Variable	White Males				Black Males			
	Graduate (N = 90)		Dropout (N = 108)		Graduate (N = 75)		Dropout (N = 129)	
	<i>f</i>	%	<i>F</i>	%	<i>f</i>	%	<i>f</i>	%
Free/Reduced Lunch								
No	84	93.3	74.0	68.5	31	41.3	44	34.1
Yes	6	6.7	34.0	31.5	44	58.7	85	65.9
Special Education Status								
No	85	94.4	93.0	86.1	65	86.7	106	82.2
Yes	5	5.6	15.0	13.9	10	13.3	23	17.8
Retentions								
None	84	93.3	72.0	66.7	61	81.3	59	45.7
One	6	6.7	19.0	17.6	10	13.3	38	29.5
Two or More	0	0.0	17.0	15.7	4	5.3	32	24.8
Total Absences								
Six or Fewer	24	26.7	33.0	30.6	18	24	9	7.0
B/W 7 & 18	31	34.4	7.0	6.5	17	22.7	27	20.9
B/W 19 & 30	15	16.7	16.0	14.8	21	28	23	17.8
More than 30	20	22.2	52.0	48.1	19	25.3	70	54.3
Average Annual Absences								
Two or Fewer	30	33.3	34.0	31.5	24	32	12	9.3
B/W 2 & 5	34	37.8	15.0	13.9	22	29.3	41	31.8
B/W 5 & 10	12	13.3	35.0	32.4	19	25.3	27	20.9
More than 10	14	15.6	24.0	22.2	10	13.3	49	38.0

(Table 24 continues)

(Table 24 continued)

Predictor Variable	<u>White Males</u>				<u>Black Males</u>			
	Graduate (<i>N</i> = 90)		Dropout (<i>N</i> = 108)		Graduate (<i>N</i> = 75)		Dropout (<i>N</i> = 129)	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
In School Suspensions								
None	65	72.2	47.0	43.5	39	52	24	18.6
B/W 1 & 5	24	26.7	46.0	42.6	23	30.7	53	41.1
More than 5	1	1.1	15.0	13.9	13	17.3	52	40.3
Out of School Suspensions								
None	71	78.9	57.0	52.8	38	50.7	21	16.3
B/W 1 & 5	18	20.0	44.0	40.7	35	46.7	70	54.3
More than 5	1	1.1	7.0	6.5	2	2.7	38	29.5
Expulsions								
None	90	90.0	97.0	89.8	70	93.3	99	76.7
One or More	0	0.0	11.0	10.2	5	6.7	30	23.3
Grade Point Average								
1.0 or Less	0	0.0	34.0	31.5	2	2.7	49	38.0
B/W 1.1 & 2.0	17	18.9	57.0	52.8	30	40	71	55.0
B/W 2.1 & 3.0	43	47.8	17.0	15.7	33	44	8	6.2
More than 3.0	30	33.3	0.0	0.0	10	13.3	1	0.8

Table 25

Correlations and Tests for Differences between Correlations Pertinent to Nine Variables that Predict Dropping Out of School for White Students by Gender (N = 331)

Predictor Variable	White Female (N = 133)		White Male (N = 198)		Test Statistics	
	r_1	p	r_2	p	Z	p
Free/Reduced Lunch	0.16	0.065	0.31	0.000	-1.39	0.165
Special Education	0.10	0.237	0.14	0.053	-0.31	0.757
Retentions	0.34	0.000	0.34	0.000	0.09	0.928
Total Absences	0.26	0.003	0.19	0.009	0.66	0.509
Average Absences	0.23	0.007	0.17	0.020	0.61	0.542
IS Suspensions	0.28	0.001	0.31	0.000	-0.31	0.757
OS Suspensions	0.27	0.001	0.27	0.000	0.03	0.976
Expulsions	0.12	0.184	0.21	0.003	-0.85	0.395
Grade Point Average	-0.67	0.000	-0.70	0.000	0.44	0.660

Table 26

Correlations and Tests for Differences between Correlations Pertinent to Nine Variables that Predict Dropping Out of School for Black Students by Gender (N = 338)

Predictor Variable	Black Female (N = 134)		Black Male (N = 204)		Test Statistics	
	r_1	p	r_2	p	Z	p
Free/Reduced Lunch	0.00	0.962	0.07	0.304	-0.68	0.497
Special Education	0.02	0.794	0.06	0.403	-0.32	0.749
Retentions	0.31	0.000	0.34	0.000	-0.33	0.741
Total Absences	0.26	0.003	0.19	0.009	0.66	0.509
Average Absences	0.23	0.007	0.17	0.020	0.61	0.542
IS Suspensions	0.31	0.000	0.23	0.001	0.75	0.453
OS Suspensions	0.34	0.000	0.37	0.000	-0.33	0.741
Expulsions	0.12	0.159	0.22	0.002	-0.89	0.374
Grade Point Average	-0.64	0.000	-0.62	0.000	-0.36	0.719

Table 27

Tests for Differences between Correlations Pertinent to Nine Variables that Predict Dropping Out of School by Ethnic Groups within Genders (N = 669)

Predictor Variable	White versus Black Females Test Statistics		White versus Black Males Test Statistics	
	Z	p	Z	p
Free/Reduced Lunch	1.34	0.180	2.45	0.014
Special Education	0.65	0.516	0.79	0.430
Retentions	0.31	0.757	-0.09	0.928
Total Absences	-0.17	0.865	-1.37	0.171
Average Absences	-0.21	0.834	-1.23	0.219
IS Suspensions	-0.25	0.803	0.88	0.379
OS Suspensions	-0.56	0.576	-1.09	0.276
Expulsions	-0.05	0.960	-0.09	0.928
Grade Point Average	-0.41	0.682	-1.40	0.162

Summary

Presented in this chapter were the results of the data analysis regarding the extent of relationship between a set of institutional and demographic variables that are routinely collected on students by school districts students' dropout status and whether or not the magnitude of these relationships differed by students' race and gender. With respect to 13 Research Questions and presented in 27 tables, procedures employed in the data analysis included frequencies and percentages, bivariate correlations and tests for differences between pairs of independent correlations, and hierarchical logistic regressions. In broad outline, all demographic and institutional variables proved to be predictors of dropping for all 699 students included in the study, with Grade Point Average consistently observed to be most powerful predictor of whether or not a student dropped out of or graduated from high school. Differences in the predictive power of variables were observed by students' race and gender, but the differences were contingent on whether the group criterion was race, gender, or the confluence of these two characteristics.

Immediately following in Chapter 5 will be a more complete review of findings, policy implications, recommendations for further research, and a conclusion.

Chapter 5

Findings and Conclusions, Implications, Recommendations, and Summary

This chapter provides conclusions based on the data analyzed and covers the following sections: findings, implications, recommendations for further research, and conclusion. The review of findings and conclusions of this research are provided in the first section and are based on the data analysis performed. The next section presents the implications that emerged from the findings of this study. The third section provides recommendations for future research on high school dropouts. Finally, a concluding section summarizes the value of this study and the need for implementation of initiatives aimed at decreasing the high school dropout rate.

Findings and Conclusions

The purpose of this study was to analyze the relationship between dropout variables and the race and gender of high school students. Current dropout studies have brought much attention to the epidemic plaguing high schools in the U.S. (Balfanz & Legters, 2004; Bridgeland et al., 2006). The literature has identified several variables that influence a student's decision to drop out, including academic performance, disciplinary infractions, and socio-economic status to name a few (Suh et al., 2007). Depending on the research conducted, any one of these variables could significantly impact the decision to drop out of high school.

According to the Student Integration Model (Tinto, 1987), students experience a separation from the familiar and integration to the unfamiliar when transitioning from one institution to another. For example, as a student transitions from middle school to high school, he or she may struggle to integrate into the school's culture. This, in turn, may

lead to decreased social engagement, low attendance, failing academics, and even behavioral infractions – all of which are common high school dropout variables. According to Jerald (2006), only about 70% of all ninth-grade students will complete high school on time. The other remaining percentage runs the risk of being classified as a non-completer or dropout.

The findings in this study shed light on the impact various dropout variables have upon high school students, especially the relationship these variables have among different gender and racial subgroups. The results of this research corroborated other studies conducted on the topic of dropout variables and the ability to predict dropout rates (Goldschmidt & Wang, 1999; Schargel, 2004). A student's ethnicity and gender, for example, could be used to determine if the student is more at risk for dropping out of school since blacks and males are at higher risk for dropping out than whites and females. Even more telling than ethnicity and gender, however, are the other variables used in this study such as grade point average.

In the presence of grade point average, the remaining variables dwarf in significance. In the absence of grade point average, however, the researcher was able to ascertain which variables served as significant predictors for dropping out. Aside from grade point average, the most frequently significant variables were absentee rate, retention rate, and behavioral infractions – more specifically out of school suspensions. Ironically, neither special education classification nor socio-economic status (free and reduced lunch) significantly predicted dropout occurrences among the 699 students researched in this study. This finding is in stark contrast to research that implies that special needs students are at greater risk for dropping out than students who are not

classified as needing special education services (Repetto, Pankaskie, De Palma-Hankins, Schwartz, & Perry, 1997; Schargel, 2004). Although this study revealed that some variables do not significantly contribute to the prediction of dropout rates, it should be noted that this finding does not mean that these variables have no impact at all on the decision to dropout. These variables, in fact, are just not strong enough to be considered significant at predicting dropout occurrences in a population similar to those researched in this study. In order to determine which variables were better predictors of dropout rates, the following thirteen questions were addressed:

Question 1: Examined in the aggregate and as grouped by legal age of departure, how does a selection of demographic and institutional variables describe a population of students who have dropped out of schools in a moderately-sized suburban district during the previous five years?

The first question examines how selected dropout variables describe the dropout population in a suburban school district. It was, therefore, determined that a descriptive analysis would best answer this question. Results from this analysis indicated that regardless to whether the research looked at students younger than 18 years of age or 18 years of age or older, the profiles that emerged were the same. Overall, the results indicate that in the aggregate, males were more likely to dropout than females and Blacks were more likely to dropout than whites.

Question 2: After pooling observations made on a comparable sample of graduates with those made on the dropout population, what relationships emerge between each of the selected variables taken individually and a student's status as a graduate or dropout?

Regarding research question 2, the relationships between dropout status and gender, ethnicity, free/reduced lunch status, special education status, absences, retentions, and suspensions, and grade point average were all significant. Of these variables, stronger correlations were observed for retention, absences, and suspensions. Because it maintained the strongest of the relationships, however, a low grade point average was most associated with dropping out of high school than all of the other variables.

Question 3: What differences in the strength of such relationships are seen when observations made on the population of dropouts grouped by legal age of departure are compared?

Regarding research question 3, the correlation coefficient for ethnicity emerged as the strongest, especially among those dropouts age 18 and older. Being Black was a better predictor of dropping for those 18 years of age or older. In fact, the relationship between dropping out and ethnicity was much stronger for this group than the under 18 years of age group.

Question 4: After pooling observations made on the sample of graduates with those made on the dropout population, what institutional and demographic variables, when simultaneously examined, are observed to predict dropping out of school, both for the aggregate and as grouped by legal age of departure?

Regarding research question 4, gender, ethnicity, and expulsions all emerged as significant variables. Of course, grade point average was also statistically significant. When the data was examined in the aggregate, students who were white, female, had amassed several expulsions and maintained a low grade point average were associated with the greatest likelihood of dropping out. For those dropouts younger than 18 years of

age, the same variables (gender, ethnicity, expulsions, and grade point average) emerged as significantly associated with dropping out of high school. The results varied slightly, however, for those 18 years of age or older. In this case, high absentee rate, high retention rate, and low grade point average were most associated with dropping out of high school.

Question 5: Examined in the aggregate and as grouped by legal age of departure, how does the selection of demographic and institutional variables describe the population of White students and Black students who have dropped out of school under the circumstances previously outline?

Regarding research question 5, males tended to have excessive absences, suspensions, expulsions, and a low grade point average. For White students receiving free/reduced lunch, dropping out was more likely than for Blacks receiving free/reduced lunch. White and Black dropouts in both the under 18 and 18 years of age and over groups were more likely to have been retained, to have received free/reduced lunch, and to have received special education services.

Question 6: When the pooled observations made on graduates and on White and Black dropouts are analyzed, what relationships emerge between each of these selected variables taken individually and a student's status as a graduate or dropout, both for the aggregate and as grouped by legal age of departure?

Regarding research question 6, in aggregate, the correlation coefficients for all variables among Blacks were statistically significant except for free/reduced lunch and special education status. Among Whites, all relationships were statistically significant. Grade point average continued to emerge as the strong relationship. In fact, because

grade point average was negatively correlated, lower grade point averages were strongly associated with increased likelihood of dropping out of high school. When observing White and Black dropouts by legal age of departure, there was no significant relationship found between genders and dropping out among Black students under 18 years of age.

Question 7: What differences in the strength of such relationships are seen when observations made on the population of White and Black dropouts are compared, both in the aggregate and by legal age of departure?

Regarding research question 7, in aggregate, the relationship between free and reduced lunch and dropping out was stronger for White students than Blacks. For the under 18 years of age group, three variables, free and reduced lunch, in-school suspensions, and grade point average emerged as statistically significant for both Blacks and Whites but were stronger predictors for Whites students than for Black students. When considering students who were 18 years of age or older, the results were similar to the under 18 years of age group.

Question 8: After pooling observations made on graduates and dropouts, what institutional and demographic variables, when simultaneously examined, are observed to predict dropping out of school for White students and Black students, considered in the aggregate and as grouped by legal age of departure?

Regarding research question 8, none of the variables were significant in the presence of grade point average. In aggregate, after taking grade point average into consideration, only out-of-school suspension, an institutional variable, remained a significant predictor for dropping out. For Blacks in aggregate, having more out-of-

school suspensions and a low grade point average were significantly associated with dropping out. None of the demographic variables were significant predictors.

Question 9: Examined in the aggregate and as grouped by legal age of departure, how does the selection of demographic and instructional variables describe the populations of a male and female students who have dropped out of school under the circumstances previously outlined?

Regarding research question 9, in aggregate, Black male students and Black female students were more likely to dropout out than their white counterparts if they received free and reduced lunch, received special education services, had a large number of suspensions and/or expulsions, and had a low grade point average. By gender, males were more likely to dropout out than females if they were receiving free and reduced lunch or had a large number of expulsions. The profile of both female and male dropouts under 18 years of age as well as for 18 years of age and older was comprised of Blacks who were the recipients of free and reduced lunch and special education services, who had been retained, and had a large number of absences, suspensions, expulsions, and low grade point average.

Question 10: When the pooled observations made on graduates and male and female dropouts are analyzed, what relationships emerge between each of these selected variables taken individually and a student's status as a graduate or dropout, both for the aggregate and as grouped by legal age of departure?

Regarding research question 10, the only variables not statistically significant in aggregate were special education status within the female group and ethnicity within the male group. All other correlation coefficients were statistically significant. For females

under the age of 18, three variables including ethnicity, free and reduced lunch status, and special education status were not statistically significant. All other variables, however, remained significant. For males in this same under the age of 18 group, only ethnicity was non-significant. For females in the 18 years of age or older group, all variables, with the exception of special education status and number of expulsions, were significantly related to dropping out. For males in this same 18 years of age or older group, special education was the only non-significant predictor.

Question 11: What differences in the strength of such relationships are seen when observations made on the populations of male and female dropouts are compared, both in the aggregate and by legal age of departure?

Regarding research question 11, in aggregate, there was no statistically significant difference between male and females with regard to their correlation coefficients. When male and female dropouts under the age of 18 were looked at, the relationship between expulsions and dropout out was stronger for males than females. For males and females in the 18 years of age or older group, however, there was no indication of a statistically significant difference between the two gender groups.

Question 12: After pooling observations made on graduates and dropouts, what institutional and demographic variables, when simultaneously examined, are observed to predict dropping out of school for male and female students, considered in the aggregate and as grouped by legal age of departure?

Regarding research question 12, in the presence of grade point average, none of the other variables were significant factors. Essentially, the lower the student's grade point average, the greater the likelihood that he or she will dropout. For male students,

ethnicity and expulsions emerged as statistically significant variables after adding grade point average variable into the model. Being white, having a high number of expulsions, and maintaining a low grade point average were significantly associated with dropping out of high school.

Question 13: In crossing the gender and ethnic characteristics of students in the dropout population, what relationships emerge between the remaining variables and a student's status as a dropout or graduate; how does the strength of such relationships compare across groups?

On research question 13, no significant differences were found when comparing the White female students to Black female students. When comparing White males to Black males, however, one observed difference was found with regard to free and reduced lunch status. Essentially, the relationship between being socioeconomically disadvantaged and dropping out was stronger for White males than for Black males.

The information gathered for this chapter produced several findings. The findings in this research, in turn, posit several policy implications. These policy implications are outlined in the next section.

Implications

Although much research, including this study, has been contributed to the body of literature on high school dropouts, the topic remains an area for future investigations in the educational field. As part of an overall education reform movement, states and local school districts have steadily increased high school graduation requirements over the past two decades (Medrich, Brown, Henke, Ross, & McArthur, 1992). In Tennessee, for example, the required credits that students needed in 1995 to earn a diploma were as

follows: English (4), Math (3), Social Studies (3), Science (3), Wellness (1), and Electives (6) for a total of 20 credits required in addition to passing all exit exams. These credits were the same recommendations set forth by the National Commission on Excellence in Education in A Nation at Risk report (1983). By 2009, nearly two decades later, the required credits had increased. Currently, students must earn (4) credits of English, (4) Math, (3) Social Studies, (3) Science, Physical Education and Wellness (1.5), Personal Finance (0.5), Foreign Language (2), Fine Arts (1), and Elective Focus (3) for a total of 22 credits required.

The findings of this study imply that because grade point average is a significant predictor for dropping out, school districts should begin developing prevention and intervention policies, procedures, and programs that specifically address this one particular variable. Whether through course recovery programs or supplemental routes to completing graduation requirements, it is obvious that decrease in the dropout rate is directly related to addressing students' failing grade point averages. Given the results of this research, school administrators and policy makers can predict dropout rates more accurately, target the variables of significance to the student body they serve, as well as pinpoint specific ethnic/gender groups requiring both prevention and intervention strategies. Stakeholders likewise can better collaborate with institutions and allocate various social resources to assist school leaders with meeting the needs of their student population. As a result of these efforts, the dropout rates across this nation can begin to experience a sharp decline, which in turn, will make for a more civil society. Despite the findings in this study, there is still much more to add to the body of research on high

school dropouts. The next section will provide a few recommendations for further research.

Recommendations for Further Research

This study analyzed the relationship between dropout variables and the race and gender of high school students and was primarily conducted to find whether these variables interacted differently among and between dropouts with respect to their gender and/or race. Based on the findings in this study, several additional recommendations for further research should be considered. The sole intent of these recommendations is to expand the knowledge base and research on high school dropouts.

Future research should be directed toward replicating this study using a larger sample with greater diversity to test the findings and validity of the theoretical framework used. Additional research may provide more specific information to aid policymakers and educational administrators in developing effective prevention and intervention programs for students at-risk for dropping out. School districts should also consider implementing proactive and intervention measures toward the goal of decreasing high school dropout incidences.

School district administrators should consider the validity of Tinto's (1987) theory and its relevance to students transitioning from middle school to high school. According to a study conducted by Neild and Balfanz (2006), of those who failed 8th grade math and/or English, 77% of them dropped out of high school. The transition into high school is marked by a decrease in engagement and motivation, especially for low-performing students (National Research Council, 2004). Students that have been identified as having one or more of the institutional variables such as low grade point

average, retention episodes, high absentee rates, and excessive or extreme behavioral infractions in earlier grades should be targeted prior to and during their transition to high school.

Failure to complete required high school units likely means the student's grade point average has suffered as well. An examination of effective strategies for improving grade point average among high school students should be explored. Nearly half of all dropouts who withdrew by the end of their third year in high school failed to earn more than three credits (Neild & Farley, 2004).

Specific intervention programs catered toward improving the areas of deficiency should be developed and implemented for students at risk for dropping out of high school. Data should be collected regularly as these pre-identified students are closely monitored and provided the support needed to stay on track to graduate. Mentors and other community stakeholders should be assigned to students, especially during the initial transition period, to keep them engaged in the school culture (Quint, 2006).

One particular program that mimics the recommendations listed above is *Check & Connect*. This research based intervention trains monitors to work with small groups of students on the verge of dropping out. According to Jerald (2006), the monitors regularly track the attendance, behavioral infractions, and academic performance of students assigned to them. On a weekly basis, the adult monitors conference with their students and update parents/guardians on their progress. Working in tandem with other school-wide/district initiatives, intervention programs similar to this have proven to decrease dropout rates by as much as one half (Jerald, 2006).

Another successful intervention tool is the course recovery program. These programs assist students who struggle to earn credits in required classes. Nearly half of all dropouts who withdrew by the end of their third year in high school failed to earn more than three credits (Neild & Farley, 2004). Engaging potential dropouts in programs such as course recovery interventions can assist in reducing the dropout rate in many districts (Jerald, 2006).

Currently, the school district that was utilized by the researcher in this study offers course-recovery programs at each of its eight high schools as an intervention strategy for encouraging low performers and non-performers to remain on track for graduation. Neild, Balfanz, and Herzog (2007) posit that a tiered intervention system such as this is ideal for keeping students on track to graduation. A typical tiered system includes school wide strategies (Tier 1), targeted strategies (Tier 2), and intensive strategies (Tier 3). Each of the strategies focuses on three areas: attendance, behavior, or course failures.

Ninth grade academies can be implemented in conjunction with tiered intervention models such as the one previously mentioned. Though these academies are regarded as interventions throughout the entire high school career, they are particularly helpful with students as they transition from middle school to high school. A ninth grade academy is often regarded as a school within a school. Ninth graders are kept separate and isolated among other ninth graders for the majority of the school day. Because the decision to dropout is often a long-term process that often begins earlier than the student's high school career, preventive measures should be implemented earlier than the student's transition to high school (Rumberger, 1995).

Further studies should be conducted regarding how dropout variables affect additional racial/ethnic groups not researched in this study, such as Hispanics, Asians, and American Indian in particular. Their exclusion from this study was primarily due to the limited number of samples available in the district's database. In order to alleviate the achievement gaps between ethnic and gender groups, both preventive and intervention strategies must be researched for all groups represented in this nation's school districts.

Conclusion

This study was designed to research the relationship between dropout variables and the race and gender of high school students. Much research has been done on profiling the dropout, identifying dropout variables, and even on prevention programs that are effective at reducing dropout rates. The findings of this study together with existing research can influence and serve as a catalyst for change in many school districts throughout this nation. Hopefully, the findings in this study will urge researchers and educational stakeholders to consider looking at how dropout indicators affect specific gender and ethnic groups. Obviously, educators cannot change many of the dropout variables presented in this study, such as socioeconomic status, gender, ethnicity, absentee rate, etc. Reforming middle and high schools, however, by implementing effective prevention and intervention initiatives, can be just as powerful a change agent in the quest to decrease this nation's dropout rate.

References

- Adamich, T., & Childers, M. (2011). Gov Doc Kids Group and At-Risk Youth: Federal and State responses and strategies. *Library Media Connection, 29*(5), 20-21.
- African American. (2001) In *US Legal Definitions*. Retrieved February 25, 2011, from <http://definitions.uslegal.com/a/african-americans/>
- Akos, P., & Galassi, J.P. (2004). Middle and high school transitions as viewed by students, parents, and teachers. *Professional School Counseling, 7*, 212-221.
- Alexander, K.L., & Entwisle, D.R. (1997). From first grade forward: Early foundations of high school dropout. *Sociology of Education, 70*(2), 87-107.
- Allensworth, E., & Easton, J. Q. (2007). *What matters for staying on-track and graduating in Chicago Public High Schools: A close look at course grades, failures and attendance in the freshman year*. Chicago: Consortium on Chicago School Research.
- Almeida, C., Balfanz, R., & Steinberg, A. (2009). Dropout Factories: New strategies states can use. *Education Week, 29*(15), 20, 22.
- Alspaugh, J. W. (1998). Achievement loss associated with the transition to middle school and high school. *The Journal of Educational Research, 92*, 20-25.
- Balfanz, R., & Legters, N. (2006). Closing 'dropout factories': The graduation-rate crisis we know, and what can be done about it. *Education Week, 25*(42), 42-43.
- Balfanz, R., & Legters, N. (2004). *Locating the Dropout Crisis: Which High Schools Produce the Nation's Dropouts? Where are they located? Who Attends Them?* In G. Orfield (Ed.), *Dropouts in America: Confronting the Graduation Rate Crisis* (pp. 57-84). Cambridge: Harvard Education Press.

- Barton, P. E. (2005). *One Third of a Nation: Rising Dropout Rates and Declining Opportunities*. Educational Testing Service, 1-46.
- Battin-Pearson, S., & Newcomb, M. (2000). Predictors of early high school dropout: A Test of five theories. *Journal of Educational Psychology*, 92(3), 568-583.
- Bloom, D. (2010). Programs and Policies to Assist High School Dropouts in the Transition to Adulthood. *The Future of Children*, 20 (1), 89-108.
- Booker, K. C. (2006). School belonging and the African American adolescent: What do we know and where should we go? *The High School Journal*, 89, 1-7.
- Bridgeland, J.M., Dulilio, J.J., & Morrison, K.B. (2006). *The silent epidemic: Perspectives of high school dropouts*. Washington, DC: Civic Enterprises.
- Bradby, D., Owings, X., & Quinn, P. (1992). Language characteristics and academic achievement: A look at Asian and Hispanic eighth graders in NELS: 88 (Statistical Analysis Rep. No. NCES 92-479). Washington, DC: U.S. Department of Education, Office of Educational Research & Improvement.
- Buckley, M., Storino, M., & Saami, C. (2003). Promoting emotional competence in children and adolescents: Implications for school psychologist. *School Psychologist Quarterly*, 18, 177-191.
- Burgette, J., King, M., Lee, C., & Park, H. (2011). Tennessee Dropout Policy Scan. Center for Research in Educational Policy.
- Cantin S., & Boivin, M. (2004). Change and stability in children's social network and self-perceptions during the transition from elementary to junior high school. *International Journal of Behavioral Development*, 28(6), 561-570.

- Caraway, K., Tucker, C. M., Reinke, W. M., & Hall, C. (2003). Self-efficacy, Goal Orientation, and Fear of Failure as Predictors of School Engagement in High School Students. *Psychology in the Schools, 40*, 417-427.
- Carpenter, D.M., II, & Ramirez, A. (2007). More than one gap: Dropout rate gaps between and among Black, Hispanic, and White Students. *Journal of Advanced Academics, 19*, 32-64.
- Caucasian. (2001). In *US Legal Definitions*. Retrieved February 25, 2011, from <http://definitions.uslegal.com/c/caucasian/>
- Center for Labor Market Studies, (2009). *Left Behind in America: The Nations Dropout Crisis*. Boston: Northeastern University Center for Labor Market Studies.
- Charles, C. M. (1998). *Introduction to Educational Research* (3rd ed.). New York: Addison Wesley Longman, Inc.
- Chavez, R.C., Belkin, L. D., Hornback, J. G., & Adams, K. (1991). Dropping Out of School: Issues Affecting Culturally, Ethnically, and Linguistically Distinct Student Groups. *The Journal of Educational Issues of Language Minority Students, 8*, 1-21.
- Christenson, S.L., Sinclair, M.F., Lehr, C.A., & Godber, Y. (2001). Promoting successful school completion: Critical conceptual and methodological guidelines. *School Psychology Quarterly, 16*, 468-484.
- Christenson, S.L., Sinclair, M.F., Lehr, C.A., & Hurley, C.M. (2000). In D. Minke & G. Bear (Eds.), *Preventing school problems-promoting school success: Strategies and programs that work*. Bethesda, MD: National Association of School Psychologists.

- Christenson, S. L., & Thurlow, M. L. (2004). School Dropouts: Prevention considerations, interventions, and challenges. *Current Directions in Psychological Science, 13*(1), 36-39.
- Cohen, J., & Smerdon, B. (2009). Tightening the Dropout Turniquet: Easing the Transition From Middle to High School. *Preventing School Failure, 53*(3), 177-84.
- Coley, R. J. (1995). *Dreams Deferred: High School Dropouts in the United States*. Princeton, NJ: Educational Testing Service, Policy Information Center.
- Conant, J. (1961). *Slums and Suburbs: A Commentary on Schools in Metropolitan Areas*. New York: McGraw-Hill.
- Cresswell, J.W. (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, NJ: Pearson, Merrill Prentice Hall.
- Croninger, R. G., & Lee, V. E. (2001). Social capital and dropping out of high school: Benefits to at-risk students of teachers' support and guidance. *Teachers College Record, 103*, 548-581.
- Crowder, K., & South, S. J. (2003). Neighborhood distress and school dropout: The variable significance of community context. *Social Science Research, 32*, 659-698.
- Devine, J. (1996). *Maximum Security: The Culture of Violence in Inner-City Schools*. Chicago: University of Chicago Press.
- Duke, D., & Jacobson, M. (2011). Tackling the Toughest Turnaround – Low Performing High Schools. *Phi Delta Kappan 92*(5), 34-8.

- Dynarski, M., & Gleason, P. (2002). How can we help? What we have learned from federal dropout prevention programs. *Journal of Education for Students Placed At Risk*, 7(1), 43-69.
- Edelman, M.W., & Howe, H., II. (1985) *Barriers to Excellence: Our Children at Risk*. Boston, MA: National Coalition of Advocates for Students.
- Editorial Projects in Education Research Center. (2006). *Diplomas count: An Essential Guide to Graduation Rates and Policies*. EdWeek. Retrieved August 23, 2009, from <http://www.edweek.org/ew/toc/2006/06/22/index.html>
- Editorial Projects in Education, Diplomas Count 2008: Diplomas Count 2008. School to College: Can State P-16 councils Ease the Transition? Special issue, *Education Week*, 26(40), 2008
- Education Week. (2007). Diplomas Count 2007: Ready for what? Preparing students for college, careers, and life after high school. Retrieved March 23, 2010, from <http://www.edweek.org/ew/toc/2007/06/12/index.html>
- Ekstrom, R.B., Goertz, M.E., Pollack, J.M., & Rock, D.A. (1986). Who droops out of high school and why? Findings from a national study. *Teachers College Record*, 87, 356-373.
- Farmer, J.A., & Payne, Y. (1992). *Dropping out: Issues and answers*. Springfield, IL: Charles C. Thomas.
- Farmer, T., Price, L., O'Neal, K., Man-Chi, L., Goforth, J., Cairns, B., et al. (2004). Exploring risk in early adolescent African American Youth. *American Journal of Community Psychology*, 33, 51-60.

- Felner, R.D., Seitsinger, A.M., Brand, S., Burns, A., & Bolton, N. (2007). Creating small learning communities: Lessons from the project on high-performing learning communities about “what works” in creating productive, developmentally enhancing, learning contexts. *Educational Psychologist, 42*, 209-221.
- Field, A. (2009). *Discovering Statistics Using SPSS*. London: Sage.
- Fields, G. (2008). The high school dropout’s economic ripple effect. *The Wall Street Journal*. Retrieved March 21, 2010, from http://online.wsj.com/article/NA_WSJ_PUB:SB122455013168452477.html
- Fine, M. (1987). Why urban adolescents drop into and out of public high school. In G. Natriello (ed.), *School dropouts: Patterns and policies* (pp. 89-105). New York: Teachers College Press.
- Fine, M. (1991). *Framing Dropouts: Notes on the politics of an urban high school*. Albany, NY: State University of New York Press.
- Finn, J.D., Gerber, S.B., & Boyd-Zaharias, J. (2005). Small classes in the early grades, academic achievement, and graduating from high school. *Journal of Education Psychology, 97*, 214-223.
- Finn, J. K. (1989). Withdrawing from School. *Review of Educational Research, 59*, 117-142.
- Finnan, C., & Chasin, G. (2007). Accelerating the Learning of Low-Achieving Students: The Transformation of a Dropout. *Phi Delta Kappan, 88*(8), 625-629.
- Frankenberg, E., Siegel-Hawley, G., & Wang, J. (2011). Choice without equity: Charter school segregation. *Educational Policy Analysis Archives, 19*(1), 1-92.

- Friedenberg, J.E. (1999). Predicting Dropout Among Hispanic Youth and Children. *Journal of Industrial Teacher Education*, 36(3). Retrieved March 25, 2010, from <http://scholar.lib.vt.edu/ejournals/JITE/v36n3/friedenberg.html>
- Furrer, C., & Skinner, E. (2003). Sense of relatedness as a factor in children's academic engagement and performance. *Journal of Educational Psychology*, 95, 148-162.
- Garnier, H. E., Stein, J. A., & Jacobs, J. K. (1997). The Process of Dropping Out of High School: A 19-year Perspective. *American Educational Research Journal*, 34, 395-419.
- Gleason, P., & Dynarski, M. (2002). Do we know whom to serve? Issues in using risk factors to identify dropouts. *Journal of Education for Students Placed at Risk*, 7, 25-41.
- Goodwin, M. (2000). Achievements or disasters? Arts Education Policy Review, 101(3), 7-8.
- Greene, J. (2002). *Public school graduation rates in the United States*. (Civic Report 31). New York: Manhattan Institute for Policy Research.
- Greene, J.P., & Winters, M.A. (2005). *The effect of residential school choice on public high school graduation rates*. *Education working paper No. 9*. New York: Manhattan Institute for Policy Research.
- Goldschmidt, P., & Wang, J. (1999). When can schools affect dropout behavior? A longitudinal multilevel analysis. *American Educational Research Journal*, 36(4), 715-738.

- Gruskin, S.J., Campbell, M.A., & Paulu, N. (1987). Dealing with dropouts: The urban superintendents call to action. Washington, DC: U.S. Department of Education, Office of Educational Research & Improvement.
- Hana, J. (2005). The Elementary and Secondary Education Act: 40 Years Later. Retrieved May 22, 2010, from http://www.gse.harvard.edu/news_events/features/2005/08/esea0819.html
- Herlihy, C. (2007). *State and district-level supports for successful transition into high school*. Washington, DC: National High School Center. Retrieved March 23, 2011, from http://www.betterhighschools.org/docs/NHSC_PolicyBrief_TransitionsIntoHighSchool.pdf
- Hess, R.S. (2000). Dropping out among Mexican American youth: Reviewing the local literature through an ecological perspective. *Journal of Education for Students Placed at Risk*, 5(3), 267-290.
- Hoyle, J.R., & Collier, V. (2006). Urban CEA superintendents alternative strategies in reducing school dropouts. *Education and Urban Society*, 39(1), 69-90.
- Jenkins, T. S. (2006). Mr. Nigger: The Challenges of educating Black males within American society. *Journal of Black Studies*, 37(1), 127-155.
- Jerald, C. (2006). *Identifying potential dropouts: Key lessons for building an early warning data system*. Washington, DC: Achieve, Inc.
- Jimerson, S. R., Anderson, G.E., & Whipple, A. D. (2002). Winning the Battle and Losing the War: Examining the Relation Between Grade Retention and Dropping Out Of High School. *Psychology in the Schools*, 39, 441-457.

- Jimerson, S.R., Eglund, B., Sroufe, A., & Carlson, B. (2000). A prospective longitudinal study of high school dropouts examining multiple predictors across development. *Journal of School Psychology, 38*, 525-549.
- Joint Economic Committee. (1991, August). *Doing drugs and dropping out: A report prepared for the use of the subcommittee on economic growth, trade, and taxes of the Joint Economic Committee, 102nd Cong. 1(1991)*. Washington, DC: Government Printing Office. (ERIC Document Reproduction Service No. 334153)
- Jordon, W. J., Lara, J., & McPartland, J. M. (1996). Exploring the causes of early dropouts among race-ethnic and gender groups. *Youth and Society, 28*(1), 62-94.
- Jordan, W.J., McPartland, J.M., & Lara, J. (1999). Rethinking the causes of high school dropout. *The Prevention Researcher, 6*(3), 1-4.
- Kaufman, P. (2004). *The National Dropout Data Collection System: History and the Search for Consistency?* In G. Orfield (Ed.), *Dropouts in America: Confronting the Graduation Rate Crisis* (pp. 107-130). Cambridge: Harvard Education Press.
- Kronick, R.F., & Hargis, C.H. (1998). *Dropouts: Who drops out and why – And the recommended action* (2nd ed.). Springfield, IL: Charles C. Thomas.
- Laird, J., Cataldi, E.F., KewalRamani, A., & Chapman, C. (2008). *Dropout and Completion Rates in the United States: 2006* (NCES 2008-053). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

- LeCompte, M., & Dworkin A. (1991). *Giving Up on School: Student Dropouts and Teacher Burnouts*. Newbury Park, CA: Corwin Press, Inc.
- Lee, V.E., & Burkam, D.T. (2003). Dropping Out of High School: The role of school organization and structure. *American Educational Research Journal*, 40(2), 353-393.
- Leedy, P. D., & Ormrod, J. E. (2001). *Practical research: Planning and design* (7th ed.). Upper Saddle River, NJ: Merrill Prentice Hall.
- Legters, N., Balfanz, R., Jordan, W., & McPartland, J. (2002). Comprehensive reform for urban high schools: A talent development approach. New York: Teachers College Press.
- Lehr, C.A., Johnson, D. R., Bremer, C. D., Cosio, A., & Thompson, M. (2004). *Essential tools increasing rates of school completion: Moving from policy and research to practice*. Minneapolis, MN: National Center on Secondary Education and Transition, Institute on Community Integration.
- Lehr, C.A., Clapper, A., & Thurlow, M. (2005). *Graduation for All: A Practical Guide to Decreasing School Dropout*. Thousand Oaks, CA: Corwin Press
- Lehr, C.A., Hansen, A., Sinclair, M.F., & Christenson, S.L. (2003). Moving beyond dropout prevention to school completion: An integrative review of data-based interventions. *School Psychology Review*, 32(3), 342-364.
- Lillard, D., & DeCicca, P. (2001). High standards, more dropouts? Evidence within and across time. *Economics of Education Review*, 20(5), 459-473.

- McAndrews, L.J. (2006). *The Era of Education: The Presidents and the Schools, 1965-2005*. Champaign: University of Illinois Press.
- McKinley, L. B., Bloom, D. E., & Freeman, R. B. (1990). The Declining Economic Position of Less Skilled American Men. In G. Burtless (ed.) *A Future of Lousy Jobs: The Changing Structure of U.S. Wages* (pp. 31-76). Washington, DC: The Brookings Institution: 31-76.
- MacMillan, D. L. (1991). *Hidden youth: Dropouts from special education*. Reston, VA: The Council for Exceptional Children.
- Manlove, J. (1998). The influence of high school dropout and school disengagement on the risk of school-age pregnancy. *Journal of Research on Adolescence, 8*, 187-220.
- Marrs, H., Hemmert, E., & Jansen, J. (2007). Trouble In A Small School: Perceptions of At-Risk students in a rural high school. *The Journal of At-Risk Issues, 13*(2), 29-35.
- Matthews, M. S. (2006). Gifted Students Dropping Out: Recent Findings from Southeastern State. *Roeper Review 28*(4), 216-23.
- Medrich, E.A., Brown, C.L., Henke, R.R., Ross, L., & McArthur, E. (1992). Overview and inventory of state requirements for school coursework and attendance. Washington DC: U.S. Department of Education Office of Educational Research and Improvement, National Center for Education Statistics. (ERIC Document Reproduction Service No. ED 346 619).
- Menzer, J. D., Hampel, R. L. (2009). Lost at the Last Minute. *Phi Delta Kappan, 90*(9), 660-664.

- Mishel, L., & Roy, J. (2006). Accurately Assessing High School Graduation Rates. *The Phi Delta Kappan*, 88(4), 287-292.
- Mitchell, D.E., Crowson, R.L., & Shipps, D. (2011). *Shaping education policy: Power and process*. New York: Routledge.
- Montecel, M.R., Cortez, J.D., & Cortez, A (2004). Dropout-prevention programs: Right intent, wrong focus, and some suggestions on where to go from here. *Education and Urban Society*, 36(2), 169-188.
- Murmane, R.J., Willet, J.B., & Boudett, K.P. (1995). Do high school dropouts benefit from obtaining a GED, postsecondary education, and training? *Educational Evaluation and Policy Analysis*, 17, 133-147.
- Murray, C., & Naranjo, J. (2008). Poor, black, learning disabled, and graduating: An investigation of factors and processes associated with school completion among high-risk urban youth. *Remedial and Special Education*, 29(3), 145-160.
- National Center for Education Statistics (2001). *The condition of education 2002* (NCES 2002025). Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.
- National Center for Education Statistics (2008). *Status and trends in the education of American Indians and Alaska Natives: 2008* (http://nces.ed.gov/pubs2008/nativetrends/ind_3_4.asp). Washington, DC: U.S. Department of Education.
- National Center for Education Statistics (2010). Digest of education statistics: 2009 (<http://nces.ed.gov/pubs2010/2010013.pdf>). Washington, DC: U.S. Department of Education.

- National Commission on Employment Policy. (1987). *Hispanics and jobs: Barriers to success*. Washington, DC: Author.
- National Commission on Excellence in Education (1983). *A Nation at Risk: The imperative for educational reform*. Washington, DC: US Department of Education.
- National Council of La Raza. (1990). *The education of Hispanics: Selected statistics*. Washington, DC: Author.
- National Research Council. (2004). *Engaging schools: Fostering high school students' motivation to learn*. Washington, DC: National Academies Press.
- Neild, R.C., & Balfanz, R. (2001). *An extreme degree of difficulty: The educational demographics of the ninth grade in Philadelphia*. Baltimore: John Hopkins University, Center for Social Organization of Schools.
- Neild, R.C., & Farley, E. (2004). *Whatever happened to the Class of 2000? The timing of dropout in Philadelphia's Schools*. In Orfield, G. (Ed.), *Dropouts in America: Confronting the graduation rate crisis (pp. 207-220)*. Cambridge, MA: Harvard Education Press.
- Neild, R.C., & Balfanz, R. (2006). *Unfulfilled promise: The dimensions and characteristic's of Philadelphia's dropout crisis. 2000-2005*. Baltimore: Center for Social Organization of Schools, Johns Hopkins University.
- Neild, R. C., Balfanz, R., & Herzog, L. (October 2007) An Early Warning System. *Educational Leadership*, 65(2), 28-33.
- No Child Left Behind Act of 2001*, Pub. L. No. 107-110, 115 Stat. 1425 (2002).

- Office of Educational Research and Improvement. *Reaching the Goals, Goal 2, High School Completion*. U.S. Department of Education, 1993.
- Office of Juvenile Justice and Delinquency Prevention (1995). *Juvenile offenders and victims: A national report*. Pittsburgh, PA: National Center for Juvenile Justice.
- Orr, M.T. (1987). *Keeping students in school: A guide to effective dropout prevention programs and services*. San Francisco: Jossey-Bass.
- Patterson, N.C., Beltyukova, S.A., Berman, K., & Francis, A. (2007). The making of sophomores. *Urban Education, 42*, 124-144.
- Patterson, J., Hale, D., & Stessman, M. (January 2008) Cultural Contradictions and School Leaving: A Case Study of an Urban High School. *The High School Journal 91*(2), 1-15.
- Patton, M. Q. (1997). *Utilization-focused evaluation: The new century text* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Peterson, P.E. (2010). *Saving schools: From Horace Mann to virtual reality*. Cambridge MA: Harvard University Press.
- Quint, J. (2006). *Meeting five critical challenges of high school reform: Lessons from research on three reform models*. New York: MCRC.
- Ravitch, D. (2011). Obama's War on Schools. *Newsweek, 157*(13), 14-20.
- Ream, R., & Rumberger, R. (2008). Student Engagement, Peer Social Capital, and School Dropout among Mexican American and Non-Latino White Students. *Sociology of Education, 81*(2), 109-139.
- Reese, W. (2005). *America's public schools: From the common school to "No Child Left Behind"*. Baltimore: The Johns Hopkins University Press.

- Repetto, J.B., Pankaskie, S.A., De Palma-Hawkins, A., Schwartz, S.E., & Perry, L. (1997). Promising practices in dropout prevention and transition for students with mild disabilities. *The Journal of At-Risk Issues*, 4(1), 19-29.
- Rimm, S. B. (1995). *Why Bright Kids Get Poor Grades and What You Can Do About It*. New York: Crown.
- Roderick, M. (1993). *The path to dropping out*. Westport, CT: Auburn House.
- Roderick, M., & Camburn, E. (1999). Risk and recovery from course failure in the early years of high school. *American Educational Research Journal*, 36(2), 302-344.
- Rodriguez, L.F., & Conchas, G.Q. (2009). Preventing Truancy and Dropout Among Urban Middle School Youth: Understanding community-based action from the student's perspective. *Education and Urban Society*, 41(2), 216-47.
- Rosenthal, B.S. (1998). Nonschool correlates of dropout: An integrative review of literature. *Children & Youth Services Review*, 20(5), 413-433.
- Rumberger, R. W. (1983). Dropping out of high school: The influence of race, sex, and family background. *American Educational Research Journal*, 20, 199-220.
- Rumberger, R.W. (1987). High School Dropouts: A review of issues and evidence. *Review of Educational Research*, 57(2), 101-121.
- Rumberger, R.W. (1995). Dropping out of middle school: A multilevel analysis of students and schools. *American Educational Research Journal*, 32(3), 583-625.
- Rumberger, R.W., & Rodriguez, G.M. (2002). *Chicano Dropouts: An update of research and policy issues*. In R.R. Valencia (Ed.), *Chicano school failure and success: Past, Present, and Future* (2nd ed., pp. 114-146). New York: Routledge Falmer.

- Rumberger, R.W., & Palardy, G.J. (2005). Test Scores, Dropout Rates, and Transfer Rates as Alternative Indicators of High School Performance. *American Educational Research Journal*, 42(1), 3-42.
- Samuels, C.A. (May 2007). Lack of Research, Data Hurts Dropout Efforts, Experts Say. *Education Week*, 26(36), 8-9.
- Schargel, F.P. (2004). Who drops out and why. In J. Smink & F.P. Schargel (Eds.), *Helping students graduate: A strategic approach to dropout prevention*. Larchmont, NY: Eye on Education.
- Shippo, D. (2003). Pulling Together: Civic capacity and urban school reform. *American Educational Research Journal*, 40(4), 848-871.
- Singham, M. (2005). *The achievement gap in US education: Canaries in the mine*. Lanham, MD: Rowman & Littlefield Education.
- Slavin, R.E., Cheung, A., Groff, C., & Lake, C. (2008). Effective Reading Programs for Middle and High Schools: A Best-Evidence Synthesis. *Reading Research Quarterly*, 43(3), 290-322.
- Sparks, S. D. (2010). Study Finds Fewer ‘Dropout Factory’ Schools. *Education Week*, 30(14), 12-13.
- Spring, J. (2001). *Deculturalization and the struggle for equality*, (3rd ed.). New York: McGraw-Hill.
- Spring, J. (2011). *The politics of American education*. New York: Routledge.

- Stillwell, R. (2010). *Public School Graduates and Dropouts*. From the Common Core of Data: School Year 2007-2008 (NCES 2010-341). National Center for Education Statistics Institute of Education Sciences, U.S. Department of Education. Washington, DC. Retrieved from <http://nces.ed.gov/pubs2010/2010341.pdf>
- Stedman, L., & Smith, M. (1983) Recent Reform Proposals for American Education. *Contemporary Education Review*, 2(2), 85-104.
- Stegelin, D.A. (2002). *Early literacy education: First steps toward dropout prevention, effective strategies for school improvement and dropout prevention*. Clemson, SC: National Dropout Prevention Center.
- Suh, S., Suh, J., & Houston, I. (2007). Predictors of Categorical At-Risk High School Dropouts. *Journal of Counseling and Development*, 85(2), 196-203.
- Suh, S., & Suh, J. (2007). Risk Factors and Levels of Risk for High School Dropouts. *Professional School Counseling*, 10(3), 297-306.
- Swanson, C. (2004) Sketching a Portrait of Public high School Graduation: Who Graduates? Who Doesn't? In G. Orfield (Ed.), *Dropouts in America: Confronting the Graduation Rate Crisis* (pp. 13-40). Cambridge: Harvard Education Press.
- TDOE. (2009). *Tennessee Department of Education Report Card 2009*. Retrieved from <http://edu.reportcard.state.tn.us/pls/apex/f?p=200:50:1687970816922178::NO::>
- Texas Education Agency. (2003). *Secondary school completion and dropouts in Texas public schools, 2001-02* (Document No. GE03 601 04). Austin: Author.
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45, 89-125.

- Tinto, V. (1987) *Leaving College: Rethinking the Causes and Cures of Student Attrition*. Chicago, Ill.: University of Chicago Press.
- Thurlow, M. L., Sinclair, M. F., & Johnson, D. R. (2002, July). *Students with disabilities who drop out of school: Implications for policy and practice*. Issue Brief, 1(2). Minneapolis, MN: University of Minnesota, Institute on Community Integration, National Center on Secondary Education and Transition.
- Tyler, J.H., & Lofstrom, M. Finishing High School: Alternative pathways and dropout recovery. *The Future of Children*, 19(1), 77-103.
- U.S. Department of Education. (2011). *No Child Left Behind*. Retrieved June 11, 2011, from <http://www2.ed.gov/nclb/landing.jhtml>
- U.S. Department of Education, National Center for Education Statistics (NCES), Washington, D.C., *Dropout Rates in the United States: 1998*. Retrieved August 28, 2009 from <http://www.ed.gov/stats.html>
- U.S. Department of Education, Office of Communications and Outreach. (2010a) *Blueprint for Reform: The reauthorization of the Elementary and Secondary Education Act*. Retrieved June 15, 2011 from <http://www2.ed.gov/policy/elsec/leg/blueprint/blueprint.pdf>
- U.S. Department of Education, National Center for Education Statistics. (2010b). *The Condition of Education 2010* (NCES 2010-028), Indicator 20.
- U.S. Department of Education, National Center for Education Statistics (NCES), Washington, D.C., *Public High School Dropouts and Completers from the Common Core of Data: School Years 1998-99 and 1999-2000*. Retrieved November 15, 2009 from http://nces.ed.gov/pubs2002/dropout98_99/

- U.S. General Accounting Office. (1994). *Hispanics' schooling: Risk factors for dropping out and barriers to resuming education*. Washington, DC: U.S. Government Printing Office.
- Varlas, L. (2005, August). Bridging the widest gap: Raising the achievement of black boys. *Education Update*, 47(8), 1-8.
- Velez, W. (1989). High school attrition among Hispanic and non-Hispanic youths. *Sociology of Education*, 62, 119-133.
- Viadero, D. (2006, June 22). Signs of Early Exit for Dropouts Abound. *Education Week* 25(41S), 20.
- Weber, J.M. (1989). *Identifying potential dropouts: A compilation and evaluation of selected procedures*. Columbus, OH: Center on Education and Training for Employment.
- Wells, S., Bechard, S., & Hamby, J.V. (1989). *How to Identify At-Risk Students*. Clemson, SC: National Dropout Prevention Center.
- Western, B. (2007). Mass Imprisonment and Economic Inequality. *Social Research* 75(2), 509-532.
- Woman, C., Bruininks, R.H., & Thurlow, M.L. (1989). Dropouts and dropout programs: Implications for special education. *Remedial and Special Education*, 10(5), 6-20.
- Yell, M., & Drasgow, E. (2005). *No Child Left Behind: A guide for professionals*. Upper Saddle River, NJ: Pearson Education Inc.