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An Examination of the Association Between the Graduation Coach Program and Georgia's Graduation Rate

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AN EXAMINATION OF THE ASSOCIATION BETWEEN THE GRADUATION COACH PROGRAM AND GEORGIA'S GRADUATION RATE

by

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(Under the Direction of Brenda Marina)

ABSTRACT

As result of the dropout problem in the United States and in Georgia, many school systems around the nation have placed much emphasis on reducing the incidents of students dropping out of high school. The purpose of this study was to examine the association between the graduation coach program and Georgia's graduation rate of over a 7 year period of time, 2004-2010. The research sought to determine if differences existed between graduation rates pre the induction of the graduation coach programs and post the induction of the graduation coach program when controlling for variables such as, school locale, free and reduced lunch percentages, science achievement data and race and ethnicity percentages.

I used quantitative design to gather descriptive statistics and to test differences in means scores pre and post the induction of the graduation coach program. The participants were 343 public high schools in the state of Georgia with pre coach program graduation rates and post coach post coach program graduation rates. The spreadsheet was developed so that pre graduation coach program data and post graduation coach data was easily distinguishable. The data set contained statistical information on all 343 schools with pre and post graduation rate data.

The results of this study indicate that graduation rates were statistically significant higher after the induction of the graduation coach program when compared to the period prior to the induction of the graduation coach program. In fact, this advantage persisted across city high schools, rural high schools, suburban high schools, town high schools, metropolitan Atlanta high schools and high schools outside of metropolitan Atlanta. However, when looking at Atlanta Public Schools, Dekalb County Schools and Clayton County Schools, no significant difference was found for Atlanta Public Schools.

INDEX WORDS: Graduation coach, Dropout prevention, High Schools, Credit recovery, Graduation rate, Students persistence, Student engagement

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DEDICATION

I would like to dedicate my dissertation to my wonderful and supporting family who has routed me on from the beginning of my education career and pushed me to things that I never imagined. Much appreciation goes to my wife, Danielle, who is my number one fan. Thank you for encouraging me, praying for me and giving high fives when things went the way we planned. You were a great motivator during this project. To my son, Wardell IV, your presence reminds me of why I do what I do, thank you for being a silent motivator. To my mom, Ruby, thank you for participating in my education process; you always encouraged and supported me by helping me overcome challenges in grade school which was the foundation of my education process. To my dad, Wardell II, thank you for your support during my academic career. You supported and encouraged me to do well in education. To my siblings, Lisa, Cletus, Victoria, Fleur, Latoria, Justine and Trevonia, thank you for serving as role models and pushing me to do well in education. To my nieces and nephews, I hope I have been a motivator for you to do well in school. Despite challenges that you may encounter in elementary school, middle school, high school and college with hard work, preparation and remediation you can still rise above your challenges and reach your goals. Always remember to dream big!

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CHAPTER I

Introduction

In the United States and in Georgia people lack the skills needed to sustain employment that keeps the economy moving in a positive direction (Bradshaw, Lindsey, O'Brennan, & McNeely, 2008; Heckman & LaFontaine, 2007). In addition, poverty is evident in both urban and rural areas, and crime is on the rise. Students lack motivation in schools, students are disengaged, chronically absent, have constant discipline issues, and lack necessary skills that will increase their chance of success (Heckman & LaFontaine, 2007; Lochner, 2007; Lochner &Moretti, 2004). For many students, graduating from high school marks the beginning of their adult lives. However, in the United States and in Georgia, not all students have the opportunity. Students fail to realize the goal due to the fact that they may not fully understand the value of graduating from high school and the impact that graduation rates have on the political, economic, and social lives of Americans (Alliance for Excellent Education, 2007; Gouskova & Stafford, 2005).

According to Bradshaw et al. (2008), youth who drop out of school have a difficult time securing and maintaining jobs and earn less than high school graduates. The employment rate for high school graduates in the United States is 71%, while the employment rate for high school dropouts is 50% (Bradshaw et al.). Heckman and LaFontaine (2007) reported that the graduation rate in the United States is estimated to be anywhere from 66% to 88%. Other research estimates one third to one half of minorities fail to earn a high school diploma and that 50% of dropouts are produced by 15% of all

high schools in the nation (Neild, Balfancz, & Herzog, 2007). Georgia's graduation rate in 2007-2008 was 75.4% (Georgia Department of Education, 2008). Georgia calculates high school graduation rates utilizing the Leaver Rate, which counts students as graduates only if they receive a regular education diploma (Governor's Office of Student Achievement, 2008). The remaining 26.6% of students in Georgia who failed to graduate high school in 2010 experience negative outcomes as a result of their predicament. Students in the state of Georgia receive a regular education diploma if they satisfy all course work and pass the states graduation exit exams. The students who meet all course requirements but fail to pass the required state graduation exams are given a certificate of completion, which counts against the states' graduation rate. Students who receive special education diplomas also count against the state's graduation rate (Georgia Department of Education, 2008).

Federal, state, and local governments and society are attempting to do more to decrease the numbers of students dropping out of school. One of Georgia's initiatives to address the dropout rate is the graduation coach program. The graduation coach program is designed to impact the student dropout rate and increase student persistence. The graduation coach program was initiated in 2006 as an effort to reduce Georgia's dropout rate by providing a graduation coach in high schools to address at-risks students who meet criteria for being potential high school dropouts (Georgia Department of Education, 2008). The graduation coach program is Georgia's response to No Child Left Behind (2002), which requires schools to meet a second indicator, graduation rate, in order for schools to meet *Adequate Yearly Progress* (Patterson, Hale, & Stessman, 2007). Although the graduation coach program has been in existence for five academic school

years, little research has been conducted to examine the impact of Georgia's graduation coach program on Georgia's graduation rate.

The purpose of this study was to examine the association between Georgia's graduation coach program and Georgia's graduation rate over a seven year period of time (2003-2004, 2004-2005, 2005-2006, 2006-2007, 2007-2008, 2008-2009 and 2009-2010). Graduation rate data from 343 Georgia's public high schools that report graduation rates were examined. Data were analyzed to determine the association between Georgia's graduation coach initiative and Georgia's high schools' graduation rates for the academic school years of 2007 through 2010 when controlling for attendance, school locale, race and ethnicity, student achievement in science, and race and ethnicity percentages.

Problem Statement

For many students in the United States including Georgia, graduating high school is an accomplishment that has been difficult to achieve. For some students, graduation is a goal that they have given up on without knowing the devastating effects that dropping out of high school can have on their lives. Leaving school early can result in a person living their life in poverty, lacking skills needed for meaningful employment, and having higher incidents of criminal activity than people who graduate high school (Heckman & LaFontaine, 2007; Lochner, 2007; Lochner & Moretti 2004). The issue of high school dropout rates has become challenging for society as a whole. Federal, state, and local governments are aware of the debilitating effects that the dropout rate can have on the country. Governments have begun prioritizing school completion with federal legislation.

Educational research indicates that there are many reasons why students fail to persist and graduate high school (Alliance for Excellent Education, 2007; Gouskova & Stafford 2005). Some students drop out of school because they lack the necessary reading, math, science, and social studies skills required to pass mandated courses and state assessments. Others leave school early because they become young parents or become addicted to drugs or alcohol. Some students drop out of school due to the fact that they have attendance problems which impact their ability to receive credit for courses. Some leave school because they are unaware of the value of graduating high school, while other leave school because they do not have a sense of belonging, or a connection with faculty and staff members at their schools.

Although research has been conducted that examined the reasons why students fail to persist (Bradshaw et al., 2008; Duquette, Stodel, Fullarton, & Hagglund, 2006), there is little information on programs that increase the chances of at-risk students successfully persisting in high school (Alliance for Excellent Education, 2007; Heckman & LaFontaine, 2007). Additional research is needed that examines the impact of programs and initiatives that are in place in the United States and in Georgia that address the issue of the high student dropout rate. Identifying programs and initiatives that work to assist at-risk students in graduating will provide federal, state, and local school officials with insight as to how to better service at-risk students in their schools who have challenges completing course work, passing state assessments, attending school, and/or meeting other requirements that will lead to students successfully graduating high school.

One such initiative is the graduation coach program that was instituted in many schools throughout Georgia in 2006. While it appears to be a viable means to address

Georgia's high dropout rate for the at-risk population, research is limited in this area. At the time of this study, no research existed that indicated the effect that the graduation coach program has had on improving the graduation rate in Georgia when controlling for other variables. The purpose of this study was to examine the association between Georgia's graduation coach program and Georgia's graduation rate over a period of time to determine the impact of Georgia's graduation coach initiative on Georgia's schools' graduation rates. The researcher controlled for variables such as attendance, school locale, race and ethnicity, student achievement in science, and race and ethnicity percentages to determine if changes in the variables correlated with changes in graduation rates of schools in the study.

Research Questions

The Georgia Department of Education initiated the graduation coach program in an effort to increase the high school graduation rate in the state of Georgia; however, at the time of this study, little is known regarding the impact of this program. The overarching research question of this study was: What is the association between the graduation coach program and Georgia's graduation rate?

The sub-questions guiding the study were:

1. Do graduation rates differ prior to and post induction of the graduation coach program when variables such as school locale, average daily attendance, free and reduced lunch percentages, race and ethnicity percentages, and science pass rate are controlled?

2. Does the association between graduation rates and the graduation coach program vary between city, rural, suburban, town, metropolitan Atlanta

schools and schools outside of metropolitan Atlanta when variables such as, average daily attendance, free and reduced lunch percentages, race and ethnicity percentages, and science pass rate are controlled?

3. Do graduation rates differ prior to and post the induction of the graduation coach program Atlanta Public Schools, DeKalb County Schools and Clayton County Schools in the state of Georgia when variables such as average daily attendance, free and reduced lunch percentages, race and ethnicity percentages, and science pass rate are controlled.

Significance of Study

National, state, and local graduation rates have been topics of concern for the government, school officials, and society as a whole. Many students in the country and in the state of Georgia are not successfully matriculating through high school in the traditional four-year period. Some fail to ever realize the goal of successfully completing requirements to receive a high school diploma. As a result, the students' likelihood of committing crime, becoming incarcerated, living in poverty, and lacking skills for sustained employment increases (Lochner & Moretti, 2004). In response to Georgia's low graduation rate and the federal government's expectation of a 100% graduation rate by 2014, the state of Georgia began the graduation coach program in an effort to decrease the dropout rate. Georgia high schools have graduation coaches who support at-risk students who have risk factors that may lead to them dropping out of school. The risk factors include academic problems, issues passing standardized state assessments, alcohol and drug abuse, discipline, and attendance problems.

Through this study the researcher sought to determine if there was an association between Georgia's graduation rates and the graduation coach program. It was important to discuss the topic because, in times of economic crisis and budget concerns, it is necessary for decision makers to know what programs are successful in improving student graduation rates. The study was unique because, at the time of this study, little research existed that examined the association of the graduation coach program to Georgia graduation rates when controlling for variables that might have impacted the graduation rates.

Results of the study provided information to help school administrators make informed decisions regarding the duties and responsibilities of graduation coaches and their effectiveness at improving the graduation rate for their school. Further, study results provided insight for future economic decisions regarding funding for the graduation coach program in an effort to increase Georgia's graduation rates. Graduation coaches might benefit from this study because results provided information about the need for the coaches to continue serving at-risk students who have factors that contribute to the at-risk population dropping out of school. School administrators benefitted because they will be able to use the information to make informed decisions regarding full time equivalency (FTE) points for graduation coach positions.

The research holds significance for society as it sheds light on the a whole as the fiscal responsible use of public funds at a time when many systems are facing budget cuts and many education programs not directly related to instruction are being eliminated. Benton (2010) contended that schools struggle to keep graduation coaches. For example, the Dade county school system cut some of their coaching positions. Benton (2010)

reported that a change in how graduation coaches are funded is the reason for many of the cuts in the position. Moreover, 170 of 840 graduation coach jobs have been cut in the state of Georgia as a result of the state reducing school budgets. School districts in northwest Georgia are struggling to keep their graduation coaches because of the value graduation coaches bring to their systems (Benton, 2010).

Procedures

Data were collected on graduation rates of 343 Georgia public high schools from the years 2004-2006 and 2007-2010. The Statistical Package for Social Science (SPSS) software was used to perform a multiple independent *t*-tests on graduation rates before and after the inception of the graduation coach program to determine if there was difference between graduation rates prior to and post the induction of the graduation coach program. Multiple independent *t*-tests were also computed to determine if significant differences existed after implementation of the graduation coach program for the variables (a) average daily attendance, (b) free and reduced lunch percentages, (c) race and ethnicity percentages, (d) school locale, and (e) student achievement data in the science area. In addition, an ANCOVA analysis was ran to determine whether or not graduation rates were statistically significantly different when controlling for average daily attendance, free and reduced lunch percentages and race and ethnicity. Data were obtained by accessing Georgia's Department of Education public database that maintains education data for schools in Georgia and the National Center for Education Statistics that maintains educational data for schools and school systems in the United States and the state of Georgia.

Limitations, Delimitations, and Assumptions

The following limitation was identified for the study. As data were quantitative in nature, details about the individual school experiences regarding the impact of the graduation coach program were not included.

Delimitations were identified for the study. Communication was conducted via email with an analyst of technology management for the Georgia Department of Education to obtain instructions on retrieving electronic files of Georgia graduation rates by individual school for the years 2004 through 2010. Data collected were from public high schools in the state of Georgia. Data were collected based on the graduation coach program established in the State of Georgia.

The following assumption was made for the study. Data obtained from the state of Georgia and the National Center for Educational Statistics were accurate due to the fact the information is on a public government site.

Definition of Terms

Following are definitions of terms specific to the study.

Adequate Yearly Progress (AYP). A term introduced by the No Child Left Behind Act (2002) that refers to **a** measurement used to determine how schools, school systems and state educational systems perform on standardized tests and secondary indicators such as attendance and graduation rates.

At-risk student. An at-risk student is a student who meets criteria for having risk factors that may contribute to them dropping out of school early. Identified risk factors include poor attendance, parent factors, drug or alcohol problems, trouble passing the

high school graduation test, lack motivation, and academic troubles (Georgia Department of Education, 2008).

City. As defined by the National Center for Educational Statistics (2010), a city is a large territory inside an urban area with a population of more than 250,000.

Career academies. Kemple and Wilner (2008) described career academies as organized small learning communities utilized by high schools to improve student academic achievement. The career academy model combines academic and technical curricula around career themes that provide work-based learning opportunities for students.

End of course tests (EOCT). In Georgia high schools EOCTs are tests given to students upon completion of courses in Math I, Math II, Algebra, Geometry, ninth-grade literature, American Literature, Physical Science, Biology, American History, and Economics (Georgia Department of Education, 2008).

Georgia High School Graduation Tests (GHSGT). In response to the No Child Left Behind Act (2001), Georgia developed standardized tests in math, language arts, science, social studies and writing that students must pass in order to receive a high school diploma (Georgia Department of Education, 2008).

Graduation coach. A graduation coach is a person hired to work with schools and students to reduce incidents of students dropping out prior to completing high school (Georgia Department of Education, 2008).

Graduation coach program. –The graduation coach program was designed and implemented in Georgia high schools to increase the graduation rate in the State of Georgia (Georgia Department of Education, 2008).

High school dropout. A person who fails to complete all years of high school, course work, and tests required to receive a high school diploma is determined to be a high school dropout (Georgia Department of Education, 2008).

Leaver rate. The percent of students leaving high school with a regular diploma is known as the leaver rate (Governor's Office of Student Achievement, 2008).

Risk ratio. The risk ration is used by graduation coaches to determine the level of intervention needed by graduation coaches for students on their caseload (Georgia Department of Education, 2008).

Rural. A rural area is a territory more than 25 miles away from an urbanized area and more than 10 miles away from an urban cluster (National Center for Educational Statistics, 2010).

Suburb. According to the National Center for Educational Statistics (2010), a suburb is a territory outside of a major city with a population of more than 250,000.

Town. A town is defined as a remote territory inside of an urban cluster that is more than 35 miles from a remote area (National Center for Educational Statistics, 2010).

CHAPTER II

REVIEW OF LITERATURE

Introduction

For many people, graduating from high school marks the beginning of their adult lives. In the United States and in Georgia, not all people have the opportunity to graduate from high school. Many people do not reach this goal for a number of reasons. Some fail to realize this goal because they may not fully understand the value of graduating high school and the impact that graduation rates have on the political, economic, and social lives of Americans. This literature review examines the social, political, and economic impact of high school completion. Also presented is a review of current literature related to the high school completion rates in the United States and Georgia, literature on student engagement, student persistence, dropout prevention, and the economic and social impact of students failing to earn a high school diploma.

High School Completion Rate

Heckman and LaFontaine (2007) reported that the graduation rate in the United States is estimated to be between 66% and 88%. According to the National Center for Education Statistic in 2008 the graduation rate for the nation was 74.9% with graduation rates ranging from 51.3% for the state of Nevada to 89.6% for the state of Wisconsin (National Center for Education Statistics, 2010). Graduation rates by ethnicity group were reported (a) 91.4% for Asian Pacific/Island students had a completion rate, (b) 81% for White students, (c) 64.2% for American Indian students, (d) 63.5% for Latino students, and (d) 61.5% for Black students. The National Center for Education Statistics

calculates graduation rates by reviewing Average Freshman Graduation Rate (AFGR). In 2008, 613,379 students dropped out of school in the 49 reporting states. Louisiana had the highest dropout rate which was 7.5%. In states that reported dropout rates by gender, the male dropout rate was higher in every state. According to Neild, Balfancz, and Herzog (2007) the states' dropout rates for minorities ranged from 50% to 80%. The wide range of state reported minority dropout rates was believed to occur because state governments calculate graduation rates and school completion differently (Neild et al., 2007).

Furthermore, Neild et al. (2007) reported that an estimated one third to one half of minorities do not earn a high school diploma. Heckman and LaFontaine (2007) did not include individuals who attained a General Equivalency Diploma (GED) as being high school graduates. A GED is not equivalent to a high school diploma because many GED recipients have the economic and social outcomes of people who drop out of high school. The researchers found that GED recipients lacked perseverance based on military attrition rates that were similar to other dropouts, and exit post secondary schooling at the same rate as dropouts without the GED credential. In 2008 493,000 Americans and 19,738 Georgia students earned a GED (General Educational Testing Service, 2009) Georgia's graduation rate in 2005-2006 was 70.8%, 2006-2007, 72.3% 2007-2008, 75.4% (Georgia Department of Education, 2008). The National Center for Education Statistics (2010) reported that in 2008 Georgia's average graduation rate was 65.4% with Hispanic students having the lowest rate at 55.4%. During the 2007-2008 school year, Georgia had 20,135 dropouts.

The Graduation Coach Program

The inception of No Child Left Behind caused many states and school districts to monitor their graduation rate as a result of a component of No Child Left Behind requires schools to make Adequate Yearly Progress (AYP) in the area of graduation rate (Department of Education, 2008; No Child Left Behind Act, 2001; Patterson, Hale, & Stessman, 2007).

Schools systems throughout the nation have begun programs designed to address the issue of students graduating. One such program is the graduation coach program. Graduation coach programs are delivered in various forms throughout the nation. Some programs are designed by school agencies, while others are by government agencies involving various stakeholders in society. The following sections provide specific information about graduation coach programs in Georgia, Alabama, South Carolina, and Michigan.

Georgia's Graduation Coach Program

Georgia school leaders responded by putting a graduation coach program in place to assist schools and the state in reaching the goal of 100% graduation rate by the year 2014 (Georgia Department of Education, 2008). In 2006, the Georgia Department of Education initiated the graduation coach program to identify and provide support services to students who are at-risk of dropping out of school (Georgia Department of Education, 2008). The program began in the fall of 2006 with the placement of graduation coaches in Georgia high Schools. During the 2007-2008 school year, graduation coaches were placed in middle school in the state of Georgia and high schools with graduation rates less than 95% (Georgia Department of Education, 2008). At-risk students are students

who have a history of course failure and grade retention. In addition, students who had low achievement on Georgia Criterion Reference Competency Tests given to students in first through eighth grades, students who failed the Georgia High School Graduation Tests and the End of Course Tests, special education students, students with attendance problems, students with behavior problems and a history of suspensions, disengaged students from school who have low expectations, lack of extracurricular involvement, economically disadvantaged, non native speakers of English and pregnant students are also considered to be at-risk (Georgia Department of Education, 2008). Wehlage, Rutter, Smith, Lesko, and Fernandez (1989) found that students who are at-risk of dropping out of school are not necessarily those who struggle academically, but those with socio-cultural characteristics like delinquency, truancy, drug abuse, family problems. The researchers support programs such as the Graduation coach program that intervenes and assists in retaining students (Wehlage et. al).

The Graduation Coach

The graduation coach's main responsibility is to ensure that at-risk students receive the support and resources to achieve academically and graduate from high school. In Georgia, graduation coaches use the Graduation Coach Work Management System to manage and make data-based decisions from their local schools regarding who to serve (Georgia Department of Education, 2008). Graduation coaches receive ongoing training from Georgia's Department of Education School Improvement Secondary Redesign and Graduation Unit, a unit that works to increase the graduation rates in the state of Georgia through the use of graduation coaches, teachers as advisors, and school counselors who utilize research based practices (Georgia Department of Education, 2009). In addition,

Communities in Schools (CIS) in the state of Georgia is a dropout prevention organization that partners with local school districts to provide service to more than 163,000 students in Georgia (Communities In Schools, 2009). CIS provide students who are at risk of dropping out with mentoring, education assistance, tutorials, social services, after-school support, youth leadership, and parent education (Georgia Department of Education, 2008). The professional learning includes small group sessions, one-on-one sessions, and technical support, Much of the emphasis of the training is placed on "the coordination of efforts among graduation coaches, counselors, school administrators, school personnel, and community stakeholders to provide effective intervention services to at-risk students" (Georgia Department of Education, 2008 p. 5). At graduation coaches' training, coaches share ideas and strategies that work best at their local schools in helping students who are at risk of dropping out. Coaches attend presentations and engage in hands-on activities that will help them assist students on their caseload. Graduation coaches are also given support on an as needed basis to assist them with specific learning needs. Focus groups are conducted for graduation coaches to get answers to frequently asked questions related to concerns of graduation coaches and to plan for future training sessions (Georgia Department of Education, 2008).

At the time of the study there were more than 800 graduation coaches serving Georgia's middle and high schools. There were 398 graduation coaches in Georgia high schools and 424 in Georgia middle schools (Georgia Department of Education, 2008). All Georgia graduation coaches are required to hold a Professional Standards Commission issued credential, hold a bachelor's degree, and have at least three years of experience working with students. In addition, graduation coaches attend regional

trainings to share ideas and strategies with a Regional Educational Service Agency (RESA) that provides professional development and support to schools throughout the state of Georgia (Georgia Department of Education, 2008).

Graduation coaches utilize a risk ratio to measure the degree to which a student may be at risk of not graduating. The ratio considers academic risk factors such as attendance, test results, retention, special education status, behavioral problems, levels of disengagement, English to Speakers of other Languages (ESOL) status, history of school failure and retention, low scores on standardized assessment, and pregnancy (Georgia Department of Education, 2008). The ratio is useful for graduation coaches to prioritize assistance needed for at-risk students. The risk ratio ranges from 0 to 1. Zero indicates that there is no risk; one indicates that a student is presenting a risk on all factors that are being considered. Students scoring a risk ratio close to one would need intensive support that might involve frequent interactions between the student and the graduation coach (Georgia Department of Education, 2008).

Every graduation coach has a caseload which identifies the students who are at-risk of dropping out of school and need to receive support services (Georgia Department of Education, 2008). Students are only on a graduation coach's caseload when they have a need that requires them to receive intervention. For example, if students have a family crisis that makes them eligible for the graduation coach's caseload due to the fact that they meet one of the at-risk criteria, the identified students would remain on the caseload until the crisis was resolved.

During the 2007-2008 school year, graduation coaches delivered more than 282,400 interventions for at-risk students in Georgia and documented more than 11

million contact hours with students on their caseloads (Georgia Department of Education, 2008). Graduation coach interventions included mentoring, tutoring, life skills programming, credit recovery, parental involvement, anger management, college planning, school-to-work programming, guest speakers, graduation test planning, and teen parent programs (Georgia Department of Education, 2008). From example, a graduation coach from Atlanta Public Schools contended that she had to convince a student on her caseload of the need to attend Plato Credit Recovery. The graduation coach contended that the student had family issues that interfered with him being successful in school. As a result of the graduation coach's interaction and communication with his parent, the student attended credit recover three times per week and was on track to graduate (Georgia Department of Education, 2008). Furthermore, another graduation coach reported that the number of seniors who were not on track to graduate as a result of the Georgia High School Graduation Tests had decreased from 80 in fall of 2007 to 16 by the spring of 2008. The decrease was believed to be as a result of intensified tutorial efforts, utilization of technology software, Saturday-crunch sessions, and peer tutoring that was set up by the graduation coach at one of the high schools (Georgia Department of Education, 2008). In another county at a combination middle school and high school in Georgia the graduation coach's efforts were part of an intervention process that resulted in the school achieving a 100% pass rate. A specific instance cited was the intervention provided to a female student who gave birth to a 2.5 pound baby and frequently had seizures. The student had severe attendance problems that jeopardized her graduating. Before the graduation coach intervened the student did not complete make-up work or would turn in excuses. The graduation coach began to

make the student stay after school to complete missed assignments in order to pass two classes needed for graduation. The graduation coach took the student home after school. At the end of the year the student did not march with the class but completed all course work during post planning. The student was the first to receive a high school diploma in her family.

Graduation coaches in the state of Georgia served more than 100,000 at risk students in 2008 providing them with services that supported the personal and academic growth of students. Graduation coaches are issued a certificate from Georgia Professional Standards Commission, must hold a bachelor's degree from an accredited institution, and have three years of experience working with students (Georgia Department of Education, 2008). The job responsibility of a graduation coach is closely related to student engagement, which is strongly correlated with high school completion (Appleton, Christenson, & Furlong, 2008). Graduation coaches serve as a *go-to* person for students at risk of dropping out of school. Graduation coaches attempt to resolve student engagement related concerns of at-risk students by addressing cognitive, behavioral, and affective aspects of student engagement (Georgia Department of Education, 2008). In addition the interaction with a graduation coach may affect a school's graduation rate.

According to the 2008 report on the graduation coach program, a total of 13,723 students on graduation coaches' caseloads were identified as at-risk because of attendance problems in 2006 were no longer identified as at risk by the end of the 2007-2008 school year. However, 20, 161 students were still on graduation coaches' caseloads in the state of Georgia due to fact that the attendance problems were prevalent. The same

report stated that 14,080 additional caseload students became at-risk due to attendance problems during the academic years 2006 through2008. Students were considered to have attendance issues if they attended classes less than 92% of the time that they were enrolled in school (Georgia Department of Education, 2008).

Of the 50, 048 students being served by graduation coaches at the end of the 2007-2008 school year, 185 who were at risk due to credit deficiencies were not at risk by the end of the that school year. Further, during the 2007-2008 school year, 13,897 students who were at risk due to credit deficiencies were still at risk at the end of the school year. Another 35,552 students who were not identified as at risk due to credit deficiencies in the previous year 2006-2007 were at risk at the end of the 2007-2008 school year. During the 2007-2008 school year, 13,156 students served by graduation coaches graduated high school in the state of Georgia. Like Georgia, Alabama's graduation coach program began in 2006.

Alabama Graduation Coach Program

The state of Alabama also initiated a graduation coach program in place in an effort to increase the state's graduation rate (Young, 2008). Similar to Georgia, Alabama has a graduation coach program in place to assist at risk students in their schools. Graduation coaches in Alabama, serving as mentors for many of the students working to establish relationships with those at risk of dropping out of school (Young, 2008). Graduation coaches in Alabama look at proximity to graduation, graduation exams those students on their caseload need to pass, incidents of retention, and other risk factors (Young, 2008). Alabama's graduation rate was 62.5% in 2007 (Education Week, 2010).

South Carolina' graduation coach program has been put in place to improve the state's graduation rate (Education Week, 2010).

South Carolina Graduation Coach Program

A school district in South Carolina, Oconee County, utilized stimulus money to fund graduation coaches at the high school level (Education Week, 2010). In 2009, West Oak high school had the lowest graduation rate in Oconee County South Carolina which was 71.5%. Oak Wood's graduation coach has been charged with helping the school improve its graduation rate. The graduation coach's caseload included 76 of the 246 seniors. Similar to Georgia, students were targeted as being at risk due to attendance problems, class or grade retention and failure to pass state exit exams (Education Week, 2010). Although it is too early to predict the success of the graduation coach program in South Carolina's Oak Wood High School, school leaders and the community are optimistic about the future of the graduation coach program in their district (Education Week, 2010). Michigan's graduation coach program showed mixed results when considering the impact of the program on student achievement.

Michigan's Graduation Coach Program

Lacefield, Zeller, and Van Kannel-Ray (2010) conducted a study to demonstrate the effectiveness of graduation coaching for at-risk student in a high school in Southwest Michigan. The researchers sampled two cohorts of students, one cohort with 344 sophomores in their first semester and a second cohort with 293 students in their first semester. Coaches and teachers chose 112 students from the first cohort and 70 students from the second cohort to receive graduation coaching. Students in each of the cohorts were classified as being at risk of falling if their GPA trajectories demonstrated an

accelerated decline in middle school. Students were classified as *at-risk rising* if their trajectory showed decline but began moving up toward a 2.0 GPA or above during their eighth grade year, and they were considered *at- risk failing* if their trajectory showed consistent failure in almost all courses during their sixth, seventh, and eighth grade years in middle school. Based on their classified student type students were classified as being *uncoached, coached a little,* or *coached a lot* (Lacefield et al., 2008). Findings showed no association as a result of interactions with graduation coaches as measured by student GPAs for students indentified as *at-risk falling* or at-risk of failing and the trajectory for students classified as *uncoached* or *coached* were almost identical (Lacefield et al., 2008). However, the students who were at-risk rising and coached a little showed statistical association as a result of interactions with the graduation coach. Result showed that the at-risk rising group overcame or did not show a hard transition from middle school to high school. The graduation coach program requires much interaction between coaches and students on their caseloads. The engagement between adults and students may prove to be beneficial at reducing instances of student dropping out of school.

Student Engagement

Another major aspect associated with high school dropouts is student engagement and disengagement which has been linked to school completions (Appleton et al., 2008; Archambault, Janosz, Morizot & Pagni, 2009; Neild, Balfanz, & Herzog, 2007; Georgia Department of Education, 2009). Graduation coaches provide personal attention and encouragement to students on their caseloads as well as other at-risk students in the school (Georgia Department of Education). Graduation coaches have frequent interactions with their students in the hallways, at the bus stop, in the cafeteria, and at

school events. Students and graduation coaches reported that personal attention and encouragement that coaches give is one of the most effective interventions.

Appleton et al., (2008) contended that student engagement is relevant for predicting and preventing school dropout and facilitating positive outcomes for students. The researchers contended that student engagement is multidimensional in the sense that there are several types of student engagement. Credits earned, time on task, and homework completion were considered to represent academic engagement. Variables such as attendance, suspension, classroom participation, and participation in extracurricular activities were considered behavioral engagement. Cognitive engagement consisted of understanding the relevance between school and future work, the value of learning, and personal goals, while psychological engagement consisted of the feeling of belonging and the relationships that exist between teachers and peers. According to Appleton et al. (2008), student engagement provides a means for educators to intervene at the early sign of student disconnection. Students likely to be disengaged in school were male, students from ethnic groups other than White or Asian, students from low socioeconomic status, and students in special education classes (Appleton et al., 2008).

Sinclair, Christonson, and Thurlow (2005) examined the impact that the *Check and Connect* model of student engagement had on school completion at a high risk school that had less than 50% graduation rate. The Check and Connect model involves routine monitoring of indicators of engagement, such as absenteeism, suspension, and credit accumulation. In addition, the model allows the researcher to examine relationship building, timely interventions, problem solving, and other components that related to student engagement. The study included 144 ninth- grade students who were assigned to

a treatment group, and monitored weekly by Check and Connect staff members who intervened and monitored student skips, behavioral referrals, truancy, credit accumulation, or who were assigned to a control group of at-risk students who were not given the support that the treatment group was given. The results demonstrated that students in the treatment group had a lower dropout rate than those in the control group.

Moreover, Finn (2006) conducted a study for the National Center for Education Statistics to examine the adult lives of at-risk students and their roles of attainment and engagement in high school. Study results revealed that high school dropouts were the least engaged when compared to high school graduates. Finn also found that the level of student engagement was linked to postsecondary programs, number of credits students earn, and their likelihood of finishing program of study. Finn found that disengagement of students in high school was strongly related to poor postsecondary options. Finn examined engagement components such as attendance, behavior, and extracurricular activities.

Archambault et al. (2009) found that students who reported low engagement in school during the early years of secondary school presented a higher risk of dropping out of high school. The researchers examined the relationship between behavioral, cognitive, and affective engagement of students in high school to determine the relationship between student engagement ratings and dropout rate. A convenience sampling method was used for the study. The study involved 13,330 participants between the ages of 12 and 16 who attended secondary school in Quebec, Canada (Archambault et al., 2009). The findings suggested that more attention should be given to students in the early years to address their behavioral, cognitive and affective engagement in school in an effort to

prevent them from dropping out later in their academic careers (Archambault et al., 2009). The study emphasized that social and emotional needs of students were directly related to the dropout rate. The researchers contended that connectedness to school through individuals promoted student success. The graduation coach program has strong links to student engagement and connectedness to individuals through the work that graduation coaches perform.

Duesbery and Werblow (2009) examined whether smaller school size was associated with increased growth in math achievement and reduced high school dropout rate. From 2002 until 2004, the longitudinal study followed a sampling of 16,081 tenth-grade students in a cohort of 752 schools. Participants were monitored during the sophomore and senior years of high school. The researchers used the stratified sampling method during the study. Utilizing data from the National Center for Educational Statistics (NCES), the researchers collected information on school enrollment, geographic data, and school type. The NCES randomly selected 26 tenth-grade students from each of the high schools. Student cognitive ratings in mathematics during the10th and 12th grades were measured. The mathematics item pool consisted of 85 questions combined from 10th and 12th grade years. In addition, student enrollment status over the course of the study was monitored.

The study findings indicated that students in smaller schools were less likely to drop out than those in larger schools. Small schools were those with less than 674 students. Large schools were those with more than 2,692 students. Furthermore, students in small schools and large schools had the largest gain in math achievement. Those in intermediate schools, schools with more than 674 students but less than 2,692

students, demonstrated smaller gains in mathematics achievement. The study implications suggested that smaller schools be created to reduce high school dropout rates. Student engagement and the personalization that small schools provide may contribute to increases in graduation rate (Duesbery & Werblow, 2009)

Furthermore, Neild et al. (2007) contended that preventing student disengagement in middle school can help reduce incidents of dropouts during high school. The research was an extension of a longitudinal study in Philadelphia in which 14,000 students were followed 1996 until 2004 to determine the students dropout status based on sixth-grade indicators. Predictor variables for students at risk of dropping out by looking at academic performance of students in fifth and sixth grades, in school and out of school suspensions, students with an attendance rate of less than 80%, special education status, English as a Second Language status, grade, and age status of students (Neild et al., 2007). Warning flags for students at-risk of dropping out identified by the researchers included attending school less than 80% of the time, failing math in the sixth grade, failing English in the sixth grade, being suspended in the sixth grade. The researchers asserted that the warning system developed from the study results could identify 60% of students who would not graduate high school. The researchers contended that school systems could use the information that identified behavioral forms of disengagement and course failure to reduce dropout rates, which are interventions of graduation coaches in the state of Georgia (Neild et al., 2007). Increasing student engagement opportunities is one strategy that can assist school systems in developing more effective dropout prevention programs.

Dropout Prevention

Indiana has drastically changed its graduation policies to reduce instances of students dropping out of school prior to graduation. Indiana's dropout prevention program, for example, has several components.

1. The compulsory school age increased to 18. Students, who drop out of school, risk losing their work permits and driving privileges.
2. Career planning requires students in the eighth grade to develop career plans with periodic reviews and counseling support for students who fall behind.
3. School flex enables at-risk 11th graders to attend class at least 3 hours per day and maintain employment.
4. Double–up allows students to take classes on college campuses up to an associate's degree. The college and the high school pay for the classes for students who have low incomes.
5. Fast track enables students who dropped out of high school to receive a high school diploma while being enrolled in an associate or certificate program at a state college or university. Students are required to pass the state's graduation exams, or equivalent (National Governors Association, 2006).

Indiana has seen a slight increase in their graduation rate since 2006 (Indiana Education Statistics, 2010). Indiana's graduation rate in 2006 was 76%, the 2007 graduation rate was 76%, the 2008 graduation rate was 78%, and the 2009 graduation rate was 82% (Indiana Education Statistics).

Tyler and Lofstrom (2009) described three reform efforts that contribute to reducing the dropout rate in the United States. The three reform efforts are Check and

Connect, Career Academies, and Talent Development High Schools. Check and Connect originally was a program for urban middle school students with behavior challenges. The program has been expanded to assist students without disabilities in urban and suburban communities. The Check and Connect program provides services for students, their family and school to assist the student in staying in school. Each Check and Connect student has a monitor who serves as the students' caseworker and mentor. The monitor reviews students' performance regularly and is trained to respond at the first sign that a student is struggling in any area. Check and Connect monitors provide individualized services to students even if they leave one school and go to another school (Tyler & Lofstrom, 2009).

One Check and Connect study showed that ninth-grade students enrolled in Check and Connect were less likely than the control group members to drop out of school by the end of the ninth grade, 9% compared to 32% (Tyler & Lofstrom, 2009). Tyler and Lofstrom (2009) Check and Connect study found that 39% of students in Check and Connect treatment group had dropped out compared to 58% of students in the control group.

Tyler and Lofstrom (2009) contended that career academies were effective in lowering the dropout rate. The researchers identified three reasons for the success of career academies at reducing incidents of high school dropouts. Students in career academies take classes in smaller more personalized learning environments with the same teachers during the course of three or four years. Students take both academic and vocational course work. Partnerships that assist in giving students work based learning

opportunities are developed between the school and the local community (Kemple & Willner, 2008; Tyler & Lofstrom, 2009).

An experimental study (Kemple, 2008) evaluated 1700 students and found that career academies reduced the baseline dropout rate of 32% among high risk youth by 11%. Kemple and Willner (2008) found that 40% of students who were high risk in career academies had sufficient credits to graduate compared to 26% of high risk students who were not in career academies (Kemple & Willner, 2008).

The high school reform model Talent Development High Schools (TDHS) is a model for large urban high schools that have problems with student behavior, attendance, academic performance, and dropout rates (Tyler &Lofstrom, 2009). The reform model was initiated by John Hopkins University and called on schools to reorganize into small learning communities with a focus on math and English courses as well as increasing community and parental involvement. A school in Philadelphia found that 68% of the students in TDHS schools were promoted to the 10th grade compared with 60% of the comparison group (Tyler & Lofstrom, 2009).

The National Dropout Prevention Center/Network (2010) identified interventions to reduce instances of students dropping out of school. The interventions included school community collaboration, family engagement, mentoring, tutoring, individualized instruction, after school opportunities, and professional development opportunities for adults. Graduation coaches in the state of Georgia utilize the community that consists of parents, teachers, administrators, support personnel, and community partners to gather information about students on their caseloads and to identify students who may need to be referred to a graduation coach. Graduation coaches reported communicating with

family members of students on their caseloads by telephone, small group meetings, and home visits (Georgia Department of Education, 2009).

Tutoring and mentoring were other preferred interventions identified by the National Dropout Prevention Center. Tutoring and helping students arrange for tutoring is major duty of the graduation coach. Many students on graduation coaches' caseloads have not passed required exit exams such as the Georgia High School Graduation Tests and experience difficulties in current classes. Graduation coaches work to arrange tutoring to support students who have risk factors (Georgia Department of Education, 2009). Graduation coaches provide students with the opportunity to receive mentoring from adult role models inside and outside of the school building. Mentors from outside of the school include individuals who have similar interest as students who are on graduation coaches' caseloads. Mentors may include individuals from the community who have been successful in careers such as business, law enforcement, and entertainment as well as individuals such as administrators, teachers, and other staff members within the school building (Georgia Department of Education, 2008). In 2009 mentoring represented 20% of the interventions provided by graduation coaches (Georgia Department of Education, 2008).

After-school opportunities are provided to students on graduation coaches' caseloads in the area of credit recovery and individualized instruction. In 2009, 17.89% of students on graduation coaches' caseloads had credit deficiency. Credit recovery enables students to reclaim credits when they have failed a course before. In some instances credit recovery allows students to make up missing assignments and unfinished work without having to complete the entire course. These opportunities are

individualized to meet the need of particular students. Sometimes credit recovery is part of an after-school or Saturday-school program, while in some cases credit recovery takes place during the regular school day. Graduation coaches work with counselors, teachers, and students to make credit recovery arrangements (Georgia Department of Education, 2009). Graduation coaches also provide individualized instruction relating to students' current courses.

Individualized instruction is provided to students on graduation coaches' caseloads in the form of tutorials either after-school or before school. Such tutorials are provided for specific subjects or for test preparation purposes (Georgia Department of Education, 2009). In 2008, 21,481 interventions were documented in the area of tutoring. In addition, 24, 704 interventions were documented in the area of basic skills (Georgia Department of Education, 2008)

The National Dropout Prevention Center (2010) indicated that the professional development of adults contributes to the reduction in the instances of students dropping out of school. The National Dropout Prevention Center provides resources and support to individuals, agencies, and organizations about ways to help students remain in school until graduation. Graduation coaches receive extensive professional development in one-on-one sessions, small group sessions, and large group sessions. In 2008, 500 graduation coaches attended training provided by the National Dropout Prevention Center. Graduation coaches attend regional training to network, share ideas, and problem solve as a cohort. Graduation coaches also receive support from Georgia Department of Education and Communities and Schools through school visits, telephone calls, and the sharing of resources (Georgia Department of Education, 2008). Many interventions to

help students persist in school rather than dropping out have been employed by graduation coaches around the state of Georgia.

Student Persistence

Research has been conducted to determine why students choose to drop out of school or persist and graduate (Bradshaw, O'Brennan, & McNeely, 2008; Tinto, 1975). Tinto (1975), examined why postsecondary students drop out of college or persist. Tinto suggested that three variables contribute to students dropping out of college. The variables are (a) background characteristics, such as personal commitments, family situations and personal attributes; (b) academic integration such as grade performance and intellectual ability; and (c) level of social integration with peer groups, extracurricular activities, and interaction with teachers. Bradshaw et al. (2008) stated that family situations can impact a person's decision to persist or leave school early. Tinto (1997) began to focus on student persistence, which is continuous enrollment in college until graduating. Tinto suggested that students receive academic support through tutoring and more social support from college institutions in order to achieve persistence and graduate.

Duquette et al. (2006) conducted a study to determine why students with fetal alcohol spectrum disorder persisted in high school. Participants in this study consisted of eight adolescents and their parents who resided in Canada or the United States. Data were collected using questionnaires and interviews to determine how students felt about their educational experience. Respondents' answers were chunked and categorized to fit into Tinto's (1975) Student Integration Model. Results showed that students perceived themselves to be academically and socially successful. The students' persistence was the

result of the strong support by their adoptive parents. Duquette et al. (2006) concluded that parental advocacy was an environmental factor that influenced students with Fetal Alcohol Spectrum Disorder to persist in high school. The study suggested that parental support and involvement might contribute to high school persistence.

Schools can redirect students who show signs of dropping out early in the students' educational experience (Neild et al., 2007). Neild et al. contended that students who drop out of high school send strong distress signals early in their academic careers. Schools and systems can develop interventions to keep potential dropouts on track for graduation. Policy makers and educators face the challenges of (a) discerning the signals emitted by students who have the potential of dropping out, (b) developing practices and structures within the school to help educators identify the students who are sending signals, and (c) determining the help that students need based on the signals that they emit and the results of previous interventions.

The Neild et al. (2007) study examined data from a school district in Philadelphia to determine indicators for students at risk of dropping out in an effort to provide districts with support to reduce the number of students who drop out of school. The study followed a cohort of 14,000 sixth graders to determine their dropout status six years later. Data included test scores, behavior marks, report card grades, attendance records, special education status, and student demographics. The researchers reported that sixth-grade students who had a final grade in math of *F*, a final grade in English of *F*, attendance below 80% for the year, or an unsatisfactory mark for behavior in one class had at least a 75% chance of dropping out of high school.

Students who showed more than one signal of dropping out, such as a final grade of *F* in math or attendance below 80%, had an even greater chance of dropping out of high school (Neild et al., 2007). The signals that had the greatest predictive power for student dropout in this study were student action or behavior in the classroom. More than half of the students who dropped out of school sent signals before they entered the ninth grade (Neild et al.).

The students who showed their first distress signal in the ninth grade had a 75% chance of dropping out of high school. Neild et al. (2007) found that 80% of the dropouts studied in Philadelphia sent signals of dropping out in middle grades or in the ninth grade. Neild et al. suggested that school systems intervene early in the middle school years addressing each signal. The research suggested that lower cost interventions provided by the school could provide would suffice in the middle school. Neild et al. (2007) suggested using a three-tiered model of intervention to address signals that appear in middle grades. The first tier consists of school-wide preventative measures that could reach 70% to 80% of the students, such as a school-wide attendance program to the track daily attendance. The second tier is aimed at 10% to 20% of the student body who require additional support, such as an attendance contract. The third tier is more intensive for 5% to10% of the student population who may need the intervention of a social worker (Neild et al, 2007). Moreover, the researchers suggested monitoring ninth-grade students by providing additional support in math and reading comprehension by utilizing age-appropriate materials that enable students to catch up if they are behind in reading. In addition, students should be afforded opportunities to experience short term

success by engaging in service learning projects, debate, and other performance experiences (Neild et at, 2007).

Paterson, Hale, and Stessman, (2007) found that contradictions between school culture, structure and instruction, and students' home culture contributed to the school's high dropout rate. The researchers sampled 68 participants, predominantly Latino, to determine why Prairie High School's dropout rate was 56%. Participants were asked to share their opinions and views as to why so many Prairie High School students left school and what could be implemented to ensure that more students graduate. Interviews were also conducted with administrators, teachers, counselors, attendance clerks, students at various academic levels, and dropouts. Purposive sampling strategies were used to select participants.

The following were some of the contributing factors to the high dropout rate at Prairie High School:

- Faculty and staff did not value diversity and did not expect the low income students to achieve.
- Faculty and staff believed that racial minorities were responsible for the high dropout rate.
- They stated that students who dropped out were not motivated and did not value education; teachers believed that Latino parents did not value education because of their lack of involvement.
- Many staff members believed that Latino parents encouraged their students to drop out of high school so that they can go to work to contribute to the household (Patterson et al., 2007).

Patterson et al. (2007) identified incongruous beliefs about teacher instructional practices and student needs. If students believed that the teachers were caring, they also believed that they were effective instructors. Caring teachers were those who asked students about their social and personal lives as well as their academic lives. Caring teachers were enthusiastic and utilized varied instructional methods. Some students reported teachers giving notes or lecturing, indicating that that practice was not preferred. Structural barriers and cultural contradictions included (a) teachers reporting a lack of time to do what they need to do in a class period, (b) having classes that are too small or too large, and (c) having inflexible graduation requirements that make it difficult for students to complete high school. Although teachers complained about not having enough time, students stated that teachers did not use the full 90 minutes of instruction time. Students believed that a 90-minute class was too long (Patterson et al., 2007).

Somers and Piliawsky (2004) evaluated a pilot program that provided academic tutoring and enrichment to ninth-grade students. The researchers found that role models and other adolescent motivators such as gaining knowledge, making money, and family influence were related to high school completion and drop out. Participants were administered 20-item questionnaire that examined educational intentions, educational commitment, social support of educational commitments, and attainment before the tutoring intervention and again after the tutoring intervention. The researchers found that grade point averages were higher for both the experimental and control groups when educational intentions and identification of personal value of education were high.

Somers and Piliawsky (2004) found a strong correlation between student's intentions to finish high school and behaviors related to executing the intentions such as

completing homework and studying. Furthermore, the dropout rate for students who completed the tutorial program was 7.7% while the dropout rate for students in the school was 13%, and the district's dropout rate was 15% for 10th graders. Somers and Piliawsky, 2004 further found that students' decision to stay in school was influenced by motivators such as gaining knowledge, making money, family influence, and parental authority. Participants in this study included 96 ninth graders from a mid-west city who were 99% African American and were from a low socioeconomic level.

Economic and Social Value of Completing School

Since the Elementary and Secondary Education Act of 2001, No Child Left Behind, many states have made attempts to improve their success rates (Patterson, Hale, & Stessman , 2007). According to Patterson et al. (2007), schools must demonstrate Adequate Yearly Progress (AYP) on state assessments, as well as a second indicator such as attendance, graduation rate or another academic content area. The relationship that exists between education, the economy, and social aspects of society is alarming, causing many states to look closer at its graduation rate (Lochner & Moretti, 2004). No Child Left Behind (2001) mandates that all schools have a graduation rate of 100% by 2014. Hence, many states are pressuring local schools and principals to improve graduation rates in their districts. In addition to meeting federal mandates, improving graduation rates has an economic value.

Economic Value

Accomplishing the goal of graduating high school brings benefits to students. According to Bradshaw et al. (2008), youth who drop out of school have a difficult time securing and maintaining jobs and earn less than high school graduates. The employment

rate for high school graduates was 71% in 2008, while the employment rate for high school dropouts was 50% (Bradshaw et, al., 2008). Gouskova and Stafford (2005) contended that households headed by high school graduates have 10 times more wealth than households headed by people who dropped out of high school. For example, for every $1,000 that a high school dropout earns in a given time, a high school graduate earned $10,000.

The United States would have over $74 billion additional accumulated wealth if all heads of household earned a high school diploma (Alliance for Excellent Education, 2007; State Legislatures, 2008). According to the Alliance for Excellent Education, there is a relationship between education and asset accumulation. In making that assertion, the Alliance did not include the value of a person's home as part of their asset accumulation because the value of a person's home fluctuates. Hoff (2007) contended that the United States would gain an additional $45 billion in increased tax revenue and reduced social costs if dropout rates were reduced by 50%. Furthermore, the United State Bureau of Labor Statistics (2008) contended that non high school completers earned $165 less per week than high school completers, $552 less than people with bachelor's degrees, and $1096 less than people with professional degrees (Bureau of Labor Statistics, 2008).

In Georgia, for example, there were 550,222 households headed by individuals who had dropped out of high school. The accumulated income for the group was $275,111,000 or $500 per household. For the same period, there were 929,718 households with individuals who earned a high school diploma. The household income for the group who had earned a diploma was $4,648,590,000, or $5,000 per household. According to the finding by the Alliance for Excellent Education (2007), Georgia would

potentially have $2,475,999,000 additional household wealth if all households were headed by high school graduates. Further, during the 2008-2009 school year 4500 more Georgia students graduated high school (Georgia Department of Education, 2009). Based on the United States Labor statistics in 2008, Georgia has the potential to gain more than 138 million dollars in taxable revenue per year (Georgia Department of Education, 2009). The United States would have $74,334,667,500 additional household wealth if all households in the United States were headed by high school graduates (The Alliance for Education, 2007). Furthermore, more than $310 billion would be added to the American economy by 2020 if minorities would graduate at the same rate as White students (State Legislatures, 2008). State Legislatures further reported that the United States lost $310 billion over the lifetime of the 1.2 million dropouts in 2008. Americans would save more than $17 billion in health care cost over the lifetime of every class of dropouts in the United States (State Legislatures, 2008).

Consequently, over the last 25 years, the wage differential between those who graduate high school and those who drop out of high school has increased the economic incentive to complete high school (Heckman & LaFontaine, 2007). The decline in graduation rates since 1970 has reduced college attendance and completion rates as well as the growth in the skill level of the workforce in the United States. Heckman and LaFontaine asserted that the need for skilled laborers is increasing concurrently with the high school dropout rate. In order for America to increase the skill level of the future workforce, it is essential for the United States to confront the growing dropout problem (Appleton et al., 2008; Heckman & Lafontaine, 2007). Heckman and Lafontaine contended that many of America's students who dropout are being raised with

disadvantaged backgrounds such as those with poverty level incomes, with a history of drug abuse or alcohol abuse, living in high crime areas, and from families where the parents did not complete high school. High school graduation rates are the reason for the slowdown in the growth of college attendance and completion, and the gender differences that exist in college are due to the fact that more males are high school dropouts (Bradshaw et al., 2008; Heckman & Lafontaine, 2007). Improving graduation rates for all students will have an impact on America's economy. Further, improving graduation rates will provide a positive social value.

Social Value of Graduating High School

Evidence suggests a relationship exists between educational attainment and the reduction in violent and property crimes (Appleton et al., 2008; Lochner, 2007; State Legislatures, 2008). The American economy would see a combination of savings and revenue of more than $7.7 billion in reduced crime spending and increased earnings each year if the male graduation rate increased by 5% (State Legislatures, 2008). As the education of individuals increases, the probability of criminal activity decreases (Lochner, 2007). Lochner analyzed the relationship between education and crime. Lochner asserted that youth who drop out of school are influenced by a negative set of peers, which may cause them to engage in criminal behavior.

Lochner (2007) provided reasons how schooling might impact crime. Lochner proposed that education may (a) alter preferences for risk-taking or patience, and (b) affect the social networks and peers of individuals. Education was also found to affect incarceration rates in that an extra year of schooling reduces the probability of prison by 1% for Whites and 4% for Blacks. The probability of incarceration for White males

without high school diplomas averaged 83% and for Black males without high school diplomas incarceration rate averaged 3.6%. The finding suggested that completion of 12th grade caused the greatest drop in incarceration rates but there was little effect on the incarceration rate with schooling beyond the high school years (Lockner, 2007).

Lochner and Moretti (2004) found that a relationship existed between school completion and crime. The researchers estimated that a one year increase in average educational level reduced the state level arrest rate by 11%. Using the ordinary least squares (OLS) method, Lochner and Moretti also estimated that a decrease in violent crimes such as rape, murder, robbery, and property crimes such as burglary, theft, and arson decreased by 11% to12% for every one year increase in average years of schooling. Likewise, a one year increase in average schooling reduced murder and assault by 30% and motor vehicle theft by 20%. However, Lochner and Moretti (2004) reported that arrest rates for white collar crimes such as forgery, counterfeiting, and embezzlement had a positive relationship, demonstrated by a synchronous increase of the arrest rate with years of schooling. According to Rotermund (2007) many researchers have examined reasons as to why students drop out of high school as well as strategies to prevent them from failing to persist as a result of the economic and social effects associated with dropping out. More than 86% of the prison population in Georgia failed to graduate high school (Georgia Department of Corrections, 2008). Tax payers in Georgia pay 18,000 yearly for every inmate in the penal system (Georgia Department of Corrections, 2008).

Summary

The review of literature demonstrates many states have been trying to reduce their incidents of students dropping out of school, as the number of students who drop out of

school has social and economic ramifications to the individual, the state, and society in general. No Child Left Behind requires schools to meet Adequate Yearly Progress in the area of graduation rate (No Child Left Behind Act, 2001). The Adequate Yearly Progress mandate is responsible for many states, including Georgia, initiating programs to reduce their dropout rate. In addition, national, state, and local school agencies are implementing programs to reduce incidents of students dropping out of school in an effort to remedy the social and economic effects of students failing to complete high school.

The literature review also includes information that describes why students drop out of school or persist and graduate. Student engagement is closely linked to academic outcomes and school completion (Appleton et al., 2008; Archambault et al., 2009; Finn, 2006; Georgia Department of Education, 2008; Sinclair, Christonson, & Thurlow, 2005; Tinto, 1975). In addition, literature on schools demonstrated that there is strong correlation between school completion, crime, and income (Georgia Department of Corrections, 2008; Georgia Department of Education, 2009; Lochner & Moretti, 2004).

Georgia's response to address the dropout issue was the implementation of the graduation coach program (Georgia Department of Education, 2008). Georgia's graduation coaches' work with issues related to student engagement for students at risk of dropping out in schools across the state. However, it was not currently known if the initiative has reduced Georgia's dropout rate when variables including school locale, attendance, social economic status, race and ethnicity percentages, and student achievement on the science section of the Georgia High School Graduation Tests were controlled. The purpose of this study was to examine the association between the

graduation coach program and Georgia's graduation rates when controlling for the identified variables.

CHAPTER III

METHOD

Purpose and Research Questions

The state of Georgia initiated a graduation coach program in an effort to increase the high school graduation rates in the state of Georgia. However, at the time of this study little is known regarding the impact of this program. The purpose of this study was to examine the association between Georgia's graduation coach program and Georgia's graduation rates over a four-year period of time from 2007 through 2010. The overarching research question of this study was: What is the association between the graduation coach program and Georgia's graduation rate?

The following sub-questions guided the study:

1. Do graduation rates differ prior to and post the introduction of the Graduation coach program when variables such as school locale, average daily attendance, free and reduced lunch percentages, race and ethnicity percentages, and science pass rate are controlled?

2. Does the association between graduation rates and the graduation coach program vary between city, rural, suburban, town, metropolitan Atlanta schools, and schools outside of metropolitan Atlanta when variables such as average daily attendance, free and reduced lunch percentages, race and ethnicity percentages, and science pass rate are controlled?

3. Do graduation rates differ prior to and post the induction of the Graduation coach program in Atlanta Public Schools, DeKalb County Schools and

Clayton County Schools in the state of Georgia when variables such as average daily attendance, free and reduced lunch percentages, race and ethnicity percentages, and science pass rate are controlled?

Research Design

The research design enabled the researcher to determine how graduation rates changed during the specified time period. This non-experimental ex post facto study examined whether graduation rates before the implementation of the graduation coach program differed significantly from graduation rates after the implementation of the program. An ex post facto design was selected as this study examined archived graduation rates data as related to independent variables that had already been reported and could not be manipulated (Johnson 2001). Graduation rates from 2004-2010 for Georgia high schools were evaluated to determine if there was empirical evidence of change since the inception of the graduation coach program. The study examined whether or not a change in graduation rates occurred following implementation of the graduation coach program Johnson (2001) suggested that non-experimental research in education was important because educators would benefit from understanding how independent variables that cannot be manipulated affected educational outcomes. The following section describes the population and sample for the study.

Population and Sample

The population in this study included 343 public high schools in the state of Georgia that reported graduation rates from 2004 through 2010. Schools were selected based on their status as a public high school in the state of Georgia. Public high schools were chosen by the researcher because funding was provided by the state of Georgia

taxpayer to support the graduation coach initiative (Georgia Department of Education, 2008). This study utilized statistical data from the Georgia Department of Education and the National Center for Education Statistics in Washington District of Columbia. The sample consisted of 343 public high schools in the state of Georgia with graduation rates provided by Georgia's Department of Education. Graduation rates from 2004 through 2006 were determined to be the baseline data (prior to the graduation coach program) and from 2007 through 2010, the years following the inception of the graduation coach program. A description of data collection procedures follows.

Data Collection

Data collection began after Institutional Review Board (IRB) approval was received from Georgia Southern University (see Appendix A). Data collection was completed in one week by accessing the Georgia Department of Education public website by clicking on Accessing School Data Reporting, followed by Report Card, followed by Comparisons, followed by Download Other Data. After clicking on download other data, I collected data records for each year of the study, 2004 through 2010. Such data included attendance, racial demographics, Georgia Graduation Tests results in science, free and reduced lunch percentages, and graduation rates for the years 2004 through 2010. I accessed the state of Georgia's school report cards for each year of the study (2004 through 2010) from the Georgia Department of Education website through the following steps.

1. I collected information about graduation rates for high schools in the state of Georgia from the years 2004 through 2010, which provided graduation rate data from three years before inception of the graduation coach program and

four years after the inception of the graduate coach program. The graduation coach program was introduced in Georgia in 2006. It should be noted that Georgia calculates its graduation rate by dividing the number of students who graduate with a regular diploma by the number of ninth through12th-grade dropouts from appropriate years (previous years 11th-grade dropouts, 10th-grade dropouts from the previous 2 years, and ninth-grade dropouts from for previous 3 years) plus graduates, plus other completers (Governor's Office of Student Achievement, 2008).

2. I also collected data that provide statistics about the percentage of students receiving free and reduced lunch during the years 2004 through 2010. Free and reduced lunch percentages provided statistical data to determine students' socioeconomic status. Free and reduced lunch percentages are calculated by dividing the number of students who receive free or reduced lunch by the overall population of the school (Georgia Department of Education, 2008).
3. Data were collected for average daily attendance rates of schools. Average daily attendance is calculated by dividing the total number of days enrolled of all students by the number of days present for all students (Georgia Department of Education, 2009). In 2009, 31% of students on graduation coaches' caseloads were identified as being at risk due to attendance problems (Georgia Department of Education, 2009).
4. Racial composition data were obtained to determine if trends in racial enrollment contribute to graduation rates of Georgia high schools. Racial composition is calculated by dividing the number of students from a particular

racial or ethnic group by the total population of the school (Georgia Department of Education, 2008). In 2009, graduation coaches' student caseloads were comprised of 8% Asian, 21% Black, 19% Hispanic, 14% White, and 15% were multi-racial.(Georgia Department of Education, 2008).

5. Student achievement data in the science performance area of the Georgia High School Graduation Test (GHSGT) was obtained and used as a control variable. Percentage of students passing the tests was utilized as a means to measure student achievement for the school. Science was chosen as a measure of student achievement because many students in the state of Georgia fail to achieve graduation as a result of not passing the required science portion of the GHSGT (Georgia Department of Education, 2008). In 2008, graduation coaches documented 24,704 interventions related to test preparation and tutoring (Georgia Department of Education, 2008). In 2009, 47% of students on graduation coaches' caseloads in the Georgia program were the result of students needing intervention for the science portion of the GHSGT.
6. In addition to accessing Georgia's Department of Education report card to obtain data, school locale information, such as city, rural, suburban or town, was collected from the National Center for Education Statistics (2010) public site. The data were retrieved from http://www.nces.ed.gov/ccd/data/txt/psu081blay.txt, which is a public site for the National Center for Education Statistics in Washington, District of Columbia.

Once data were collected, an Excel spreadsheet was created to facilitate data transfer into the Statistical Packages for Social Sciences (SPSS) program for statistical analysis (Cronk, 2008). The Excel spread sheet contained a record of each variable that was analyzed (see Appendix B). The variables included graduation rates, school locale (see Appendix C), attendance, science achievement data, and race and ethnicity percentages for Asian, Black, White, and Latino students during the years 2004 through 2010.

After all data were collected, the data set was reviewed to identify schools that did not have recordings of graduation rates before 2007 when the graduation coach program was initiated. All schools that did not have a record of graduation rates before 2007 were deleted from the data set as there was no baseline data for those schools. Schools deleted from the data set included: Dekalb Truancy, DeKalb Transition, DeKalb Rockdale Psycho-Education Center, Gateway to College in DeKalb County, South Paulding High School in Paulding County, Georgia, Gwinnett Intervention Education (GIVE) Center East.

Summary

In the United States and Georgia, schools, society as a whole, and government agencies are seeking ways to improve graduation rates. The purpose of this study was to examine the association between the graduation coach program and Georgia's high school graduation rates. This topic is important because in times of economic crisis, when many programs are being cut, leaders and decision makers need to be informed about the effectiveness of programs such as the graduation coach program that was initiated to reduce dropout rates in Georgia. In addition, students who have risk factors that may

contribute to them not graduating on time may benefit from the resources that graduation coaches provide.

Data were obtained from public sources that maintain data on schools in the United States and the state of Georgia. Data were collected on graduation rates of Georgia public high schools from the years 2004 through 2006 and 2007 through 2010. SPSS software was used to calculate a multiple independent *t*-tests on graduation rates before and after the inception of the graduation coach program to determine if there were a differences between graduation rates prior to and post the induction of the graduation coach program. In addition an ANCOVA analysis was ran to control for such variables as average daily attendance, free and reduced lunch percentages and race and ethnicity percentages.

CHAPTER IV

REPORT OF DATA AND DATA ANALYSIS

The purpose of this chapter is to present the data analysis findings in order to address the research questions associated with the study. The over arching research question is what is the association between the graduation coach program and Georgia's graduation rate? This research study was based on three research questions. Specifically, the research questions that guided this study are as follows:

1. Do graduation rates differ prior to and post the introduction of the Graduation coach program when variables such as school locale, average daily attendance, free and reduced lunch percentages, race and ethnicity percentages, and science pass rate are controlled?

2. Does the association between graduation rates and the graduation coach program vary between city, rural, suburban, town, metropolitan Atlanta schools, and schools outside of metropolitan Atlanta when variables such as average daily attendance, free and reduced lunch percentages, race and ethnicity percentages, and science pass rate are controlled?

3. Do graduation rates differ prior to and post the induction of the Graduation coach program in Atlanta Public Schools, DeKalb County Schools and Clayton County Schools in the state of Georgia when variables such as average daily attendance, free and reduced lunch percentages, race and ethnicity percentages, and science pass rate are controlled?

It is noted that science pass rate was not part of the ANCOVA analysis due to the fact that changes in Georgia's science curriculum took place during the years of the study (Georgia Department of Education, 2011).

Demographic Profile of Respondents

This study was based on archival data that were obtained from the state of Georgia Department of Education and therefore no original data were collected. Since the data were all archival, this study did not contain any *respondents*. However, a demographic profile of the students represented by the schools featured in this study is provided in this section. Specifically, a box plot featuring the graduation coach and the non-coach groups was constructed for each variable that was included in the analysis of covariance (ANCOVA) statistical tests.

Figure 1 provides a visual depiction of the socioeconomic status of the schools in this study. The results indicate that the distributions were very similar in both groups with the 95% confidence intervals (e.g., whiskers) and the inter-quartile range (grey box) showing a similar amount of variability. However, the median percent for the graduation coach group was higher when compared to the non-coach group. There were no extremes or outliers in either group.

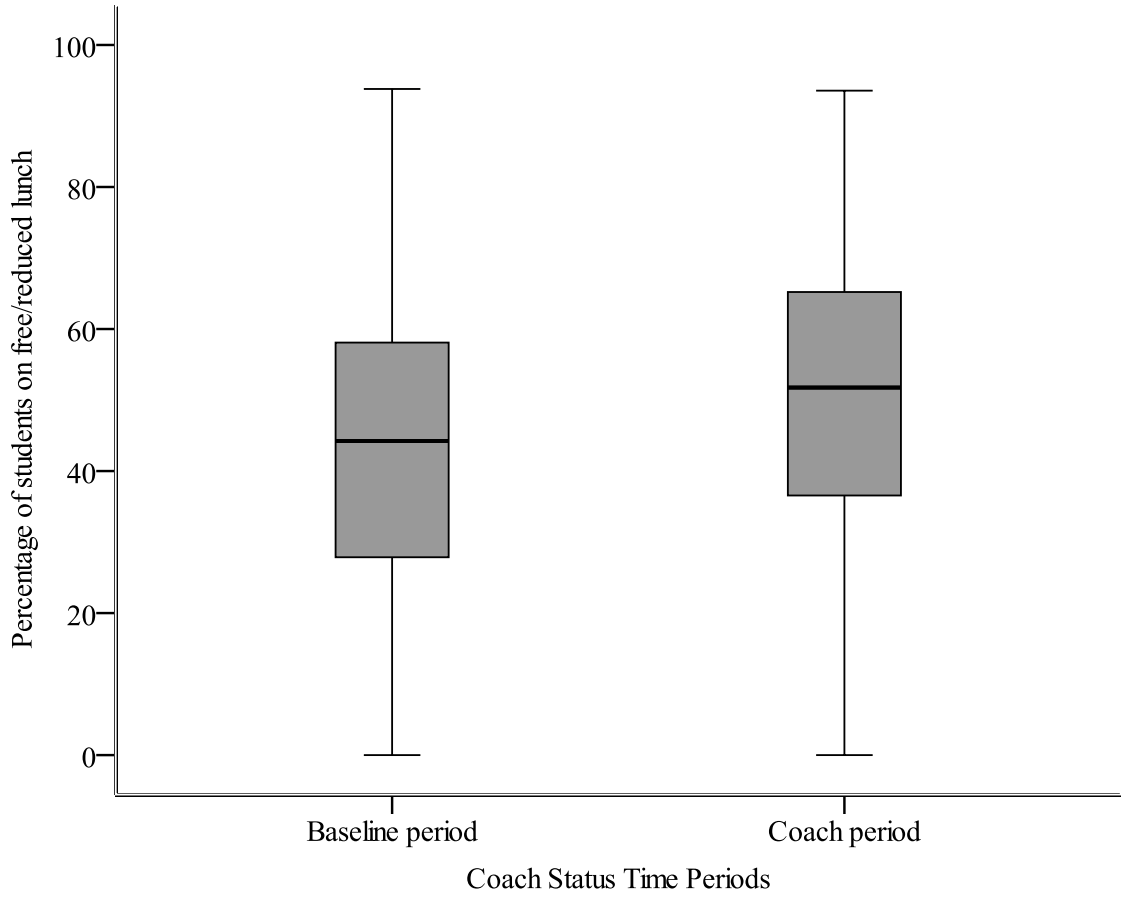

Figure 1. Distribution of percentage of students on free/reduced lunch for the schools featured in this study by coach status time period (Baseline Period 2004-2006 versus Coach Period 2007-2010).

Figure 2 displays the box plots based on daily attendance rates. The results indicate that the amount of variability in the daily attendance rates was similar between the two groups as was the median daily attendance rate. In addition, the appearance of black circles (extreme values) and asterisks (outliers) indicate that there were some extreme daily attendance rates in the sample with some being outliers (more than three standard deviations away from the mean). While there were some extreme values on the

higher end of the distribution, most of the extreme values and all of the outliers were on the lower end of the distribution.

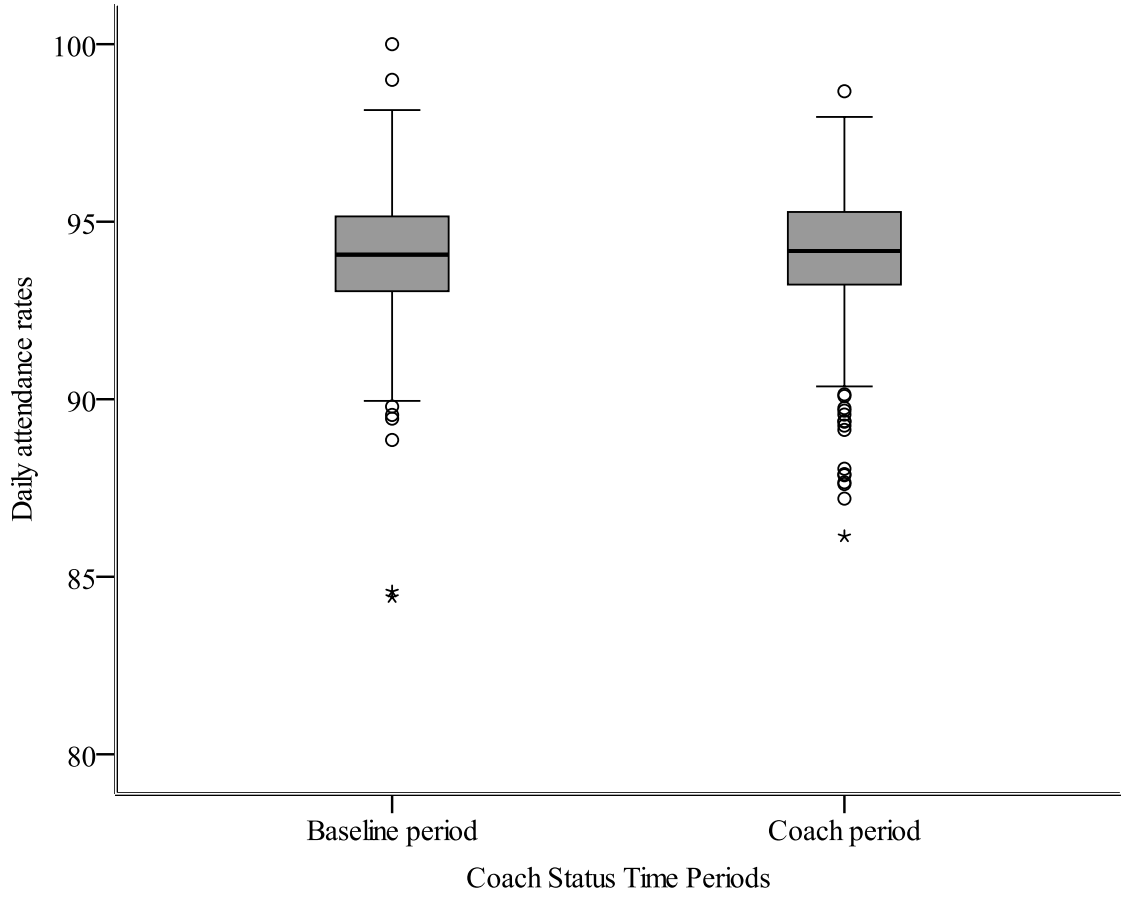

Figure 2. Distribution of daily attendance rates for the schools featured in this study by coach status time period (Baseline Period 2004-2006 versus Coach Period 2007-2010).

The percentage of Hispanic students by group is presented in Figure 3. The results indicate that there was more variability within the schools during the graduation coach period given the wider inter-quartile range and whiskers; although both time periods had a relatively small amount of variability. There were also more outliers in the graduation coach group when compared to the non-coach group. However, the median values were similar for the two groups.

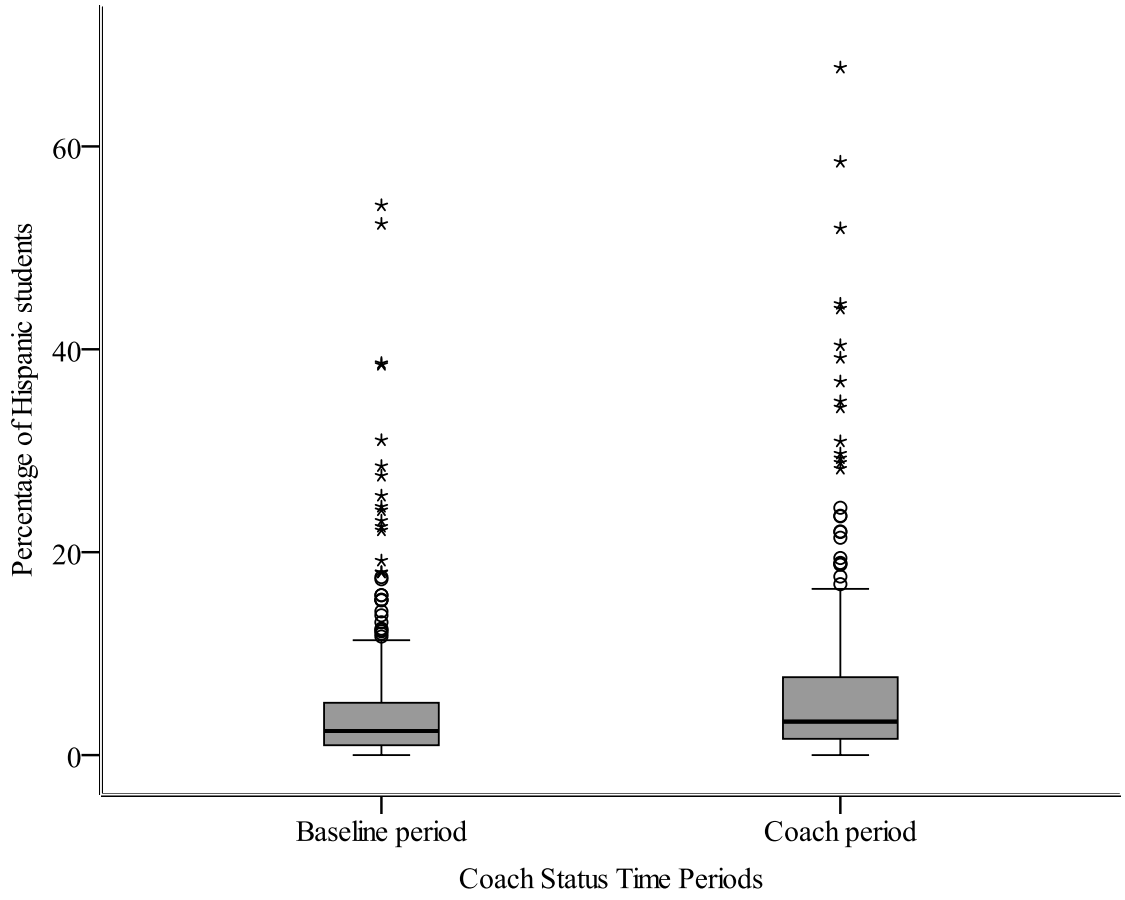

Figure 3. Distribution of percentage of Hispanic students for the schools featured in this study by coach status time period (Baseline Period 2004-2006 versus Coach Period 2007-2010).

The percentage of Black students by group is displayed in Figure 4. The results indicate that there was more variability in the graduation coach group as indicated by the wider inter-quartile range. In addition, the median percentage of Black students was higher in the graduation coach group as compared to the non-coach group. Finally, there were no extremes or outliers.

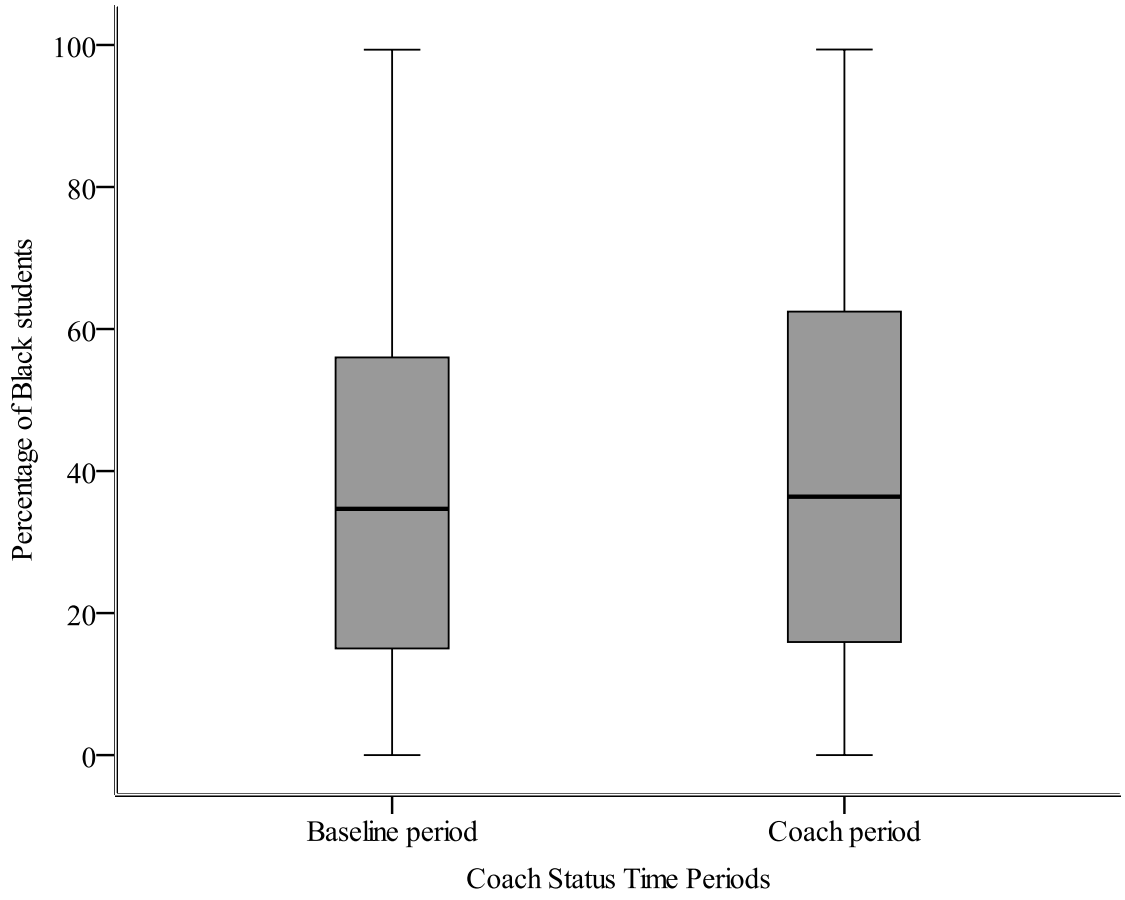

Figure 4. Distribution of percentage of Black students for the schools featured in this study by coach status time period (Baseline Period 2004-2006 versus Coach Period 2007-2010).

The percentage of White students by group is featured in Figure 5. The results indicate that there was a lot of variability within the two groups, with the graduation coach group having more variability as indicated by the wider inter-quartile range. In addition, there were no extreme values or outliers in either of the two distributions. The results also indicate that the median percentage of White students was higher in the non-coach group when compared to the graduation coach group.

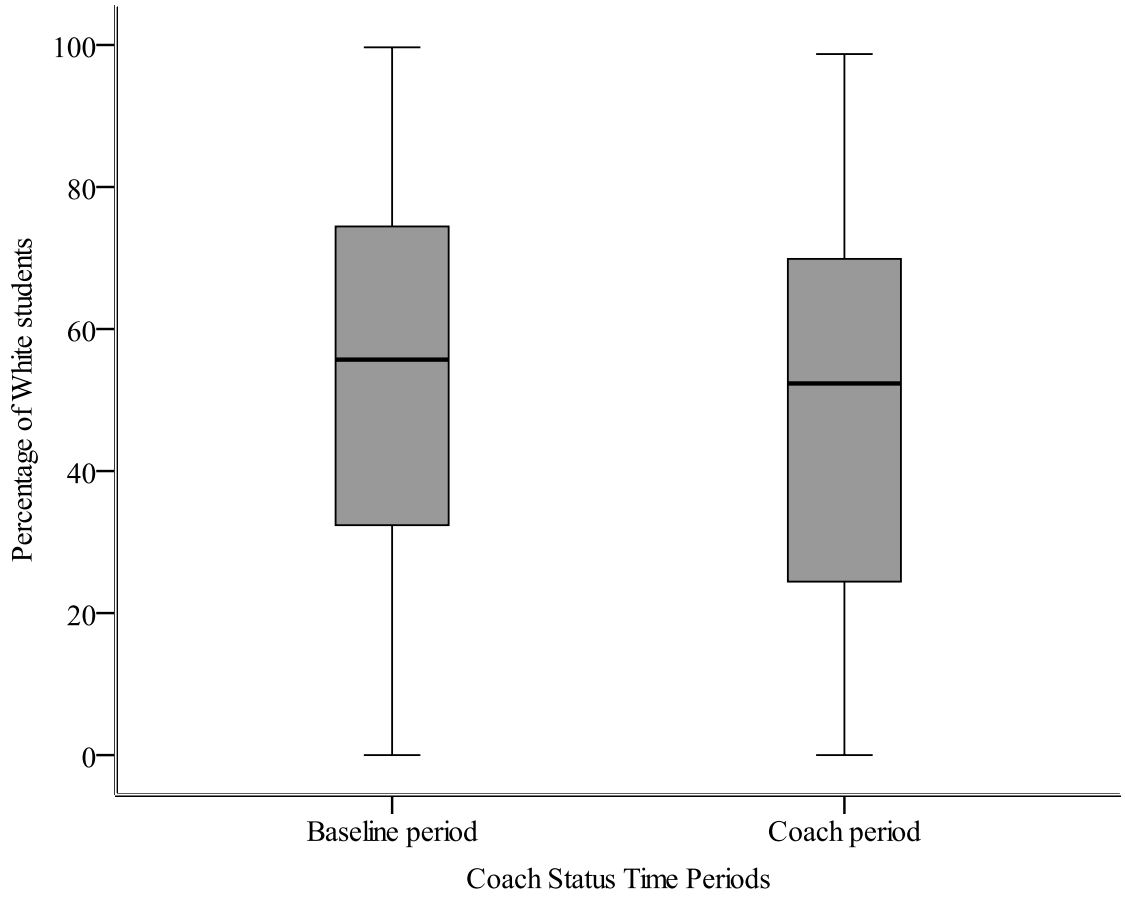

Figure 5. Distribution of percentage of White students for the schools featured in this study by coach status time period (Baseline Period 2004-2006 versus Coach Period 2007-2010).

Figure 6 displays the distributional characteristics for the two groups with regard to the percentage of Asian students. The results indicate that there was a very small amount of variability within the two groups with an upward distribution of values and outliers. The median percentage of Asian students was very similar for the two groups. Finally, most of the schools in this study had a low percentage of Asian students with some schools having up to approximately 33%.

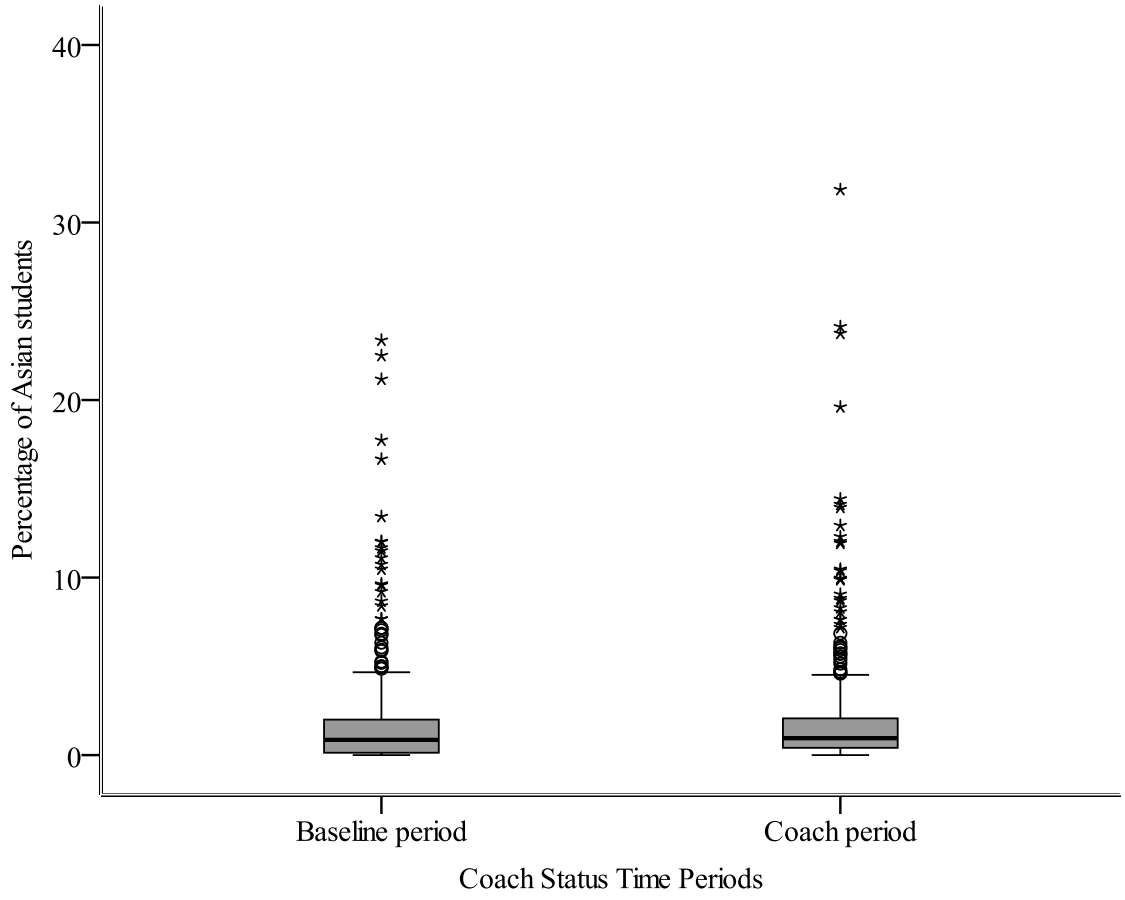

Figure 6. Distribution of percentage of Asian students for the schools featured in this study by coach status time period (Baseline Period 2004-2006 versus Coach Period 2007-2010).

The distribution of graduation rates within each group is featured in Figure 7. The results indicate that there was more variability in the graduation rates within the non-coach group as indicated by the wider inter-quartile range and whiskers. However, there were more extreme values and an outlier within the graduation coach group when compared to the non-coach group. Finally, the median graduation rate for the graduation coach group was higher than the median graduation rate for the non-coach group.

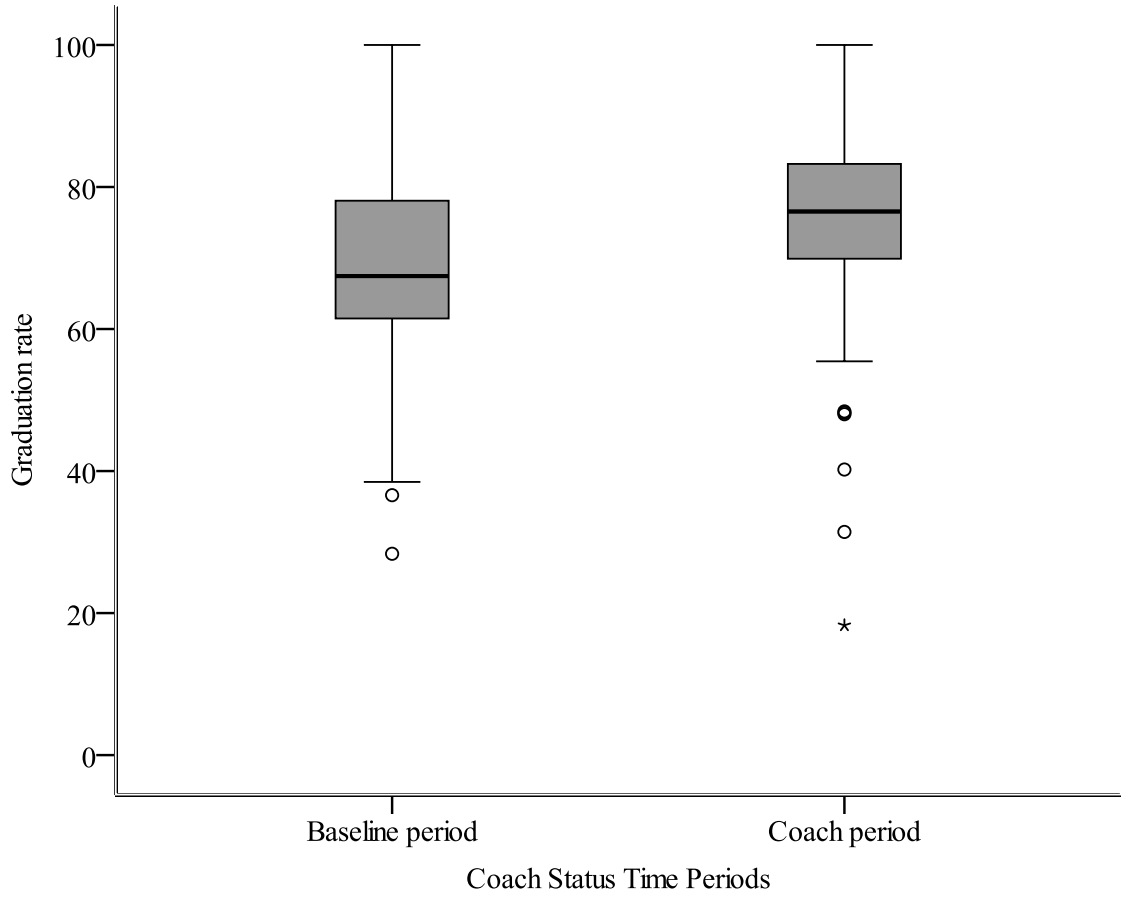

Figure 7. Distribution of graduation rates for the schools featured in this study by coach status time period (Baseline Period 2004-2006 versus Coach Period 2007-2010).

Demographic findings suggest that graduation rates differed pre and post the induction of the graduation coach program with graduation rates being higher post the induction of the program. In regard to race variability, White student enrollment varied a lot with fewer students being enrolled during the coach period; Asia students had a small amount of variation; Black student enrollment varied with more students enrolled during the coach period and Hispanic student enrollment varied more students enrolled during the coach period. In addition, the results indicate that the daily attendance rates

were similar between the two time periods. Lastly, socioeconomic status of students had little variation between the two periods.

Findings

This section of the chapter presents the findings based on the analysis of the data. Each research question was analyzed separately by first conducting an independent samples *t*-test to determine if the non coach graduations rates differed significantly from the coach graduation rates. In addition, the two time periods or groups were compared based on demographic factors such as free/reduced lunch percentages, attendance rates, race and ethnicity percentages, in order to determine if the differences were statistically significant. In addition to the independent samples *t*-test, an analysis of covariance (ANCOVA) was conducted whereby the two groups (non coach and graduation coach) were compared on their graduation rates while statistically controlling for free/reduced lunch percentages, attendance rates, and race and ethnicity percentages (e.g., percent Black, percent Hispanic and percent Asian). Percent White was not included given that the relationship between percent White and percent Black was very high, $r = -.926$, $p < .001$, which would result in multicollinearity (Mertler & Vannatta, 2005; Field, 2009). Also, it is important to note that the science pass rates were not included in the ANCOVA given that the science test was not consistent across the two time periods.

In addition, in the state of Georgia the science curriculum changed from Quality Core Curriculum to Georgia Performance Standards (Georgia Department of Education, 2011). In addition to the curriculum changing, the Georgia High School Graduation Tests in science also changed resulting in substantial differences in science scores between the two periods (Georgia Department of Education, 2011). Due to the change in

the science curriculum and test, science data could not be used for analysis. Statistical significance was determined based on an alpha level of .05.

Research Question One

The first research question asked "Do graduation rates differ prior to and post the introduction of the graduation coach program when variables such as school locale, average daily attendance, free and reduced lunch percentages, race and ethnicity percentages, and science pass rates are controlled?"

Table 1 provides the results of the independent samples *t*-test where all of the Georgia schools in the study were included in the analysis. The two groups were compared based on the dependent variable (graduation rates) and the potential covariates (free/reduced lunch, attendance rates, and race and ethnicity). The results in Table 1 indicate that the graduation rates during the graduation coach time period were statistically significantly higher than they were during the non graduation coach time period (76.61% and 69.18%, respectively), $t(684) = 8.37$, $p < .01$. The results also indicate that a significant difference was found relative to socioeconomic status in that the graduation coach group had a higher percentage of students on free/reduced lunch than the non-coach group (49.77% and 43.07%, respectively), $t(684) = 4.27$, $p < .01$. However, the two groups were not statistically significantly different with regard to their attendance rates (94.03% and 93.98%, respectively), $t(684) = 0.34$, $p > .05$.

With regard to race and ethnicity, the two groups were statistically and significantly different for percentage of Hispanic students and the percentage of White students. Specifically, the graduation coach group had a significantly higher percentage of Hispanic students (6.39% and 4.64%, respectively), $t(684) = 2.88$, $p < .05$, and a

significantly lower percentage of White students (47.68% and 52.05%, respectively), $t(684) = -1.99$, $p < .05$, when compared to the non-coach group. No significant differences were found relative to the percentage of Asian students or the percentage of Black students. Finally, the two groups were statistically significantly different in their science pass rates with a higher percentage of students passing during the graduation coach period than during the non-coach period (83.45% and 66.50%, respectively), $t(684) = 19.36$, $p < .01$. As previously stated, the significant difference in science pass score percentages between the two time periods may have been the result of the change in Georgia's curriculum from Quality Core Curriculum to Georgia Performance Standards as well as the change in Georgia High School Graduation Tests in science reflecting the new Georgia Performance Standards curriculum (Georgia Department of Education, 2011).

Table 1

Results of t-tests and Descriptive Statistics for Various High School Variables by Coach and non-Coach Years

Outcome	Coach Status						95% CI for Mean Difference	t	df
	Coach			Non-Coach					
	M	SD	n	M	SD	N			
Graduation rate	76.61	10.60	343	69.18	12.57	343	5.59, 9.17	8.37**	684
Free/reduced lunch	49.77	20.40	343	43.07	20.66	343	3.61, 9.77	4.27**	684
Attendance rate	94.03	1.90	343	93.98	1.83	343	-.23, .33	0.34	684
Percent Hispanic	6.39	8.93	343	4.64	6.84	343	.56, 2.94	2.88*	684
Percent Asian	2.12	3.60	343	1.93	3.28	343	-.32, .71	0.74	684
Percent Black	41.46	30.00	343	39.33	29.25	343	-2.31, 6.57	0.94	684
Percent White	47.68	28.77	343	52.05	28.80	343	-8.69, -.06	-1.99*	684
Science pass rate	83.45	8.94	343	66.50	13.52	343	15.23, 18.67	19.36**	684

*p < .05
**p < .01

The ANCOVA results are presented in Table 2. As previously indicated, the percentage of White students and the science pass rates were not included in the analysis. The results indicate that after controlling for free/reduced lunch status, attendance rates, and race and ethnicity, graduation rates were still statistically significantly higher in the graduation coach group as compared to the non-coach group, $F(1,679) = 217.37$, $p < .01$. The adjusted mean graduation rate for the non-coach group was 68.22% and the adjusted mean graduation rate for the graduation coach group was 77.58%. A 9.36% increase in graduation rate was observed since the induction of the graduation coach program.

Table 2

Results of ANCOVA for Coach and non-Coach Years while Controlling for Socioeconomic Status, Attendance Rates, and Race

Group	Graduation Rate			
	Observed Mean	Adjusted Mean	SD	n
Non Coaching	69.18	68.22	12.57	343
Coaching	76.61	77.58	10.60	343
Source	SS	df	MS	F
Group	14249.61	1	14249.61	217.37**
Free/reduced lunch	13656.98	1	13656.98	208.33**
Attendance rate	8011.14	1	8011.14	122.21**
Percent Hispanic	1.30	1	1.30	0.02
Percent Black	1609.97	1	1609.97	24.56**
Percent Asian	556.76	1	556.76	8.49**
Error	44511.22	679	65.55	

Note. R^2 = .563, Adj. R^2 = .559, adjustments based on SES = 46.42, attendance rate = 94.00, Percent Hispanic = 5.51, Percent Black = 40.40, and Percent Asian = 2.03
**p < .01

Overall the results related to research question one suggest that graduation rates do differ prior to and post the introduction of the graduation coach program when variables such as school locale, average daily attendance, free and reduced lunch status, and race and ethnicity percentages are controlled. Specifically, graduation rates were statistically significantly higher for schools who participated in the graduation coach program.

Research Question Two

The second research question asked "Does the association between graduation rates and the graduation coach program vary between city, rural and suburban, metropolitan Atlanta schools and schools outside of metropolitan Atlanta when variables

such as average daily attendance, free and reduced lunch percentages, race and ethnicity percentages, and science pass rates are controlled?"

The first set of analyses consisted of independent sample *t*-tests for each group of schools. There was a statistically significant difference in graduation rates across all groups when comparing the graduation coach group to the non-coach group. Specifically, graduation rates were higher for the graduation coach group than they were for the non-coach group for city high schools (72.48% and 66.51%, respectively), $t(104) = 2.08$, $p < .05$; rural high schools (75.39% and 67.14%, respectively), $t(260) = 7.49$, $p < .01$; suburban high schools (80.78% and 74.40%, respectively), $t(210) = 3.63$, $p < .01$; town high schools (75.42% and 66.46%, respectively), $t(104) = 5.45$, $p < .01$; metropolitan Atlanta high schools (80.67% and 74.70%, respectively), $t(200) = 3.15$, $p < .01$; and high schools outside of metropolitan Atlanta (74.92% and 66.88%, respectively), $t(482) = 8.74$, $p < .01$. Significant differences were observed for free/reduced lunch status, race and ethnicity, and science pass rates for all six groups with the exception of city high schools. City high schools had significant differences for free/reduced lunch and science pass rates, but no significant effect for race or ethnicity.

The ANCOVA results for city high schools are presented in Table 3. The results indicate that after controlling for free/reduced lunch status, attendance rates, and race and ethnicity, graduation rates were still statistically significantly higher in the graduation coach group as compared to the non-coach group, $F(1,99) = 21.62$, $p < .01$. The adjusted mean graduation rate for the non-coach group was 64.79% and the adjusted mean graduation rate for the graduation coach group was 74.20%. A 9.41% increase in graduation rate was observed since the induction of the graduation coach program.

Table 3

Results of ANCOVA for Coach and non-Coach Years for City High Schools while Controlling for Socioeconomic Status, Attendance Rates, and Race

Group	Graduation Rate			
	Observed Mean	Adjusted Mean	SD	n
Non Coaching	66.51	64.79	14.96	53
Coaching	72.48	74.20	14.64	53
Source	SS	df	MS	F
Group	2068.99	1	2068.99	21.62**
Free/reduced lunch	1148.13	1	1148.13	12.00**
Attendance rate	2266.84	1	2266.84	23.69**
Percent Hispanic	116.03	1	116.03	1.21
Percent Black	465.25	1	465.25	4.86*
Percent Asian	186.44	1	186.44	1.95
Error	9473.43	99	95.69	

Note. $R^2 = .601$, Adj. $R^2 = .577$, adjustments based on SES = 56.44, attendance rate = 92.87, Percent Hispanic = 5.28, Percent Black = 67.91, and Percent Asian = 1.44

**p < .01

The ANCOVA results for rural high schools are provided in Table 4. The results indicate that after controlling for free/reduced lunch status, attendance rates, and race and ethnicity, graduation rates were still statistically significantly higher in the graduation coach group as compared to the non-coach group, $F(1,255) = 132.87$, $p < .01$. The adjusted mean graduation rate for the non-coach group was 66.44% and the adjusted mean graduation rate for the graduation coach group was 76.10%. A 9.66% increase in graduation rate was observed since the induction of the graduation coach program.

Table 4

Results of ANCOVA for Coach and non-Coach Years for Rural High Schools while Controlling for Socioeconomic Status, Attendance Rates, and Race

Group	Graduation Rate			
	Observed Mean	Adjusted Mean	SD	n
Non Coaching	67.14	66.44	9.58	131
Coaching	75.39	76.10	8.18	131
Source	SS	df	MS	F
Group	5828.14	1	5828.14	132.87**
Free/reduced lunch	2490.96	1	2490.96	56.79**
Attendance rate	2959.57	1	2959.57	67.47**
Percent Hispanic	18.74	1	18.74	0.43
Percent Black	6.96	1	6.96	0.16
Percent Asian	1.47	1	1.47	0.03
Error	11185.11	255	43.86	

Note. $R^2 = .554$, Adj. $R^2 = .544$, adjustments based on SES = 49.51, attendance rate = 94.18, Percent Hispanic = 3.71, Percent Black = 31.52, and Percent Asian = 0.78
**p < .01

The ANCOVA results for suburban high schools are featured in Table 5. After controlling for free/reduced lunch status, attendance rates, and race and ethnicity, graduation rates were still statistically significantly higher in the graduation coach group as compared to the non-coach group, $F(1,205) = 32.79$, $p < .01$. The adjusted mean graduation rate for the non-coach group was 73.44% and the adjusted mean graduation rate for the graduation coach group was 81.74%. An 8.3% increase in graduation rate was observed since the induction of the graduation coach program.

Table 5

Results of ANCOVA for Coach and non-Coach Years for Suburban High Schools while Controlling for Socioeconomic Status, Attendance Rates, and Race

Group	Graduation Rate			
	Observed Mean	Adjusted Mean	SD	n
Non Coaching	74.40	73.44	14.37	106
Coaching	80.78	81.74	10.99	106
Source	SS	df	MS	F
Group	2844.74	1	2844.74	32.79**
Free/reduced lunch	2085.76	1	2085.76	24.04**
Attendance rate	1109.14	1	1109.14	12.78**
Percent Hispanic	27.96	1	27.96	0.32
Percent Black	887.36	1	887.36	10.23**
Percent Asian	586.02	1	586.02	6.75*
Error	17786.71	205	86.76	

Note. R^2 = .513, Adj. R^2 = .499, adjustments based on SES = 36.02, attendance rate = 94.15,Percent Hispanic = 8.56, Percent Black = 39.89, and Percent Asian = 4.45
*p < .05
**p < .01

The ANCOVA results for town high schools are provided in Table 6. The results indicate that after controlling for free/reduced lunch status, attendance rates, and race and ethnicity, graduation rates were still statistically significantly higher in the graduation coach group as compared to the non-coach group, $F(1,99) = 75.13$, $p < .01$. The adjusted mean graduation rate for the non-coach group was 65.55% and the adjusted mean

graduation rate for the graduation coach group was 76.32%. A 10.77% increase in graduation rate was observed since the induction of the graduation coach program.

Table 6

Results of ANCOVA for Coach and non-Coach Years for Town High Schools while Controlling for Socioeconomic Status, Attendance Rates, and Race

Group	Graduation Rate			
	Observed Mean	Adjusted Mean	SD	n
Non Coaching	66.46	65.55	9.38	53
Coaching	75.42	76.32	7.44	53
Source	SS	df	MS	F
Group	2753.22	1	2753.22	75.13**
Free/reduced lunch	694.86	1	694.86	18.96**
Attendance rate	740.24	1	740.24	20.20**
Percent Hispanic	0.27	1	0.27	0.01
Percent Black	13.20	1	13.20	0.36
Percent Asian	6.36	1	6.36	0.17
Error	3628.16	99	36.65	

Note. $R^2 = .621$, Adj. $R^2 = .598$, adjustments based on SES = 49.56, attendance rate = 94.40, Percent Hispanic = 4.10, Percent Black = 35.81, and Percent Asian = 0.85
**p < .01

The ANCOVA results for metropolitan Atlanta high schools are provided in Table 7. The results indicate that after controlling for free/reduced lunch status, attendance rates, and race and ethnicity, graduation rates were still statistically significantly higher in the graduation coach group as compared to the non-coach group, $F(1,195) = 22.37$, $p < .01$. The adjusted mean graduation rate for the non-coach group

was 74.11% and the adjusted mean graduation rate for the graduation coach group was 81.26%. A 7.15% increase in graduation rate was observed since the induction of the graduation coach program.

Table 7

Results of ANCOVA for Coach and non-Coach Years for Metropolitan Atlanta High Schools while Controlling for Socioeconomic Status, Attendance Rates, and Race

Group	Graduation Rate			
	Observed Mean	Adjusted Mean	SD	n
Non Coaching	74.70	74.11	14.56	101
Coaching	80.67	81.26	12.34	101
Source	SS	df	MS	F
Group	2219.27	1	2219.27	22.37**
Free/reduced lunch	501.92	1	501.92	5.06*
Attendance rate	3228.05	1	3228.05	32.54**
Percent Hispanic	513.81	1	513.81	5.18*
Percent Black	146.61	1	146.61	1.48
Percent Asian	400.26	1	400.26	4.04*
Error	19341.93	195	99.19	

Note. R^2 = .494, Adj. R^2 = .479, adjustments based on SES = 39.80, attendance rate = 93.76, Percent Hispanic = 7.91, Percent Black = 49.81, and Percent Asian = 4.42
*p < .05
**p < .01

Finally, the ANCOVA results for high schools outside of metropolitan Atlanta are displayed in Table 8. The results indicate that after controlling for free/reduced lunch status, attendance rates, and race and ethnicity, graduation rates were still statistically

significantly higher in the graduation coach group as compared to the non-coach group, $F(1,477) = 228.41$, $p < .01$. The adjusted mean graduation rate for the non-coach group was 66.14% and the adjusted mean graduation rate for the graduation coach group was 75.66%. A 9.52% increase in graduation rate was observed since the induction of the graduation coach program.

Table 8

Results of ANCOVA for Coach and non-Coach Years for High Schools outside of Metropolitan Atlanta while Controlling for Socioeconomic Status, Attendance Rates, and Race

Group	Graduation Rate			
	Observed Mean	Adjusted Mean	SD	n
Non Coaching	66.88	66.14	10.87	242
Coaching	74.92	75.66	9.30	242
Source	SS	df	MS	F
Group	10285.49	1	10285.49	228.41**
Free/reduced lunch	4043.60	1	4043.60	89.80**
Attendance rate	6310.06	1	6310.06	140.13**
Percent Hispanic	0.25	1	0.25	0.01
Percent Black	0.04	1	0.04	0.00
Percent Asian	221.95	1	221.95	4.93*
Error	21479.30	477	45.03	

Note. $R^2 = .624$, Adj. $R^2 = .619$, adjustments based on SES = 49.18, attendance rate = 94.10, Percent Hispanic = 4.51, Percent Black = 36.47, and Percent Asian = 1.03
*p < .05
**p < .01

The results for research question two indicate that the association between graduation rates and the graduation coach program remained significant and positive across all groups, including city high schools, rural high schools, suburban high schools,

town high schools, metropolitan Atlanta high schools, and high schools outside of metropolitan Atlanta. However, the increase in graduation rate varied by group with the largest increase emerging for town high schools 10.77% respectively and the smallest increase emerging for metropolitan Atlanta schools, 7.15% respectively. Therefore the association between graduation rates and the graduation coach program does vary across the above listed groups.

Research Question Three

The third research question asked "Do graduation rates differ prior to and post the induction of the Graduation coach program in Atlanta Public Schools, Dekalb County Schools and Clayton County Schools in the state of Georgia when variables such as average daily attendance, free and reduced lunch percentages, race and ethnicity percentages, and science pass rates are controlled?"

The first set of analyses consisted of independent samples *t*-tests for each group of schools. The results indicated that there was a statistically significant difference in graduation rates for Dekalb County Schools (80.42% and 69.51%, respectively), $t(34) = 2.81$, $p < .01$, and Clayton County Schools (77.94% and 67.28%, respectively), $t(12) = 4.06$, $p < .01$, when comparing the graduation coach group to the non-coach group. Specifically, the graduation rates were higher for the graduation coach group when compared to the non-coach group. However, there was no statistically significant difference for Atlanta Public Schools (74.37% and 68.63%, respectively), $t(18) = 0.67$, $p > .05$. Significant differences were also found for science pass rates for Dekalb County Schools and Clayton County Schools. Finally, a significant effect for free/reduced lunch status was found for Clayton County Schools only.

The ANCOVA results for Atlanta Public Schools are featured in Table 9. The results indicate that after controlling for socioeconomic status, attendance rates, and race and ethnicity, graduation rates were still not statistically significantly higher in the graduation coach group as compared to the non-coach group, $F(1,13) = 1.25$, $p > .05$. The adjusted mean graduation rate for the non-coach group was 66.78% and the adjusted mean graduation rate for the graduation coach group was 76.22%. Therefore although the adjusted graduation rates were higher for the graduation coach group, the results were not statistically reliable given the small sample size (Field, 2009). A 9.4% increase in graduation rate was observed since the induction of the graduation coach program.

Table 9

Results of ANCOVA for Coach and non-Coach Years for Atlanta Public Schools while Controlling for Socioeconomic Status, Attendance Rates, and Race

Group	Graduation Rate			
	Observed Mean	Adjusted Mean	SD	n
Non Coaching	68.63	66.78	16.78	10
Coaching	74.37	76.22	21.02	10
Source	SS	df	MS	F
Group	348.17	1	348.17	1.25
Free/reduced lunch	265.24	1	265.24	0.95
Attendance rate	2024.41	1	2024.41	7.28*
Percent Hispanic	178.50	1	178.50	0.64
Percent Black	9.32	1	9.32	0.03
Percent Asian	73.11	1	73.11	0.26
Error	3616.27	13	278.17	

Note. $R^2 = .458$, Adj. $R^2 = .208$, adjustments based on SES = 68.15, attendance rate = 91.69, Percent Hispanic = 2.46, Percent Black = 88.73, and Percent Asian = 0.44
*p < .05

The ANCOVA results for Dekalb County Schools are provided in Table 10. The results indicate that after controlling for free/reduced lunch status, attendance rates, and

race and ethnicity, graduation rates were still statistically significantly higher in the graduation coach group as compared to the non-coach group, $F(1,29) = 24.04$, $p < .01$. The adjusted mean graduation rate for the non-coach group was 69.44% and the adjusted mean graduation rate for the graduation coach group was 80.19%. A 10.75% increase in graduation rate was observed since the induction of the graduation coach program.

Table 10

Results of ANCOVA for Coach and non-Coach Years for Dekalb County Schools while Controlling for Socioeconomic Status, Attendance Rates, and Race

Group	Graduation Rate			
	Observed Mean	Adjusted Mean	SD	n
Non Coaching	69.21	69.44	14.51	18
Coaching	80.42	80.19	8.77	18
Source	SS	df	MS	F
Group	608.34	1	608.34	24.04**
Free/reduced lunch	1.00	1	1.00	0.04
Attendance rate	480.02	1	480.02	18.97**
Percent Hispanic	68.91	1	68.91	2.72
Percent Black	110.03	1	110.03	4.35*
Percent Asian	217.75	1	217.75	8.60**
Error	733.85	29	25.31	

Note. $R^2 = .878$, Adj. $R^2 = .853$, adjustments based on SES = 56.21, attendance rate = 93.26, Percent Hispanic = 6.05, Percent Black = 78.99, and Percent Asian = 3.56
*p < .05
**p < .01

Finally, the ANCOVA results for Clayton County Schools are displayed in Table 11. The results indicate that after controlling for free/reduced lunch status, attendance

rates, and race and ethnicity, graduation rates were still statistically significantly higher in the graduation coach group as compared to the non-coach group, $F(1,7) = 8.39$, $p < .05$. The adjusted mean graduation rate for the non-coach group was 67.91% and the adjusted mean graduation rate for the graduation coach group was 77.31%. A 9.4% increase in graduation rate was observed since the induction of the graduation coach program.

Also, it is interesting to note that none of the covariates were statistically significant.

Table 11

Results of ANCOVA for Coach and non-Coach Years for Clayton County Schools while Controlling for Socioeconomic Status, Attendance Rates, and Race

Group	Graduation Rate			
	Observed Mean	Adjusted Mean	SD	n
Non Coaching	67.28	67.91	6.39	7
Coaching	77.94	77.31	2.71	7
Source	SS	df	MS	F
Group	120.02	1	120.02	8.39*
Socioeconomic status	3.89	1	3.89	0.27
Attendance rate	11.14	1	11.14	0.78
Percent Hispanic	8.05	1	8.05	0.56
Percent Black	9.05	1	9.05	0.63
Percent Asian	13.98	1	13.98	0.98
Error	100.11	7	14.30	

Note. $R^2 = .854$, Adj. $R^2 = .729$, adjustments based on SES = 62.03, attendance rate = 91.00, Percent Hispanic = 7.62, Percent Black = 76.81, and Percent Asian = 4.75
*p < .05

The results for research question three indicate that graduation rates differed prior to and post the induction of the graduation coach program in Atlanta Public Schools, 9.4% respectively, Dekalb County Schools, 10.755 respectively and Clayton County Schools, 9.4% respectively in the state of Georgia in that graduation rates were higher post the induction of the graduation coach program. However, the difference in the graduation rates was not statistically significant for Atlanta Public Schools due to its low power and the number of schools involved in the study.

Summary

Through this non-experimental ex post facto study, the researcher sought to determine if there was an association between Georgia's graduation rates and the graduation coach program through the extraction and analysis of archival data. It was important to discuss the topic because, in times of economic crisis and budget concerns, it is necessary for decision makers to know what programs are successful in improving student graduation rates. The study was unique because, at the time of this study, little research existed that examined the association of the graduation coach program to Georgia graduation.

The results of this study indicate that graduation rates were statistically significant higher after the induction of the graduation coach program when compared to prior to the induction of the graduation coach program. In fact, this advantage persisted across city high schools, rural high schools, suburban high schools, town high schools, metropolitan Atlanta high schools and high schools outside of metropolitan Atlanta. However, when looking at Atlanta Public Schools, Dekalb County Schools and Clayton County Schools,

no significant difference was found for Atlanta Public Schools. This was most likely due to low power and small sample size in Atlanta Public Schools.

The results of this study also indicate that the increase in graduation rates varied across the six different groups of schools. For example, the largest increase emerged for town high schools, 10.77% respectively and the smallest increase emerged for metropolitan Atlanta high schools, 7.15% respectively. Furthermore, when looking at Atlanta Public Schools, Dekalb County Schools and Clayton County Schools, a relatively large increase was found for DeKalb County Schools, 10.75% respectively.

This chapter provided the data analysis results and addressed each research question. Chapter 5 will provide a discussion of these findings with regard to their relation to the current literature, the interpretations of the results and the implications for practice. In addition, Chapter 5 will provide a discussion of the current study and provide recommendations for future research.

CHAPTER V

SUMMARY, CONCLUSION, AND IMPLICATIONS

This chapter includes a discussion of research findings, conclusions, implications, recommendations, dissemination, and final thoughts of the researcher. Connections are made between the review of literature and the research findings of this study. Recommendations for future studies related to this topic as a result of the findings from this study are provided. The last section of the chapter presents the researcher's final thoughts about the research. In addition, information on other school initiatives in place since the inception of No Child Left Behind (2001) that could have contributed to the increase in graduation rates will be discussed in this chapter.

Discussion of Findings

High school completion has been a topic of discussion in schools systems and communities around the nation and in the state of Georgia. Many political and school leaders have recognized the need to improve graduation rates understanding the social and economical impact that failing to complete high school can have on individuals (Heckman & LaFontaine, 2007; Lochner, 2007). One strategy to help address the dropout issue in the state of Georgia was the introduction of graduation coaches in public high schools across the state to provide interventions to students at risk of not completing high school (Georgia Department of Education, 2008).

Data were analyzed using statistical information from 343 schools with graduation rate data, pre and post the induction of the graduation coach program, to determine if an association existed between the variables. In addition to graduation rate

data, information on school locale, race and ethnicity percentages, free and reduced lunch percentages, attendance and science achievement data were collected and analyzed to determine if those control variable were associated with the graduation rates pre and post the induction of the graduation coach program. After collecting data and preparing to analyze Georgia High School Graduation Test (GHSGT) scores in science, I learned that changes in Georgia's science curriculum had taken place during the years of the study (Georgia Department of Education, 2001). As a result of that finding, GHSGT scores in science were not controlled for due to the change in the curriculum and test. Data were analyzed to provide information regarding the association of graduation rates pre and post the induction of the graduation coach program. The answer to the overarching research question and 3 sub-questions were Ascertained by obtaining and analyzing data from Georgia's Department of Education (2011) and The National Center for Education Statistics (2011).

Data analysis revealed that graduation rates during the graduation coach period were statistically higher than graduation rates prior to the inception of the graduation coach program. These finding are consistent with research conducted on graduation coach programs in other states. For example, Lacefield et al. (2010) found preliminary indications that a Michigan graduation coach program was effective in helping some at-risk students complete their high school graduation requirements. Education Week (2010) reported that South Carolina's graduation coach program was reducing the number of high school dropouts. Other studies that have examined graduation coach programs have reached inconclusive findings (e.g., Young, 2008). Although there is still very little research on the effectiveness of graduation coach programs (Alliance for

Excellent Education, 2007; Heckman & LaFontaine, 2007) or other programs designed to increase graduation rates, the results from the current study and findings reported by Lacefield et al. and Education Week are preliminary evidence that such programs can be effective.

In addition to the positive effects of the graduation coach program, a significant difference was found in socioeconomic status. The graduation coach group had a higher percentage of students on free and reduced lunch than that non coach group. The groups were not statistically significantly different in regard to attendance rates. With regard to race and ethnicity, the graduation coach group had a significantly higher percentage of Hispanic students a significantly lower percentage of White students than did the pre graduation coach group. No statistically significant differences were found for Asian students and Black students for the two groups. However, the two groups were had statistically significant difference in science pass rate with a higher percentage of students passing during the graduation coach period than during the non coach period. However, it must be noted that the science curriculum in Georgia changed from Quality Core Curriculum to Georgia Performance Standard during the year of this study (Georgia Department of Education, 2008). Science achievement was not used during the study due to the change in curriculum and the Georgia High School Graduation Test in science (Georgia Department of Education, 2011)

The ANCOVA analysis found that graduation rates were statistically significantly higher during the graduation coach years after controlling for free/reduced lunch, attendance rates, and race and ethnicity. The adjusted mean graduation rate for the non coach group was 68.22% and the adjusted graduation rate for the coach group was

77.58%. Data analysis showed a 9.36% differences between the two groups with regard to graduation rate. Graduation rates were higher during the graduation coach time period.

Findings for Locale

Data were analyzed to determine if pre and post graduation coach program induction graduation rates would be affected by high school locale. Results from the independent *t*-test indicate that there were statistically significant differences in graduation rates for city high schools, rural high schools, suburban high schools, town high schools, metropolitan Atlanta high schools, and high schools outside of metropolitan Atlanta when comparing graduation rates of graduation coach groups and non graduation coach groups. Statistical significance was also found in free/reduced lunch status, race and ethnicity, and science pass rate for all six groups with the exception of city high schools. City high schools had a significant change for free/reduced lunch, but no significant change for race or ethnicity. Although there is limited research that examined the association of graduation coaching graduation rates in rural, city, suburban, town, metropolitan Atlanta area and non metropolitan Atlanta schools, this study provides insight on the effectiveness of the programs in those areas. Previous research (Education Week, 2010; Lacefield et. al, 2010) indicated that graduation coaching has positively impacted similar communities in other states (Education Week, 2010; Lacefield et. al, 2010).

City high schools. ANCOVA results for city high schools indicated graduation rates were statistically significantly higher in the graduation coach group than in the non coach group when controlling for free/reduced lunch status, attendance rates, and race and ethnicity. The adjusted mean graduation rate for non coach group was 64.79% and

the adjusted mean graduation rate for the coach group was 74.20%. Data analysis indicated that a 9.41% increase in graduation rate occurred during the graduation coach period.

Student ethnicity and socio-economic status affected students' engagement which is a predictor for high school completion (Archambault et al., 2009& Neild et al., 2007). Another indicator for engagement is student absenteeism (Appleton et. al., 2008; Sinclair et al, 2005). Graduation rates remained statistically significantly higher in all locales when controlling for average daily attendance. Graduation coaches have documented hours dedicated to helping improve a schools attendance rate, which is a factor when considering graduating from high school (Georgia Department of Education, 2008; Neild et. al, 2007). Students on graduation coaches' caseloads are considered attendance problems if the students do not attend class more than 92% of the time enrolled (Georgia Department of Education, 2008).

Rural High Schools. ANCOVA results for rural high schools indicated that graduation rates were statistically significantly higher in graduation coach group than in non coach group when controlling for free/reduced lunch status, attendance rates, and race and ethnicity. Data analysis indicated that a 9.66% increase in graduation rate occurred during the graduation coach period for rural schools.

Suburban high schools. ANCOVA results for suburban high schools indicated that graduation rates were still statistically significantly higher for the coach group than the non-coach group after controlling for free/reduced lunch status, attendance rates, and race and ethnicity. Data analysis indicated that an 8.3% increase in graduation rate occurred during the graduation coach period for suburban schools.

Town high schools. ANCOVA results for town high schools indicated that graduation rates were statistically significantly higher in the graduation coach groups as compared to non-coach groups after controlling for free/reduced lunch status, attendance rates, and race and ethnicity. Data analysis indicated that a 10.77% increase in graduation rate occurred during the graduation coach period for town schools.

Metropolitan Atlanta high schools. ANCOVA results for metropolitan Atlanta high schools indicated that graduation rates were statistically significantly higher in the graduation coach group as compared to the non-coach group after controlling for free/reduced lunch status, attendance rates, and race and ethnicity. Data analysis indicated that a 7.15% increase in graduation rate occurred during the graduation coach period metropolitan Atlanta high schools.

High Schools outside of metropolitan Atlanta area. ANCOVA results for high schools outside of the metropolitan Atlanta area indicated that graduation rates were statistically significantly higher for coach schools when compared to non-coach schools. Data analysis indicated that a 9.52% increase in graduation rate occurred during the graduation coach period for high school outside of the metropolitan Atlanta area.

Summary for locale. Results of the study found that between graduation rates and the graduation coach program remain significant and positive across all groups including city high schools, rural high schools, suburban high schools, town high schools, metropolitan Atlanta high schools and high schools outside of metropolitan Atlanta. However, the increase in graduation rates during the coach period varied by group with the highest increase emerging from town high schools with a 10.77% increase in graduation rate and the smallest increase emerging for metropolitan Atlanta high schools

with an increase of 7.15%. Therefore, the association between the graduation rates and the graduation coach program varied across city, rural, suburban, metropolitan Atlanta, and non metropolitan Atlanta high schools. However, the research is consistent with other studies on graduation coaching conducted in other states (Education Week, 2010; Lacefield et al., 2010).

Comparisons for Public Schools in Atlanta, DeKalb County, and Clayton County

Data were analyzed to evaluate whether or not graduation rates in the densely populated areas of Atlanta, DeKalb County, and Clayton County were associated with the graduation coach program induction. Results from the independent *t*-test indicate that there were statistically significant differences in graduation rates for DeKalb County Schools and Clayton County Schools when comparing graduation coach groups and non graduation coach groups. However, there was no statistically significant difference in graduation rates for Atlanta Public Schools when comparing graduation coach groups and non graduation coach groups. Statistical significance for free/reduced lunch status was only found for Clayton County Schools.

Atlanta public schools. ANCOVA results for Atlanta Public Schools indicated that graduation results were not statistically significantly higher after controlling for socioeconomic status, attendance rates, and race and ethnicity when comparing the coach group to the non coach group. Although the adjusted means were higher, results were not statistically reliable given the small sample size (Field, 2009). Data analysis indicated that a 9.41% increase in graduation rate occurred during the graduation coach period. These findings are similar to what was reported in other groups in the study. Although Atlanta Public School did not show statistical significance, due to its low power and the

small amount of schools in the sample size, graduation rates still increased similar to other school locales and local school systems that were studied.

DeKalb County Schools. ANCOVA results for DeKalb County Schools indicated that graduation rates were statistically significantly higher in the graduation coach group as compared to the non-coach group after controlling for socioeconomic status, attendance rates, and race and ethnicity. Data analysis indicated that a 10.75% increase in graduation rate occurred during the graduation coach period. These finding are consistent with other groups examined during the study demonstrating an increase in the graduation rate during the graduation coach time period.

Clayton County Schools. ANCOVA results for Clayton County Schools indicated that graduation rates were statistically significantly higher in the graduation coach group than the non-coach group after controlling for free/reduced lunch status, attendance rates, and race and ethnicity. Data analysis indicated that a 9.4% increase in graduation rate occurred during the graduation coach period. Interestingly, none of the covariates were statistically significant for Clayton County Schools.

Results for the comparisons of the three public school districts found that that graduation rates post graduation coach program were higher than prior to the program. Graduation rates were statistically significantly higher in the DeKalb County Schools and Clayton County Schools post the induction of the graduation coach program. In the Atlanta Public Schools, however, the differences in graduation rates were not statistically significant due to the low power and the number of high schools in the district. However, graduation rates did increase in Atlanta Public Schools.

Conclusions

I analyzed the findings from the study to conclude:

1. Graduation rates were statistically significantly higher after the induction of the graduation coach program when compared to graduation rates prior to the induction of the graduation coach program.

2. City high schools, rural high schools, suburban high schools, town high schools, metropolitan Atlanta high schools and high school outside of metropolitan Atlanta had statistically significantly higher graduation rates post the induction of the graduation coach program in Georgia.

3. No statistical significance was found in Atlanta High Schools when looking at graduation rates pre and post the induction of the graduation coach program.

4. The largest increase in graduation rate during the graduation coach program for locales emerged for town high schools with an increase of 10.77%.

5. The smallest increase in graduation rates during the inception of graduation coach program for locales emerged for metropolitan Atlanta high schools with an increase of 7.15%.

6. DeKalb County Schools had a largest increase for school districts, 10.75%; therefore, the graduation coach program yielded the most change for DeKalb County's graduation rate when comparing other groups examined.

7. Graduation rates have increased significantly increased since the 2006 induction of the graduation coach program in Georgia in all schools, city schools, rural schools, suburban schools, town schools, Dekalb County schools, Clayton County Schools, schools inside of metropolitan Atlanta area and those outside of the metropolitan Atlanta area.

8. The percentage of students on free and reduced lunch has statistically significantly increased since the inception of the graduation coach program in Georgia between the years 2004-2006 and 2007- 2010.

9. Average daily attendance in Georgia high schools have statistically significantly changed since the inception of the graduation coach program in Georgia.

10. The percent of Hispanic students in high schools in the state of Georgia have increased during the time period that the graduation coach program has been implemented.

Implications

The graduation scores increased during the period from 2007 through 2010 following the implementation of the graduation coach program. Attendance rates did not have a significant change during the years of study; however, race and ethnicity percentages, did have significant changes with white population decreasing and the Hispanic population increasing. In addition, free and reduced lunch percentages did change significantly during the period of the study. School location did not have a significant impact on whether graduation rates changed through-out the state. The

increase in graduation rates since the inception of the graduation coach program varied across locales in the state of Georgia. Drawing from this study and the previous studies previously mentioned, high schools may want to evaluate the graduation coach program in the following areas:

1. Schools should identify interventions of graduation coaches that have the most impact on students graduating. Graduation coaches should spend more time on instruction and achievement related tasks that have more influence on graduation rate (Taylor and Loftrom, 2008 & National Dropout Prevention Center, 2010).

2. School systems should consider utilizing more than one type of intervention program or strategy to address the dropout crisis (Prevatt and Kelly, 2003). Effective dropout prevention programs and strategies should be adopted by schools with low graduation rates multiple program to address the dropout crisis (Prevatt and Kelly, 2003).

3. Student attendance is crucial to school completion. Administrators and graduation coaches should continue to monitor student attendance protocol (Georgia Department of Education, 2008 & Georgia Department of Education, 2009). School leaders should consider ways to increase student attendance (Neild et al, 2007)

4. Training for graduation coaches across the state should vary based on the percentage of students identified as being at risk in schools. Schools with high at risks populations, should provide more guidance and assistance to

graduation coaches that serve those schools (Georgia Department of Education, 2008).

The problem of low graduation rates is pervasive across the country (National Center for Educational Statistics, 2010), among minority groups (Neild et al., 2007), and in Georgia (Governor's office of Student Achievement, 2008; National Center for Educational Statistics, 2010). The negative consequences of failing to graduate are profound and include difficulty finding and maintaining jobs (Bradshaw et al., 2008), low pay (Bradshaw et al., 2008; U.S. Bureau of Labor Statistics, 2008), poverty (Heckman & LaFontaine, 2007), and criminality (Lochner, 2007; Lochner & Moretti, 2004). In addition to personal consequences for dropouts, society pays a cost for low graduation rates in terms of poverty, crime (Alliance for Excellent Education, 2007; State Legislatures, 2008), and lower tax revenues (Hoff, 2007). This study has provided preliminary evidence that graduation coach programs can increase high school graduation rates. However, such programs continue to face challenges including difficulty in retaining graduation coaches (Benton, 2010). According to Benton (2010), one of the reasons for the difficulty in retaining graduation coaches is state education funding cuts. In this current study and in other research we found that the benefit to the individual and to society of increased high school graduation rates attributable to graduation coach programs justifies the costs associated with such programs (Georgia Department of Education, 2008 & Lacefield et. al, 2008).

Recommendations

Based on the finding of the study that examined the association between the graduation coach program and Georgia's graduation rate, The following recommendation are made for future researchers, school leaders and community members.

1. A qualitative study that examines administrators' perceptions regarding the effectiveness of the graduation coach program on achievement in specific schools should be conducted to learn about specific experiences with graduation coaches and administrators in buildings.

2. Achievement variables should be considered to determine if the association exist between graduation rate and achievement in areas such as math, reading and social studies achievement.

3. Surveys or interviews completed by students who were on caseloads of graduation coaches would provide insight on students' perceptions regarding the impact of the graduation coach on them completing school.

4. Given that there was 9.36% increase it is suggested that the Graduation coach programs should continue considering the increases in graduation scores since the induction of the coach program.

5. Qualitative and Quantitative studies on other intervention programs geared towards helping students complete school should be conducted providing results for the impact of the programs on rural, urban and suburban school systems.

6. A study that examines the impact of a specific graduation coach intervention should be conducted to assess the association between the intervention and student achievement as defined by them graduated high school.

7. A qualitative study should be completed that examines the percent of students on graduation coaches caseloads that graduate from high school versus the percentage of students on graduation coaches caseloads that do not graduate from high school.

8. Failure on one achievement test should not determine whether a student receives a high school diploma in the state of Georgia. A combination of measures should be used to determine high school completion.

Dissemination

This study will be useful for all individuals who are involved in supporting and promoting education in the United States and in Georgia. Administrators, graduation coaches, counselors, teachers, parents and community members will benefit from learning about the results of this study and the association between the graduation coach program and Georgia's graduation rate. The results of this study will be discussed with high school administrators in schools in the United States and the state of Georgia that would like to improve their graduation rates, as well as those schools that are satisfied with their graduation rates, but would benefit from strategies and interventions that will help them maintain their high graduation rates. In addition, I will contribute to professional literature related to graduation completion by publishing the dissertation and writing an article about the association of the graduation coach program and Georgia's graduation rate.

Concluding Thoughts

No Child Left Behind (2001) caused many school systems in the United States and in Georgia to closely monitor student achievement measured not only by test scores, but student attendance and graduation rate which are second indicators when determining whether a school made Adequate Yearly Progress (No Child Left Behind, 2001). Georgia response to address meeting the goal of 100% graduation rate by 2014 was the graduation coach program. Although results from this study show an increase in graduation rates since the inception of the graduation coach programs, other initiatives in local schools throughout the state have been implemented simultaneously that may have contributed to the increase in graduation rates throughout the states.

In many schools in the state of Georgia, Professional Learning Communities have been implemented. Professional learning communities are schools in which the professional staff as a group consistently operates along five dimensions (1) supportive and shared leadership (2) shared value and vision, (3) collective learning (4)supportive conditions, and (5) shared personal practice (Hord,1997). Professional Learning communities require teachers, and other members of the staff to help each other professionally in order to better help students achieve academically (Norwood, 2007). The professional staff come together to analyze data and make decisions regarding data and student work. This collective effort of staff members to make Adequate Yearly Progress (AYP) and improve student achievement in professional learning communities could have also contributed to the improvement over the years observed in this study. In addition, in several high schools in the state of Georgia, small learning communities have been implemented to assists schools in improving student achievement including

graduation rates. Research suggests that small schools contribute to helping students become more successful as a result of the emphasis that is placed on reading and math skills, personalization through the use of advisory, mentoring and career planning (Steinberg and Alameida, 2004). Several school systems in the state of Georgia have implemented small learning communities in an effort to improve student achievement. Andrews, Duncombe, & Yinger (2002) contended that smaller schools are more conducive to learning suggesting the student achievement improves as a result of smaller learning communities. Perhaps those efforts, in addition to the efforts of the graduation coaches may have been a contributing to the increase in graduation rates across the state of Georgia.

In Conclusion, my interest in this topic of high school completion and graduation coaching stems from my involvement when helping prepare for the graduation coach launching celebration in 2006. During that time, I was a teacher and Student Government Coordinator, when I was asked to assist with launching celebration. The launching of the graduation coach program took place at the high school where I was assigned. Participants of the launching celebration included, Governor Sunny Purdue, school administrators, graduation coaches from around the state, teachers, students government members, cheerleaders, band members, members of the local community and several local media stations. Since that experience, I have had an interest in high school completion and dropout prevention.

High school completion has been a topic of conversation for many years in the United States and Georgia. However, since 2001 when *No Child Left Behind* became law making graduation completion an indicator as to whether schools made Adequate Yearly

Progress (AYP), many school leaders in Georgia have placed emphasis on preventing incidents of students not completing high school. One of the biggest initiatives to address the dropout problem in Georgia has been the graduation coach program. It has been demonstrated that graduation rates have improved since the inception of the graduation coach program in all locales across the state. However, it is important the school leaders pay closer attention to the risk factors associated with students not completing high school. Schools must address the specific issues that impact graduation rates at their schools or in their communities. In most cases, one intervention will not suffice. Schools leaders must use multiple approaches to address the individual needs of students in their buildings to combat the dropout crisis.

I worked in communities with high dropout rates and with students who have high risk factors for dropping out of school. As a result of these experiences, I contend that academic and social risk factors are critical components of intervention and prevention programs. When addressing the dropout crisis, it is imperative that school leaders examine academic and social factors that contribute to students dropping out of school prior to receiving a high school diploma.

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APPENDIX A

IRB APPROVAL LETTER

Georgia Southern University
Office of Research Services & Sponsored Programs

Institutional Review Board (IRB)

Phone: 912-478-0843
Fax: 912-478-0719 IRB@GeorgiaSouthern.edu
Veazey Hall 2021
P.O. Box 8005
Statesboro, GA 30460

To: Wardell C. Hunter III
Brenda Marina
Department of Educational Research

cc: Charles E. Patterson
Vice President for Research and Dean of the Graduate College

From: Office of Research Services and Sponsored Programs
Administrative Support Office for Research Oversight Committees
(IACUC/IBC/IRB)

Date: February 4, 2011

Expiration Date: May 31, 2011

Subject: Status of Application for Approval to Utilize Human Subjects in Research

After a review of your proposed research project numbered **H12248** and titled **"An Examination of the Association between Georgia's Graduation Coach Program and Georgia's Graduation Rate,"** it appears that your research involves activities that do not require full approval by the Institutional Review Board according to federal guidelines. Your approval is for a maximum of **400** subjects.

According to the Code of Federal Regulations Title 45 Part 46, your research protocol is determined to be exempt from full review under the following exemption category(s):

B4 Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

Therefore, as authorized in the Federal Policy for the Protection of Human Subjects, I am pleased to notify you that your research is exempt from IRB approval. **You may proceed with the proposed research.**

Please notify the IRB when you have completed the project by emailing irb@georgiasouthern.edu. Include the date of completion, the number of subjects (records) utilized and if there were any unexpected events related to the subjects during the project. (If none, state no unexpected or adverse events occurred during the conduct of the research.)

Sincerely,

Eleanor Haynes

Eleanor Haynes
Compliance Officer

APPENDIX B

SUMMARY OF DATA ANALYZED

Column	Row
1. Row Counts	Number of rows on spreadsheet
2. County Name	Name of county where school is located
3. Unique Identification	Each school has a unique identification number
4. School Name	Name of school
5. Non-traditional/Special School	Enter 0 for traditional school; enter 1 for non-traditional school
6. Atlanta Area School	School located in Atlanta area: Enter 0 for area outside of Atlanta; enter 1 for school in Atlanta area.
7. Record	Number of reported graduation rates
8. School Location- location of school: city, rural, town or suburban	Location of school: city, rural, town or suburban
9. Year	Year of record
10. Coach	The specified time (2004-2006) enter 0 if coach program was not introduced during specified time; enter 1 if coach program was introduced during specified time (2007-2010)
11. Graduation Rate	Percent of students who graduated from the institution
12. Social Economic Status	Free and Reduced Lunch percentages
13. Science Sub	Percent of students who passed the graduation test
14. Average Daily Attendance	Average daily attendance rate of students at school
15. Race Percentages Hispanics	Percent of Hispanic at school during specified time period
16. Race Percentages Asian	Percent of Asian in school during specified time period
17. Race Percentages Black-	Percent of Black students in school during specified time period
18. Race Percentages White	Percent of White students in school during specified time period

APPENDIX C

DATA COLLECTION BY LOCALE

Locale	Districts
City	Atlanta Public Schools, Bibb County, Chatham County, Clarke County, Dalton City, Dougherty County, Fulton County, Gainesville City, Glynn County, Houston County, Liberty County, Lowndes County, Marietta City, Muscogee County, Richmond County, Valdosta City
Rural	Atkinson County, Bacon County, Baldwin County, Banks County, Barrow County, Bartow County, Berrien County, Bibb County, Bleckley County, Brantley County, Brooks County, Bryan County, Bulloch County, Burke County, Butts County, Calhoun County, Candler County, Carroll County, Charlton County, Chattooga County, Clinch County, Coffee County, Columbia County, Coweta County, Coweta County, Crawford County, Crisp County, Dawson County, Dodge County, Dooly County, Echols County. Effingham County, Emanuel County, Fannin County, Fayette County, Floyd County, Forsyth County, Franklin County, Gilmer County, Glascock County, Greene County, Habersham County, Hall County, Hancock County, Haralson County, Harris County, Heard County, Henry County, Houston County, Irwin County, Jackson County, Jasper County, Jefferson City, Jefferson County, Jones County, Lanier County, Laurens County, Lincoln County, Long County, Madison County, Marion County, McDuffie County, Meriwether County, Miller County, Mitchell County, Monroe County, Montgomery County, Morgan County, Newton County, Oglethorpe County, Paulding County, Peach County, Pickens County, Pierce County, Pike County, Polk County, Putnam County, Rabun County, Randolph County, Richmond County, Rome City, Schley County, Screven County, Social Circle City, Spalding County, Stephens County, Stewart County, Talbot County, Taliaferro County, Tattnall County, Taylor County, Telfair County, Thomas County, Thomaston-Upson County, Towns County, Troup County, Twiggs County, Union County, Vidalia City, Walker County, Ware County, Warren County, Wayne County, Wheeler County, Whitfield County, Wilcox County, Wilkinson County, Worth County
Suburban	Buford City, Catoosa County, Chatham County, Cherokee County, Chickamauga City, Clayton County, Cobb County, Columbia County, Decatur City, DeKalb County, Douglas County, Fayette County, Forsyth County, Forsyth County, Fulton County, Glynn County, Gwinnett County, Hall County, Henry County, Houston County, Lee County, McIntosh County, Oconee County, Rockdale County, Spalding County, Walker County, Walton County, Whitfield County
Town	Appling County, Barrow County, Ben Hill County, Berrien County, Bremen City, Bryan County, Bulloch County, Calhoun City, Camden County, Carroll County, Carrollton City, Cartersville City, Colquitt County, Commerce City, Cook County, Coweta County, Dade County, Decatur County, Dublin City, Early County, Elbert County, Emanuel County, Evans County, Floyd County, Gordon County, Grady County, Hart County, Houston County, Jeff Davis County, Jenkins County, Lamar County, Lumpkin County, Macon County, Meriwether County, Murray County, Pelham City, Polk County, Pulaski County, Seminole County, Sumter County, Terrell County, Thomasville City, Tift County, Toombs County, Treutlen County, Trion City, Troup County, Turner County, Walton County, Washington County, White County, Wilkes County