

## ABSTRACT

### EDUCATIONAL LEADERSHIP

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### FACTORS AFFECTING HIGH SCHOOL GRADUATION RATES IN METROPOLITAN ATLANTA PUBLIC SCHOOLS

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The purpose of this study was to critically examine the graduation rate of students who enroll in high schools in Georgia, and to identify the variables that may be impacting their graduation rate. The dependent variable was graduation rate and the independent variables were socioeconomic status (SES), class size, student attendance, teacher qualifications, teacher experience, school location, percent of students passing the Georgia High School Graduation Test (GHS GT) mathematics test, percent of students passing GHS GT social studies test, percent of students passing GHS GT English /language arts test, percent of students passing GHS GT science test, and percent of students passing GHS GT writing test. The quantitative data were analyzed using the Statistical Package for the Social Sciences (SPSS). The data are presented in two parts,

the statistical distribution of the variables to observe the extent of their variations, and the results and analyses of the statistical tests in response to the identified research questions. All of the statistical procedures were tested at the (0.05) significance level. The data were collected from state department of education for 30 schools. In addition, there were two schools surveyed to collect data on teacher perceptions on the following factors: principal leadership style, teacher motivation, teacher instructional quality, and school climate and teacher workload. This data were compared to the school's SES and graduation rate to see if there were descriptive patterns in the survey data and the schools' graduation rates. A Pearson correlation was used to test for significant relationships of the dependent and independent variables collected from the state of education department, and a descriptive frequency analysis was used to analyze the survey data.

The findings of this research suggest that graduation rate in Georgia are affected by ethnicity, gender, student with disabilities (SWD), teacher qualifications, and teacher experience, leadership style, and quality of instruction.

FACTORS AFFECTING HIGH SCHOOL GRADUATION RATES IN  
METROPOLITAN ATLANTA PUBLIC SCHOOLS

A DISSERTATION

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BY

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**CHAPTER I**  
**THE PROBLEM IN CONTEXT**

**Purpose of the Study**

The purpose of this study is to critically examine the graduation rate of students who enroll in high schools in Georgia, and to identify the variables that may be impacting their graduation rate. High school graduation rate has a history of being used as an accountability process to measure school effectiveness based on the *No Child Left behind Act of 2001*. Belfield, Levin, Muennig, and Rouse (2007) reported that graduating from High school is associated with higher incomes, better health, lower criminal activity, and lower welfare receipt. Furthermore, high school graduation has private benefits but it also produces significant public benefits.

**The Effects on Labor Market Income and Tax Revenue**

The data in Table 1 show the effects on labor market on income and tax revenue. The table shows a link between education and income. People with higher education have higher incomes and more tax is deducted from their wages to finance public services. Dropouts have lower income, which means lower tax contributions to finance public services.

Table 1

*Labor Market Outcomes by Educational Attainment (Ages 21–64)*

	High School Dropout	High School Graduate	Some College	BA Degree or More
Employment %	71	79	81	89
Male: Black	49	66	70	83
Male: Hispanic	70	78	69	85
Male: Other	71	79	77	88
Female: White	46	65	72	78
Female: Black	46	63	70	84
Female: Hispanic	51	57	64	65
Female: Other	48	62	69	73
<b>Average Annual Earnings</b>				
Male: White	\$22.800	\$33.900	\$40.300	\$79.100
Male: Black	\$13.500	\$21.800	\$29.600	\$53.800
Male: Hispanic	\$21.400	\$24.000	\$26.000	\$54.200
Male: Other	\$22.300	\$30.100	\$34.900	\$69.700
Female: White	\$ 7.800	\$16.500	\$20.400	\$35.600
Female: Black	\$10.000	\$14.200	\$19.500	\$40.600
Female: Hispanic	\$ 9.900	\$14.500	\$17.300	\$39.000
Female: Other	\$ 8.600	\$15.700	\$19.200	\$36.900
Source: Current Population Survey (March 2003 and 2004)				

### Lifetime Income and Tax Benefits from Graduation

Figures 1 and 2 show extra lifetime earnings and additional lifetime tax payments after age 20 from finishing high school and going to college.

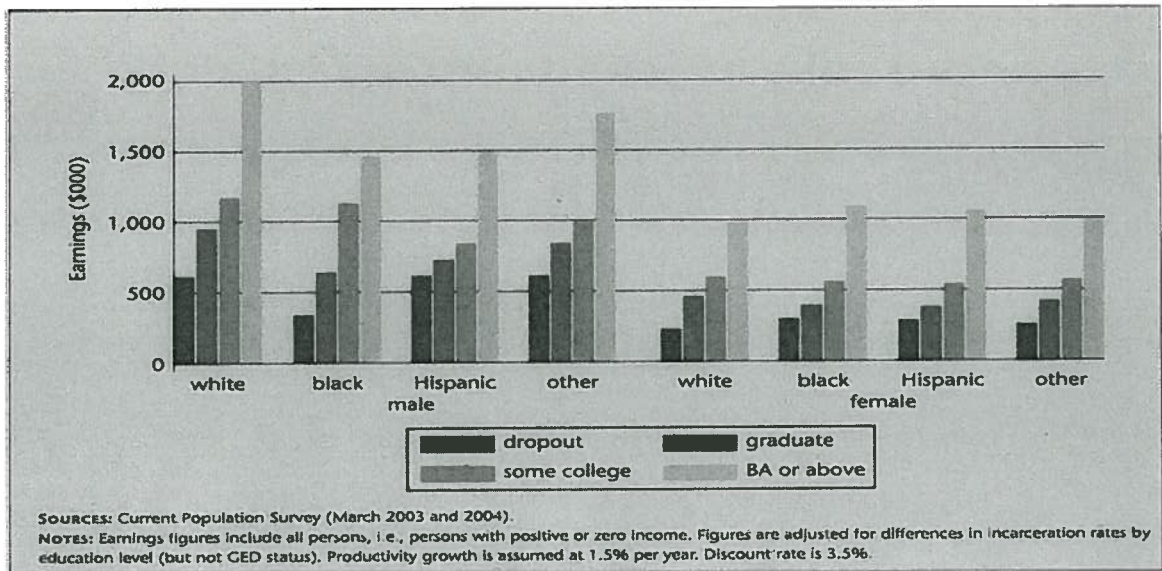


Figure 1. Lifetime Earnings by Education Level

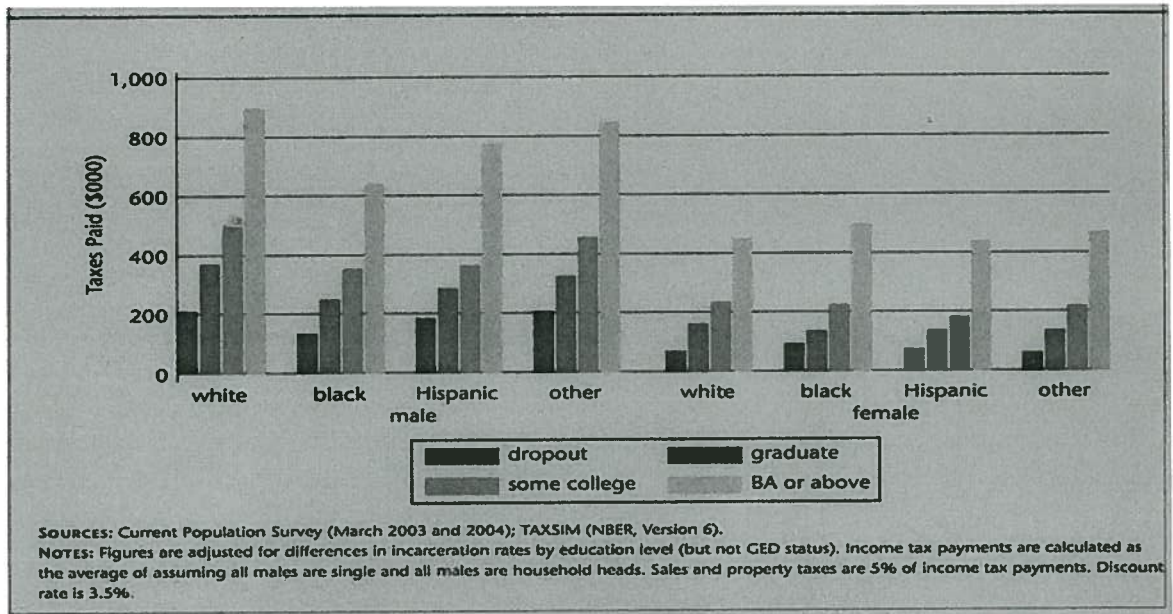


Figure 2. Lifetime Tax Payments by Education Level

### **The Cost and Benefits of High School Graduation**

Table 2 shows the lifetime economic benefits per expected high school graduate. It is believed that each new graduate will, on the average, generate economic benefits to the public sector of \$209,100 .The amounts vary by gender and race, with high school graduation providing a gross public saving of \$196,300 - \$268,500 for males and \$143,000 - \$174,600 for females.

Table 2

#### *Total Lifetime Economic Benefit per Expected High School Graduate*

	Present Value Lifetime Public Economic Benefits	
	Male	Female
White	\$161,100	\$162,000
Black	\$268,500	174,000
Hispanic	\$196,300	143,000
Other	\$239,000	157,300
Average	\$209,100	

### **Lifetime Income and Tax Benefits from Graduation**

As seen in Table 3, the average lifetime benefit in terms of additional taxes per expected high school graduate is \$139,100. The amounts vary by race, gender, but for each subgroup they are significant.

Table 3

*Lifetime Total Tax Payments per Expected High School Graduate*

	Male	Female
White	\$202,700	\$109,100
Black	\$157,600	\$ 94, 300
Hispanic	\$119,000	\$ 85,000
Other	\$168,600	\$ 96,700
Average	\$139,100	

**Effects of Education on Welfare and Expenditures**

Table 4 shows a significant difference in temporary assistance for needy families (TANF) receipts by education level. Almost half of all recipients have less than a high school education, a proportion much higher than their representation in the population. Those with any college education are highly unlikely to receive welfare.

Table 4

*Welfare Recipients by Educational Level*

	Less Than High School	High School Graduate	Some College or Above
Temporary Assistance for Needy Families (Ages 21-64)	553,000	623,700	40,100
Housing Assistance (Ages 21-64)	745,000	841,800	54,100
Food Stamps (Age 20)	95,700	226,000	

*\*Greater educational attainment is associated with lower receipt of public assistance payments or subsidies.*



### Welfare Receipt and High School Graduation

Table 5 shows the average cost-savings per expected new graduate is \$3,000 over the lifetime.

Table 5

*Welfare Cost: Savings per Expected High School Graduate*

	Male	Female
White	\$1,200	\$5,000
Black	\$3,300	\$9,000
Hispanic	\$1,200	\$3,100
Other	\$1,200	\$3,100
Average		\$3,000

### The Effects on Crime Behavior and Expenditures

Table 6 shows that the economic cost of crime is high. Listed in the table are high cost crimes. The last column shows the impact of high school graduation (adjusted for college progression) on the commission of these crimes with overall crime rates reduced by 10-20%. Broadly speaking, crime research finds that higher educational attainment reduces crime both by juveniles and adults.

Table 6

*Annual Criminal Activity by Dropouts (Age 20)*

Types of Crime	Per 1,000 High School Dropouts		Impact from Expected High School Graduation
	Arrests	Crimes	
Murder	0.48%	0.82%	-19.60%
Rape	0.69%	2.43%	-19.69%
Violent Crime	14.02%	32.24%	-19.69%
Property Crime	42.95%	279.17%	-10.50%
Drug Offenses	60.04%	600.43%	-11.50%

Notes: Violent crime includes robbery and aggravated assault. Property crime includes burglary, larceny-theft, arson, and motor vehicle theft. The share of total arrests by high school dropouts is based on incarceration rates.

**Lifetime Criminal Activity and Graduation**

Based on Table 7, the average saving per new high school graduate is \$26,600.

This amount is significantly higher for males than females.

Table 7

*Total Present Value Lifetime Cost-Savings from Reduced Criminal Activity*

	Criminal Justice System Expenditures – Extra Lifetime Savings Per Expected High School Graduate	
	Male	Female
White	\$30,200	\$8,300
Black	\$55,500	\$8,600
Hispanic	\$38,300	\$8,300
Other	\$30,200	\$8,300
Average	\$26,000	

When we calculate these benefits in a consistent form, their magnitudes are substantial (Belfield et al., 2007). This therefore reflects a belief in the important role of education in a knowledge-driven economy, and an appreciation of the fact that those without at least a high school diploma will be more severely handicapped in their labor market prospects than those who have a diploma.

High school graduation is very crucial to the extent that U.S Census data and the organization for postsecondary education opportunity found that people age 25–64 without a high school diploma earned an average of \$19,544 in 2005, and for the same age group, high school graduates earned an average of \$26,968 and college graduates with a bachelor's degree earned \$44,217 per year (Plucker, Spradlin, & Stanley, 2008). Belfield et al. (2007) stated that one of the best relationships in economics is the link between education and income: more highly educated people have higher income and failure to graduate from high school has both private and public consequences: income is lower, which means lower tax contribution to finance public services. Students who fail to graduate high school face a very bleak future because the basic skills conveyed in high school and higher education are essential for success in today's economy (Greene & Winters, 2002). Greene emphasized that students who do not receive high school skills are likely to suffer with significantly reduced earnings and employment prospects.

Belfield et al. (2007) quoted Cutler and Lleras-Muney (2006) by stating that high school graduates have improved health status and lower rates of mortality than high school dropouts and those with college education far even better. Belfield et al.

also stated that those with higher education are less likely to use public programs such as Medicaid and they typically have higher quality jobs that provide health insurance. This is because Medicaid eligibility is based on wages rather than health status, and those with more education are less likely to qualify (see related data below).

**The Effect of Graduation Rates on Health Status and Expenditures**

Based on the following Medicaid and Medicare charts (Figures 3 and 4), those with higher education attainment are less likely to use public programs such as Medicaid and Medicare because they typically have higher quality jobs that provide health insurance.

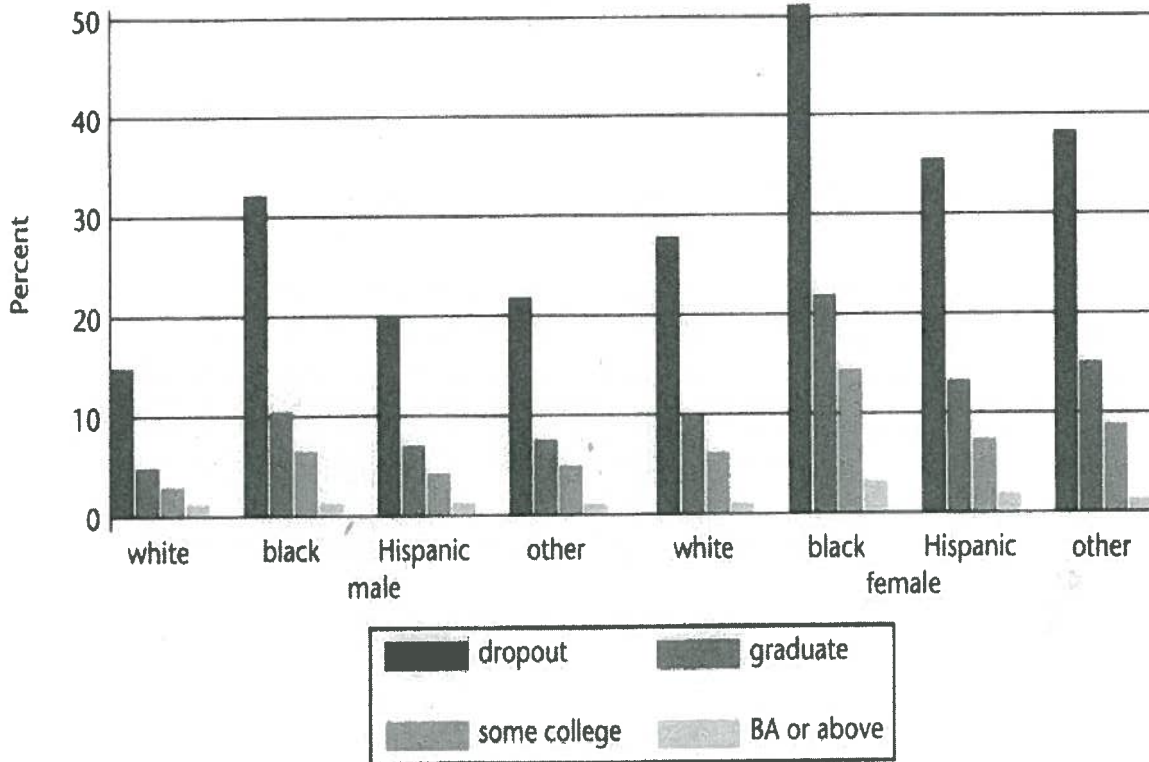
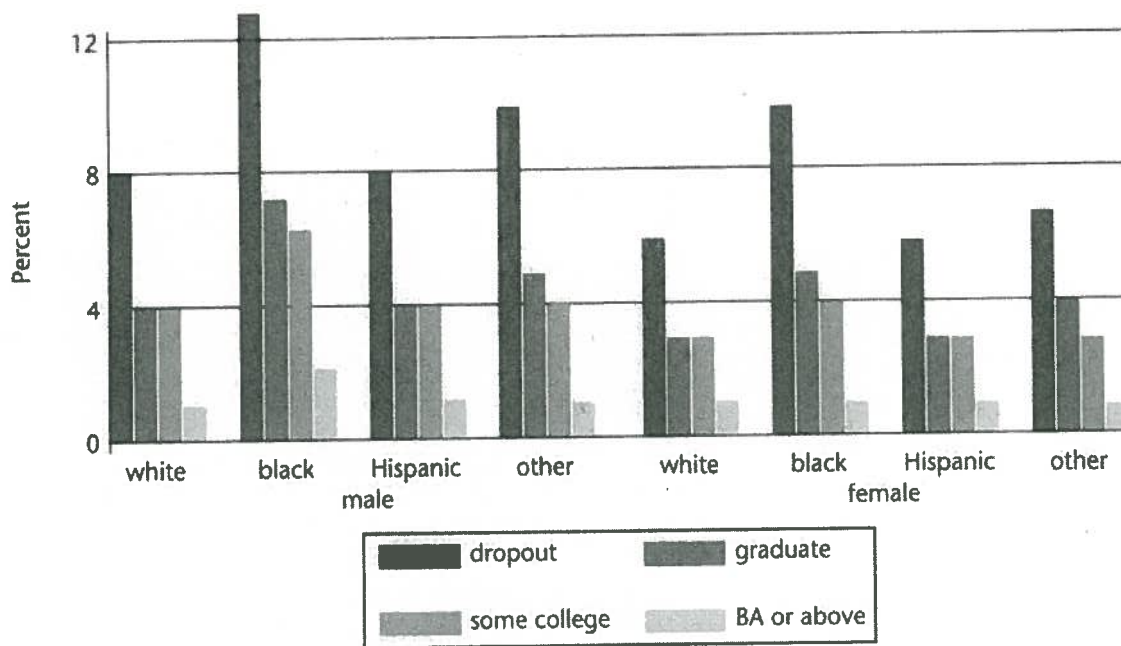


Figure 3. Medicaid Coverage



*Figure 4. Medicare Coverage*

Note: To qualify for Medicare, you must be one 65 years or older, but those under 65 years can qualify if they have social security disability income.

The No Child Left Behind Act of 2002 includes on-time graduation as one of its important objectives (Lawrence, & Joydeep, 2006). On-time national public high school graduation rates are approximately 66% - 70%, meaning that at least three out of ten students do not graduate through the regular school system within the conventional time allotted (Belfield et al., 2007). According to Belfield, graduation rates vary by gender and race. On-time public high school graduation rates for black males are as low as 43%. This he said compares to 48% for Hispanic males and similarly 71% for white males; and female rates vary similarly across races, but with higher graduation rates overall.

Prior to 2001, the Federal Government has had minimal contributions to education such as grants for elementary and secondary schools in the Northwest Ordinance of 1787, Land grants for Morrill Act of 1862, and the G.I bill of 1965. These acts were limited in scope and nature and provided support to education with less than 10% of total costs, even after the legislation of 1965 (Cleary, 2004). The government's stance on education reflected the nature of the Tenth Amendment to the Constitution of the United States: The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively or to the people (Cleary, 2004).

In 2002, President Bush's administration broadened significantly the federal government's role in education by enacting the No Child Left Behind Act of 2002. This was a revision of the Elementary and Secondary Act of 1965 (Cleary, 2004). Cleary also reported that most schools in the wealthy suburban school districts were doing well, sending about 90% of their graduates to colleges while schools located in the inner cities and in minority areas, or in rural minority areas were doing poorly. Some states and localities were noted to be running into increasing problems of financing their elementary and secondary schools, thereby calling into question the tradition of local control of public schools.

According to Robert (2004), it was also discovered that when American students took standardized tests, such as SAT, their average scores went down year after year especially when compared with students from other countries. U.S. students ranked 13th, 17th, 28th or even lower depending on the test. The performance of U.S.

students on the National Science Foundation's *Third International Mathematics and Science Study* had U.S. students lagging behind students from East Asia and European countries (Robert, 2004). This situation led to the production of a document titled *A Nation At Risk* during President Ronald Reagan's era.

*A Nation At Risk* was reported in 1981 by National Commission on Excellence in Education unveiling the situation that the educational foundations of our society are being eroded by a rising tide of mediocrity that threatens our very future as a people. During George H. W Bush and Clinton's administration, the *Nation At Risk* was addressed further by *America 2000* and *Goals 2000*. These were federal initiatives aimed at emphasizing elementary and secondary educations in science and mathematics, along with increased standardized testing and improvements in the high school graduation rate.

The No Child Left Behind Act has gone further by holding States accountable for improving the education of all students. Standardized tests are conducted in all the states as part of the accountability processes. In Georgia, the Criterion Reference Tests (CRT) are taken at elementary and middle schools level in mathematics, science, reading, language arts and social studies, while in high schools, the End of Core Tests (EOCT) are taken in high schools in biology, social studies, English, and mathematics. In high schools also standardized tests in science, mathematics, social studies, language arts, and writing tests are taken as the graduation exit exams. States were required to report all test scores and in addition they were required to measure and report separately the performance of minority children—socially disadvantaged

students (SDS), students with disabilities (SWD), and students whose native language is not English (Limited English Proficiency [LEP] students). At least 95% of students in each subgroup in the district over a minimum number must be tested.

According to the No Child Left Behind Act, states are also required to establish a minimum level of proficiency in key subject areas and the number of students demonstrating proficiency must increase every year. Schools are also required to close the achievement gaps between the minority groups and white students.

Rutledge (n.d.), the specialist on assessment for Georgia high school graduation tests, reports that all students that are seeking to obtain Georgia high school diploma must pass the graduation test in four content areas as well as the Georgia High School Writing Test. The assessment tests ensure that students qualifying for the diploma have mastered essential core academic content and skills. Students with disabilities and English Language Learners may receive appropriate standard accommodations based on their needs and the specification of their individualized education program. Students with disabilities who are unable to participate in the standardized tests are assessed with Georgia Alternate assessment. The graduation tests in writing takes place in the fall while the tests on the core subject areas take place in spring. First time takers are required to take these tests in the 11th grade. If students do not pass all the required tests at first attempt, they have more opportunities even if they have left school to come back and re-take them as many times as possible. For the purposes of this study, we will be focusing on first time



takers. To comply with the No Child Left Behind Act of 2001 (NCLB), Georgia has defined a graduate as a student who leaves high school with a regular diploma (this does not include Certificates of Attendance or special education diploma) in the standard time (4 years) (Governor's office of Student Achievement, 2007).

With regard to scoring the tests, it is necessary to understand that schools in Georgia are undergoing a transition of curriculum from the older Quality Core Curriculum (QCC) to the recent Georgia Performance Standards (GPS). Therefore, there are three different curricula of the four content areas which are, QCC, Transitional and GPS. There are differences on test questions for the different versions. Version of the test that a student takes in his/her 11th grade depends upon the curriculum that he or she has attended in his previous grades. Hence the scoring system also depends upon the version of the test that the student has taken.

Following are scoring ranges and standard passing scores for the different versions

- All QCC and Transitional curriculums have a score range from 100 to 600 with 500 as the standard passing score.
- English Language Arts (GPS curriculum) has a scale score ranging from 100 to 350 with the standard passing score as 200.
- The scale scores for Science (GPS curriculum) range from 100 to 370. The passing score is 200. (<http://www.testpreppractice.net/GHSGT/ghsgt-scores.aspx>)

### **Performance Levels**

The students' performances are classified based on their performance levels. The QCC and Transitional versions of the tests have three basic performance levels which are as follows: (a) Pass Plus, (b) Pass, and (c) Fail. The GPS version of the Georgia High School Graduation Test (GHS GT) has four performance levels, which are as follows: (a) Honors, (b) Advance Proficiency, (c) Basic Proficiency, and (d) Below Proficiency. Performance levels according to GHS GT Scores are as follows:

- **QCC and Transitional Curriculums:** Score below 500 is Fail (for all content areas).
- **ELA:** Pass = 500 to 537; Pass Plus = above 538
- **Mathematics:** Pass = 500 to 534; Pass Plus = 535 or above
- **Science:** Pass = 500 to 530; Pass Plus = above 525
- **Social Studies:** Pass = 500 to 525; Pass Plus = above 525
- **GPS Curriculum: ELA and Science Performance Scores:** Below Proficiency Scores = below 200; Basic Proficiency = 200 to 234; Advanced Proficiency = 235 to 274; Honors = 275 or above

### **Calculating Graduation Rates**

Graduation rate methodologists have varied over time and across the nation. Presently, there is still a wide variety of calculation methods in effect although some of these methods have proven to be inaccurate and misleading (Stanley, Spradlin, & Plucker, 2006). It is very imperative to understand that graduation rate and dropout rate is not equal to 100% because some students may not fall into either of the

categories for several reasons. Some of the students who may not fall into either of these categories are students who are earning or have earned a general education diploma (GED), a special education diploma or a non-diploma course completion certificate or those students who are still enrolled in school but have not yet completed their education. The NCLB law outlines some basic characteristics for defining and measuring graduation rates, but states presently have wide flexibility on how they calculate graduation rates. The lack of a congruent, uniform set of federal guidelines has led to a diverse array of calculating methods, and often inaccurate or misleading (Stanley et al., 2006).

Various methods and formulas for calculating graduation rates as outlined by the NCLB law are:

1. **Completion Ratio:** Number of diploma recipients divided by an approximation of the starting 9<sup>th</sup> grade class. Method cannot fully account for entering cohort membership, net transfer, and grade retention. Only one State is using this process.
2. **Lever Rate:** Number of students leaving high school with a standard high school diploma, expressed as a proportion of all those documented leaving with a diploma or other completion credential or as a dropout. This method is sometimes referred to as a departure-classification index and 32 states are using this method including Georgia State.

**3. Georgia's Graduation Rate Formula:**

(number of students who graduate with a regular diploma)

÷

(number of 9th-12th grade dropouts from appropriate years + graduates + other completers)

- 4. Cumulative Promotion Index (CPI):** This calculation method was used extensively earlier this decade. This method determines graduation rates by evaluating the proportion of students who progress by one grade to the next from grades 9, 10, and 11, multiplied by the proportion of seniors who graduate at the end of grade 12.
- 5. Cohort Rate:** Percent of students from an entering ninth grade cohort who graduate with a standard diploma within four years. This method can account for transfers and students retained in grade. Student data may be tracked on a statewide or local basis. Sixteen states are using this process.
- 6. Composite Rate:** Proportion of students estimated to remain in high school until grade 12 and receive a diploma. The rate for a given year is calculated by multiplying together (a) the rate of persistence between grades 9 and 12 and (b) the percent of completers who receive a diploma rather than another credential. Only one state uses this method.
- 7. Persistence Rate:** Percent of students who remain in school from grade 9 through grade 12. Rate is calculated using (a) the percent of students not dropping out at specific grade levels or (b) the percent of students

estimated to be promoted from grade to grade. This method is used by only one state.

In order to comply with federal requirements, Georgia uses the National Center for Education Statistics (NCES), the “Leaver Rate.” This method defines a graduate as a student who leaves high school with a regular diploma in four years. This process does not include certificates of attendance or special education diploma (The Governor’s Office of Student Achievement, 2008). However, there seems to be a lack of unique statewide student identifiers which has not allowed Georgia to track individual students across all four years of high school until recently, therefore, the graduation rate is a “proxy calculation” and reflects an estimate of the percentage of students who entered ninth grade and graduated four years later. The formula used by Georgia is:

$$\frac{(\# \text{ of students who graduate with a regular diploma})}{(\text{first-time entering 9}^{\text{th}} \text{ graders in year } x-4) + (\text{transfers in}) - (\text{transfers out})}$$

### **Significance of the Study**

Part of goals 2000—Educate America Act of March 31, 1994—stated that by the year 2000, the high school graduation rate will increase to at least 90%.

American students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matters including English, mathematics, science, foreign languages, Civics and government, economics, art, history, and geography; and every school in

America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our nation's modern economy (Table 8).

Table 8

*Average Freshman Graduation Rate for Public High School Students by States:*

*School Year 2000-01 through 2006-07*

State	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
United States	71.7	72.6	73.9	74.3	74.7	73.4	73.9
Alabama	63.7	62.1	64.7	65.0	65.9	66.2	67.1
Alaska	68.0	65.9	68.0	67.2	64.1	66.5	69.1
Arizona	74.2	74.7	75.9	66.8	84.7	70.5	69.6
Arkansas	73.9	74.8	76.6	76.8	75.7	80.4	74.4
California	71.6	72.7	74.1	73.9	74.6	69.2	70.7
Colorado	73.2	74.7	76.4	78.7	76.7	75.5	76.6
Connecticut	77.5	79.7	80.9	80.7	80.9	80.9	81.8
Delaware	71.0	69.5	73.0	72.9	73.1	76.3	71.9
District of Columbia	60.2	68.4	59.6	68.2	68.8	65.4	54.9
Florida	61.2	63.4	66.7	66.4	64.6	63.6	65.0
Georgia	58.7	61.1	60.8	61.2	61.7	62.4	64.1
Hawaii	68.3	72.1	71.3	72.6	75.1	75.5	75.4
Idaho	79.6	79.3	81.4	81.5	81.0	80.5	80.4
Illinois	75.6	77.1	75.9	80.3	79.4	79.7	79.5
Indiana	72.1	73.1	75.5	73.5	73.2	73.3	73.9
Iowa	82.8	84.1	85.3	85.8	86.6	86.9	86.5

Table 8 (continued)

State	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Kansas	76.5	77.1	76.9	77.9	79.2	77.6	78.9
Kentucky	69.8	69.8	71.7	73.0	75.9	77.2	76.4
Louisiana	63.7	64.4	64.1	69.4	63.9	59.5	61.3
Maine	76.4	75.6	76.3	77.6	78.6	76.3	78.5
Maryland	78.7	79.7	79.2	79.5	79.3	79.9	80.0
Massachusetts	78.9	77.6	75.7	79.3	78.7	79.5	80.8
Michigan	75.4	72.9	74.0	72.5	73.0	72.2	77.0
Minnesota	83.6	83.9	84.8	84.7	85.9	86.2	86.5
Mississippi	59.7	61.2	62.7	62.7	63.3	63.5	63.6
Missouri	75.5	76.8	78.3	80.4	80.6	81.0	81.9
Montana	80.0	79.8	81.0	80.4	81.5	81.9	81.5
Nebraska	83.8	83.9	85.2	87.6	87.8	87.0	86.3
Nevada	70.0	71.9	72.3	57.4	55.8	55.8	52.0
New Hampshire	77.8	77.8	78.2	78.7	80.1	81.1	81.7
New Jersey	85.4	85.8	87.0	86.3	85.1	84.8	84.4
New Mexico	65.9	67.4	63.1	67.0	65.4	67.3	59.1
New York	61.5	60.5	60.9	60.9	65.3	67.4	68.8
North Carolina	66.5	68.2	70.1	71.4	72.6	71.8	68.6
North Dakota	85.4	85.0	86.4	86.1	86.3	82.1	83.1
Ohio	76.5	77.5	79.0	81.3	80.2	79.2	78.7
Oklahoma	75.8	76.0	76.0	77.0	76.9	77.8	77.8
Oregon	68.3	71.0	73.7	74.2	74.2	73.0	73.8
Pennsylvania	79.0	80.2	81.7	82.2	82.5	83.5	83.0
Rhode Island	73.5	75.7	77.7	75.9	78.4	77.8	78.4

Table 8 (continued)

State	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
South Carolina	76.5	57.9	59.7	60.6	60.1	61.0	58.9
South Dakota	77.4	79.0	83.0	83.7	82.3	84.5	82.5
Tennessee	59.0	59.6	63.4	66.1	68.5	70.6	72.6
Texas	70.8	73.5	75.5	76.7	74.0	72.5	71.9
Utah	81.6	80.5	80.2	83.0	84.4	78.6	76.6
Vermont	80.2	82.0	83.6	85.4	86.5	82.3	88.6
Virginia	77.5	76.7	80.6	79.3	79.6	74.5	75.5
Washington	69.2	72.2	74.2	74.6	75.0	72.9	74.8
West Virginia	75.9	74.2	75.7	76.9	77.3	76.9	78.2
Wisconsin	83.3	84.8	85.8	85.8	86.7	87.5	88.5
Wyoming	73.4	74.4	73.9	76.0	76.7	76.1	75.8

Fifteen years after the Education Act of 1994, the state of Georgia has not yet met the projected national rate, and all of the other states are still far from attaining this goal. Figure 5 compares Georgia graduate rates with the national rate. Table 9 includes Georgia's graduation rate from 2000-01 to 2006-07 and shows how Georgia ranks nationally with some Southern states. Figure 6 compares the Georgia graduation rate and how it ranks with compared with other southern states. There is, however, a continuous increase in the Georgia high school graduation rate.



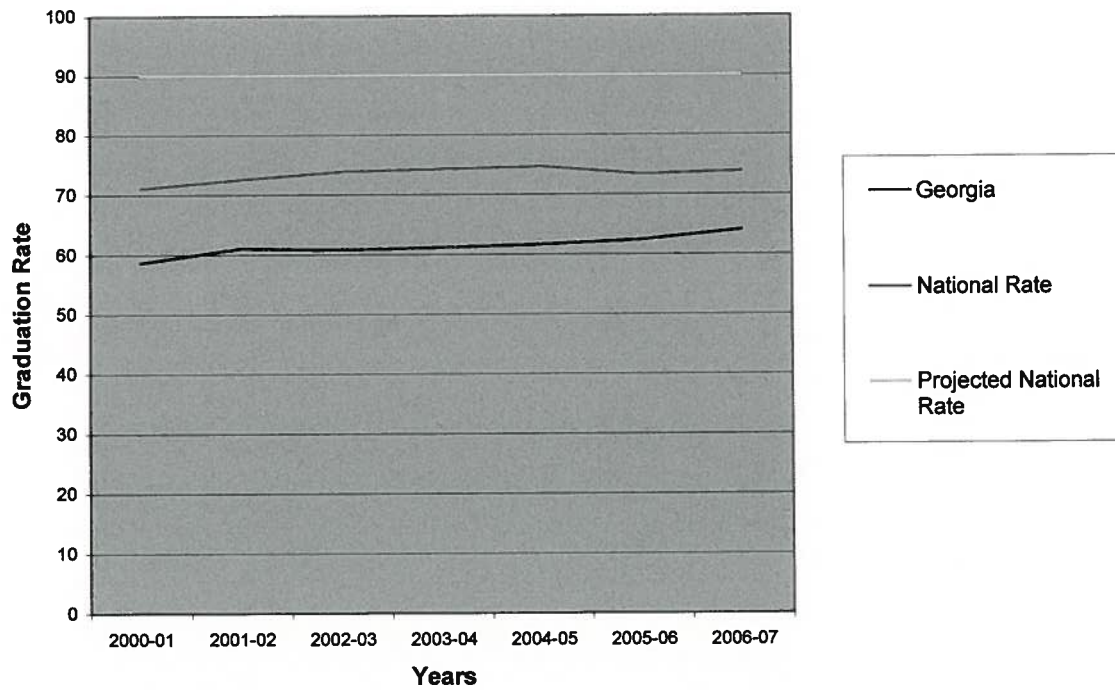


Figure 5. Georgia Graduation Rate Compared with National Rate

Table 9

Georgia State Graduation Rate from 2000-01 to 2006-07

Year	GA	AL	FL	LA	MS	NC	SC	TN
2000-01	58.7	63.7	61.2	63.7	59.7	66.5	56.5	59.0
<i>(Ranking)</i>	<i>49th</i>	<i>42nd</i>	<i>45th</i>	<i>42nd</i>	<i>47th</i>	<i>40th</i>	<i>50th</i>	<i>48th</i>
2001-02	61.1	62.1	63.4	64.4	61.2	68.2	57.9	59.6
<i>(Ranking)</i>	<i>46th</i>	<i>45th</i>	<i>44th</i>	<i>43rd</i>	<i>45th</i>	<i>40th</i>	<i>50th</i>	<i>49th</i>
2002-03	60.8	64.7	66.7	64.1	62.7	70.1	59.7	63.4
<i>(Ranking)</i>	<i>48th</i>	<i>42nd</i>	<i>41st</i>	<i>43rd</i>	<i>46th</i>	<i>39th</i>	<i>49th</i>	<i>44th</i>
2003-04	61.2	65.0	66.4	69.4	62.7	71.4	60.6	66.1
<i>(Ranking)</i>	<i>47th</i>	<i>45th</i>	<i>43rd</i>	<i>38th</i>	<i>46th</i>	<i>37th</i>	<i>49th</i>	<i>44th</i>

Table 9 (continued)

Year	GA	AL	FL	LA	MS	NC	SC	TN
2004-05	61.7	65.9	64.6	63.9	63.3	72.6	60.1	68.5
<i>(Ranking)</i>	<i>48th</i>	<i>41st</i>	<i>44th</i>	<i>46th</i>	<i>47th</i>	<i>38th</i>	<i>49th</i>	<i>40th</i>
2005-06	62.4	66.2	63.6	59.5	63.5	71.8	61.0	70.6
<i>(Ranking)</i>	<i>47th</i>	<i>43rd</i>	<i>45th</i>	<i>49th</i>	<i>46th</i>	<i>36th</i>	<i>40th</i>	<i>37th</i>
2006-07	64.1	67.1	65.0	61.3	63.6	68.6	58.9	72.6
<i>(Ranking)</i>	<i>44th</i>	<i>42nd</i>	<i>43rd</i>	<i>46th</i>	<i>45th</i>	<i>41st</i>	<i>48th</i>	<i>34th</i>

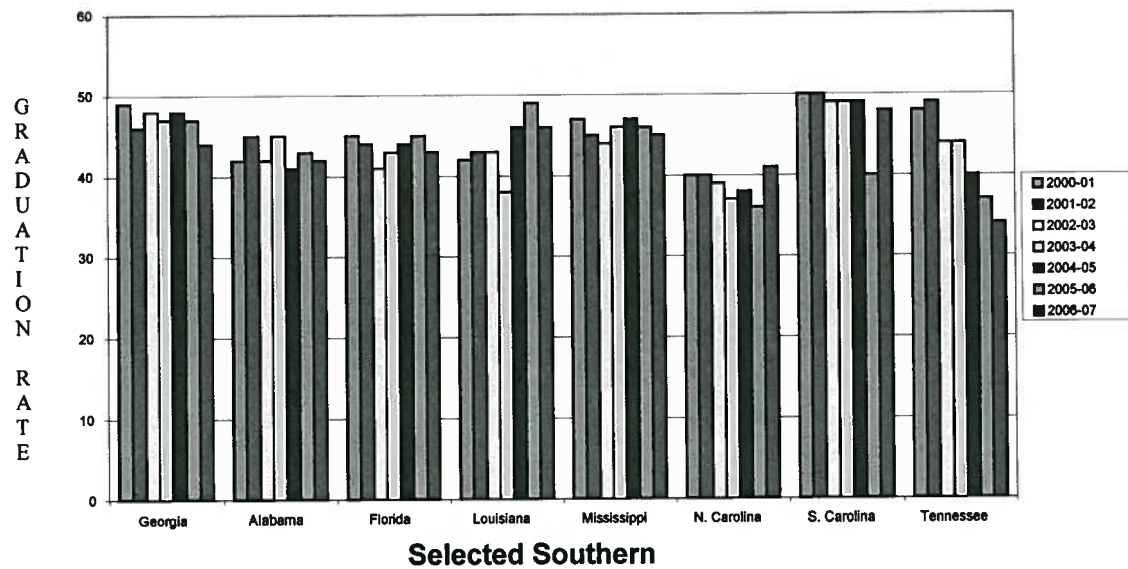


Figure 6. Georgia Graduation Rate and How it Ranks when Compared with Other Southern States

The onus, therefore, falls on us as educators and administrators to gather and analyze data on the variables that may be affecting us from reaching the national goal and come up with strategies to solving these problems. Hopefully, the result of this study will help teachers, administrators and school districts to employ teaching, remediation and administrative strategies that will help each school and districts in Georgia State to attain the national projected graduation rate as stipulated by the Educate America Act of 1994.

According to the executive summary of the Civil Rights Project, 2005 by Harvard University on *Confronting the Graduating Rate Crises in the South*, the journal reported that when high numbers of high school students leave school ill-prepared to contribute to our labor force and civic life, our economy and democracy suffers.

The independent variables that will be considered in this research are gender, teacher/student ratio (class size), teachers' qualifications and years of experience, students' attendance, students' ethnicity, socioeconomic status of school based on free and reduced lunch (SES), percentage of students with limited English proficiency (LEP), percentage of students with disability (SWD), quality of instruction, and leadership style. The dependent variable to be considered is high school graduation rate. The moderating variables which include mathematics, language arts, science, social studies, and writing test results were analyzed to determine which moderating variables are greatly impacting the Georgia high school graduation rate of each school.

### **Strategies Tried by the System**

For the purposes of this research, six Metro-Atlanta districts were chosen and the following strategies were tried by the districts without much significant progress:

#### **Public School District A**

- **Project GRAD:** This is an education reform project aimed at improving the graduation rate of disadvantaged students in order to get them into college.
- **High school transformation:** Breakup of the district's large, comprehensive high school campuses into smaller, more personalized schools or small learning communities of no more than 400 students. Each has a theme and a focused curriculum, financially supported by grants from the Bill and Melinda Gates and Arthur Blank Family foundations (Maxwell, 2010).
- **Fireside Chat:** The superintendent uses this medium five times a year, from various parts of the county to listen and address questions from, teachers, students, and parents.
- **Improvement in the ways teachers teach:** Teachers are trained to differentiate instructions, and standardized curricula.
- **Replacing most principals.**
- **Adopting whole-school-reform models.**
- **Setting high academic goals and rewarding those who reach them**

#### **Public School District B**

- **Virtual Academy:** This program provides alternative options for students to recover credits as well as earn new credits towards high school graduation.

Virtual program has several options that allow students to participate in extended instruction or remediation. It is facilitated by teachers, counselors and paraprofessionals.

- Georgia Department of Education (GADOE) Credit Recovery Program: This program is an opportunity for students to retake a course that he/she was not academically successful in earning credit towards graduation. Credit recovery courses are designed to be a flexible schedule and are not facilitated by a teacher.

#### **Public School District C**

- Differentiated instructions.
- Professional Development Programs
- Organizational Programs: This is designed towards ensuring that system policies and practices align with goals.

#### **Public School District D**

- Instructional Coaches: Coaches work directly with teachers in the classrooms, analyze teachers' needs, observe classes, collaborate with teachers on interventions, and build a network for change resulting in improving student achievement.
- Parent Resource Centers: The centers are designed to empower parents to assist their children in maximizing their full potential.

- Graduate Initiative: This has various aspects which include (a) Communities in Schools, (b) Ninth Grade redesign, (c) SAT Initiative, (d) Summer Bridge Programs, and (d) Graduation Coaches

### **Public School District E**

- Differentiated instructions
- Frequent classroom assessments
- Review, refine and implement research-based thoughtful education strategies
- Teachers will model for students on how to write an open response answer at a proficient level.
- Teachers will model for students how to answer 75% of multiple choice questions.
- Teacher Recruitment.
- Additional Instruction in Reading for 10th and additional instruction for 11th graders.
- Students will be assessed two times per semester using CATS-like assessments.
- Teachers will analyze data from learning checks to revise and implement instruction that address areas of students' needs.
- Two certified teachers will be funded through Title 1 funds in the areas of math, language arts/reading.

**Public School District F**

- Teachers provide extensions and interventions.
- Title 1, Reading Recovery, before and after-school programs.
- Transition Programs
- Adult mentor programs
- Summer Programs
- Credit recovery online course – teacher directed.

**Sources/Causes of the Problem**

Low high school graduation rate could be as a result of the following:

1. It could be as a result of poor attendance. When students are absent from school, they miss some learning opportunities which they may not be able to make up. In addition when students are continuously being suspended as a result of class disruptions, and other misconducts from school, they are also taken away from instructional hours from school. And if they do not learn the required standards, they will either fail or earn a low test scores in the High School Graduation Test.
2. Class size could be another factor that affects graduation rate in any high school. Where the student/teacher ratio is high, teacher will not be able to give the individual attention and remediation that might help a child at risk to master the standards necessary to pass graduation test.
3. Socioeconomic status of a school may affect the graduation rate of a school. (number of students taking free and reduced lunch). Most students from low

socioeconomic family status lack parental support in terms of homework completion. When this is lacking in a child's life, all aspects of the child which include social, academics, emotional and intellectual ability of that child suffers. Such parents do not attend school programs and parents' conferences to monitor the child's academic progress. Parents with high socioeconomic status will have high academic aspirations for their children and vice versa. High or low parental aspirations will cause a child to be either a high or low academic achiever. Ho and Hong (2005) stated that the positive effect of parental education aspiration on students' academic achievement was found to be consistent across ethnic groups (i.e., white, Asian American, African American, and Hispanics).

4. Students with limited English may be another variable that affect graduation rate of schools in Georgia. According to the executive summary of Harvard University (2005), the journal noted that several southern are now in the epicenter of a huge Latino migration. These students lack the reading comprehension necessary to pass high school graduation tests.
5. Students with disability may be another variable in a school that may affect graduation rate of a school. Where instructions in a classroom are not well differentiated in order to meet the needs of these students, they are found to be lost and not able to pass high school graduation test.
6. A school's location may affect graduation rate. Schools in settings with about 75% - 95% students with free and reduced lunch will likely perform lower



than schools with less percentage of students with free and reduced lunch.

Secondly, schools in sub-urban settings may perform better than students in rural or urban settings.

7. Leadership style is another factor that may affect high school graduation rate. Leadership style could either be democratic, participatory, and authoritative or laissez-faire in a school setting and any of these may affect how teachers and students will respond to teaching and learning in the school.
8. Quality of instruction could be another factor that may affect high school graduation rate. By quality instruction, we tend to ask if instructions are differentiated to meet the needs of students in the classes. Is high order thinking strategies utilized in the delivery of instructions in the classrooms? Are effective co-teaching models being used in the planning of lessons? Are instructions designed with an end in mind using backward design? Quality instructions are designed to meet those facets.

### **Dependent and Independent Variables**

#### **Dependent Variable**

The dependent variable in this research is high school graduation rate.

#### **Independent Variables**

The independent variables that were considered are: gender, class size, teachers' years of experience/qualifications, leadership style, quality of instruction, students' attendance, students' ethnicity, socioeconomic status of school (number taking free and

reduced lunch), limited English Proficiency (percentage of students with limited English proficiency), percentage of students with special disabilities (SWD), and school location.

### **Moderating Variables**

The moderating variables are mathematics, language arts, science, social studies, and writing. The ability of the students in a school to pass all these tests will account for their graduation rate.

### **Research Questions**

- RQ1: Is there a significant relationship between high school graduation rate and students' gender?
- RQ2: Is there a significant relationship between high school graduation rate and classroom size?
- RQ3: Is there a significant relationship between high school graduation rate and teacher experience?
- RQ4: Is there a significant relationship between high school graduation rate and teacher qualification?
- RQ5: Is there a significant relationship between high school graduation rate and school attendance?
- RQ6: Is there a significant relationship between high school graduation rate and students' ethnicity?
- RQ7: Is there a significant relationship between high school graduation rate and socioeconomic status of students?

- RQ8: Is there a significant relationship between high school graduation rate and students with Limited English Proficiency?
- RQ9: Is there a significant relationship between high school graduation rate and students with disabilities?
- RQ10: Is there a relationship between high school graduation rate and school location?
- RQ11: Is there a significant relationship between the subject areas percent passed and high school graduation rate?
- RQ12: Is there a relationship between high school graduation rate and principal's leadership style?
- RQ13: Is there a relationship between high school graduation rate and quality of instruction?
- RQ14: What subjects had the highest and lowest pass rate?

## **CHAPTER II**

### **LITERATURE REVIEW**

Little or no research has been done on high school graduation rates even though graduation rate stands as the economical and technological bedrock of any country (Perrit, 2001); and every year across the country, a dangerously high percentage of students, disproportionately poor and minority, disappear from the educational pipeline before graduating from high school (Civil Rights Project, Harvard University, 2005). The Harvard University executive summary further stated that nationally, only about 68% of all students who enter ninth grade will graduate “on time” with regular diplomas in 12th grade. Why are the students not graduating would be a necessary question to ask? However, for the purpose of this study, the literature review focuses on whether gender, class size, teacher experience/qualifications, attendance, ethnicity, socioeconomic status of school, English language learners (ELL), students with disabilities (SWD), leadership style, quality of instruction, and location of school have any impact on Georgia high school graduation.

#### **Gender**

The Civil Rights Project, Harvard University (2005) stated that the graduation rate for white students is 75% while approximately half of black, Latino, and Native American students earn regular diplomas alongside their classmates. Graduation rates are even said to be lower for black, Latino, and Native American males. Statistics show that

overall, an estimated one in four female students will not graduate with a regular high school diploma in the standard four year period and over 520,000 of the estimated dropouts from the class of 2007 were female students (National Women's Law Center, 2007). Nationally, 72% of female students graduated, compared with 65% of male students. The National Women's Law Center (2006) explicitly stated that there are factors that put both male and female students at greater risk of dropping out and for some reasons; it is very difficult to definitely answer why girls or boys drop out of school. It is noted that dropping out is a process a student experiences rather than a single isolated decision, rather it is been found that it is as a result of combination of reasons (National Women's Law Center, 2006). The article went further to state that even though there are limitations to the research methodologies on the causes but studies have often identified risk factors that make students more likely to drop out of school. These risk factors have however been identified as simply showing correlation and not causation. The article identified factors correlated with increased risk of dropping out under three categories namely:

**1. Student and Family Characteristics which include**

- A. Low socioeconomic status
- B. Single parent family
- C. Low level of parental involvement
- D. Race or ethnicity (black, Hispanic, and native American students generally have increased odds, and Asian/Pacific Islander students decreased odds, compared to white students)

**2. Student Attitudes Toward school and Experience at School**

- A. Being disciplined at school
- B. Poor grades
- C. Irrelevant coursework
- D. Lack of future education plans
- E. Negative peer perceptions
- F. Being held back
- G. Frequent changing school
- H. Absenteeism
- I. Feeling unsafe at school
- J. Working during school year
- K. Becoming pregnant or taking on parenting responsibilities.

**3. School Characteristics**

- A. Public school
- B. Low average socioeconomic status of school community
- C. High levels of minority students enrolment
- D. High number of students disciplined or held back and
- E. A perception that the discipline policy is unfair.

Gaps exist between the high school graduation rate of male and female students.

Clark, Thompson, and Vialle (2008) stated that international educational statistics have reported a gender gap in educational outcomes, with boys falling behind girls in regard to grades, high school graduation and university enrollment and retention. According to this

article, the study was conducted in public schools both nationally and internationally, and a common theme was found in all the countries.

Anakwe (2008) investigated the impact of assessment methods on student performance on accounting tests. In this study, the author used two independent variables, student gender and student class as co-variance. The findings revealed that neither student gender nor class was correlated to test scores in either form of testing.

Carney and Stiefel (2008) examined the long-term outcomes of one example of the problem-solving method, the Instructional Support Team (IST), in a field setting. Academic records of 32 students were reviewed to describe their educational outcomes, 3.5 school years after their initial referral to IST. Results showed that neither level of program support (Tier 1, 11, or 111) at the end of the study, nor risk for school failure, was predicted based on student gender or reason for referral. Hubbard (2005) in his article, *The Role of Gender in Academic Achievement*, stated that the students' based experiences of low-income African-American public high school students defy the traditional patterns of educational underachievement associated with this minority group. Rather, he believed that school practices, peer interactions and students' lived family and community experiences are crucial factors in shaping educational outcomes. He further stated that the intertwining of school, family and community cultures constructs gendered attitudes and beliefs.

### **Ethnicity**

Greene (2006) stated that the national high school graduation rate for the class of 2003 was 70% and there is a wide disparity in the public high school graduation rates for

whites and minority students. Greene, in addition, reported nationally that the graduation rate for white students was 78%, compared with 72% for Asian students, 55% for African-American students, and 53% for Hispanic students. Female students graduate high school at a higher rate than male students.

The National Women's Law Center (2006) went further to state that the dropout rates are more troubling for female students of color nationwide, with 37% of Hispanic female students, 40% of black female students, and 50% of Native American/Alaskan Native female students failed to graduate in four years in 2004. In addition, while girls in each racial and ethnic group fare better than their male peers of the same race or ethnicity, black, Hispanic, and Native American/Alaskan Native female students graduate at significantly lower rates than white and Asian/Pacific Islander males. There are limited researches on how gender by race or ethnicity poses a problem to students' graduation rate. The National Women's Law Center also reported that despite these limitations, available research indicates that a student's individual and family characteristics, his or her attitude toward school and experience in school, and the characteristics of that school influence the chances that he or she will graduate from school after four year period of secondary education. However, the article identified some contributing factors that could have affected females and males from graduating from high schools. The factors listed are:

- **Pregnancy and family responsibilities:** When a quarter or one-third female dropouts were interviewed they reported that pregnancy or becoming a parent played a role in their decision to drop out.



- **Attendance Rates:** Reports from Gates survey found that more girls than boys—80% compared to 71% missed many days of schools and not able to keep up with school work.
- **Academics:** It is reported that in overall North Carolina, study showed that more boys than girls drop out for academic reasons. However more black and Hispanic boys dropped out for academic reasons in later grades.
- **Rates of discipline:** North Carolina studies revealed that more boys than girls overall in North Carolina dropped out for disciplinary reasons. The study also reveals that a reasonable number of Hispanic females in 12th grade left for disciplinary reasons than any other group of students.
- **Family Structure and Rules:** The National Women's Law Center (2006) reported also that Chicago study found that girls who lived in mother-father families, rather than in single-mother families were more likely to graduate. The study also found that there was no real difference in graduation rates for boys living in these two types of families.

Peng and Wright (1994) conducted a study on the academic achievement of Asian Americans. They discovered that Asian Americans have higher academic achievement than other minority students. Based on their findings, they discovered some reasons why Asian Americans out-perform other minority groups. Some of these reasons are (a) Asian American students are more likely to live in an intact two-parent family, (b) Spend more time doing homework, and (c) Attend more lessons outside of school.

In addition, the study showed that Asian American parents have higher educational expectations for their children although they did not directly help their children in school work more than other parents. Furthermore, they also discovered that the differences in home environments and educational activities accounted for a large part of the difference in achievement between Asian American and other minority students.

Malone, Schmis, Murray, and Rabiner (2004) conducted a research on the relationship between ethnicity, attention problems, and academic achievement. Based on their study, of particular interest is that a substantial portion of the achievement gap between African-American and Caucasian students was related to higher rates of attention difficulties among African Americans. This, the study says, could be attributed to lots of activities going on in their homes at a given time and place. Monroe (1997) in her studies and leadership in a school with almost 100% black who came from poverty stricken families, stated the following: "If anyone still claims that black kids, when properly supported, can't learn and compete with anyone else, the results we've achieved at the academy prove otherwise" (p. 2).

### **Class Size**

Borland, Howsen, and Trawick (2005) conducted a research on the effect of class size on students' achievement and came up with the suggestion that the relationship between class size and student achievement is not only non-linear, but non-monotonic. Jepsen and Rivkin (2009) conducted an investigation on the effects of California's billion-dollar class size reduction program on students' achievement. The research used year-to-year differences in class size generated by variation in enrollment and state's

class size reduction program to identify both the direct effects of smaller classes and related changes in teacher quality. Results showed that smaller classes raised mathematics and reading achievement. Achilles (2003) stated that class size reduction as seen in the student achievement program demonstrated that smaller class sizes improve students' academic achievement, improve their behavior and discipline both in the classroom and outside of school. Class size also improves their citizenship and participation, engagement in and outside of school, and enhances their development into productive, humane and responsible persons that can contribute to the society. The report also stated that class size is also an incentive to attract and keep teachers in teaching.

Finn and Gerber (2005) investigated students' participation in small group class in the early grade (K-3) and how it affects their academic achievement and high school graduation. Analyses based on their results showed that graduating was related to K-3 achievement and the attending small classes for 3 or more years increased the likelihood of graduating from high school, especially among students eligible for free lunch. In addition, Finn and Gerber quoted Bloom (1964) by reporting that there is long-standing evidence that students' academic achievement in the early grades sets the stage for much of what happens in the ensuing years.

The Center for Public Education (2005) in *Key Lessons: Class Size and Student Achievement*, quoted the following authors and their findings on class size and students' achievement: Mitchell and Mitchell (1999), Molnar, Smith, and Zahorik (1999) stated that smaller classes in grades K-3 improve student achievement in reading and math. In addition, students in smaller classes perform better than students in larger classes on

reading and mathematics. He also stated that a class size of 15-18 is the upper limit for capturing benefits in the early grades. Ehrenberg, Brewer, Gamoran, and Willms (2001) reported that classes with no more than 15-18 students have been found to be the threshold class size for increasing student achievement in the early grades and that young students benefit more when reduced class size programs span grades K-3.

Brewer, Ehrenberg, Gamoran, and Willms, (2001) stated that the number of students in a class may affect how much is learned in a number of ways. The article noted that large number of students in a class setting will bring about noisy classroom, and disruptive behavior which in effect affect the kind of activities that the teacher is able to promote. For these variables, the authors believe that small sized classroom will increase academic achievement. However, the authors believe that there may be other factors that affect students' achievement. These include student's own background and motivation, broader community influences, how instructions are modified to meet the needs of the students, and school and classroom environment where the learning takes place.

### **School Attendance**

Douglas (2004) conducted a study to enable educators gain knowledge and insight concerning the relationship of students' attendance and students' achievement. He compared Ohio proficiency test on students on grade levels 4, 6, 9, and 12 with their attendance averages to see if a positive correlation exists between attendance and student achievement. The results of the study showed that there is a significant relationship between student attendance and student achievement in those grade levels. He further

stated that the correlation between students' attendance and achievement rate is moderate to strong, with the most significant relationship occurring at the ninth grade level. He concluded that this variance could be as a result of the academic standards and expectations at this grade level which are high, and attending school on a regular basis is certainly a factor. To support this fact he did an analysis of annual attendance rate for students that had many absences and found that the result showed high significance of students' learning time loss per school year. Davidson, Edward, Heather, and Wilson (2006) reported that truancy adversely affected the academics of students that were involved. These students were described as having academic underachievement. As a result of their truancy, they missed tests, did not understand examination questions, did not know where their classmates were in terms of work; or had gone down a set. Chen and Tsui-Fang (2008) reported that on the average the effect of attending lectures corresponds to a 9.4% to 18.0% improvement in exam performance for those who choose to attend classes. Marburger (2006) did a study on the impact of enforcing an attendance policy on absenteeism students' performance. The results showed that an enforced mandatory attendance policy significantly reduced absenteeism and improved exam performance.

### **School Location**

Xu (2009) in his study on *School Location, Student Achievement and Homework Management Reported by Middle School Students* showed that urban middle school students compared with their rural counterparts were more self-motivated during homework than their rural counterparts. Bouck (2004) studied how size and setting

impact education in rural schools. Results based on her findings show that students in rural schools face many personal and academic hardships which affect their academic achievements. These hardships range from living in poverty to having less opportunity and sophistication in technology. Rural schools also have fewer course offerings. She also stated that while rural schools may be more similar than expected, particularly as compared to more affluent suburban districts, rural and urban districts have larger rates of poverty and more dire financial situations which do impact the educational offerings, experiences, and outcomes of their students.

### **Students with Disabilities**

Miller (2002) outlined different facets of disabilities as (a) students with learning disabilities, (b) students with mental retardation, (c) students with emotional disabilities, and (d) students with hearing impairments. Other disabilities include (a) students with visual impairments, (b) students with deafness/blindness, (c) orthopedic impairments, (d) other health impairments, (e) autism, and (f) students with traumatic brain Injuries. Students with learning disabilities constitute more than half the entire students with disability. Miller reported that the wide range of characteristics with students with learning disability is their prominent characteristic of having difficulty with academic learning in addition with social-emotional and behavioral difficulties. Thurlow and Wiley (2006) stated that federal legislation requires states to publicly report on the participation of students with disabilities. Reporting of students data serves several purposes such as to use the data to make informed decision about educational programs and school effectiveness. Students with special needs have problems with processing

information. With this mandate to report their performance, it helps the public to explore if the right strategies are being adopted in their learning process. If the teaching approach is poor, they will likely fail badly, thereby decreasing the graduation rate of students in that school.

### **Socioeconomic Status of School**

Papanastasiou (2002) on the *Effects of Background and School Factors on Mathematics Achievement* stated that the strongest direct influence on students' attitudes toward mathematics was teaching, followed by reinforcement of the students from their near surroundings. The article also noted that the weakest effect was exerted by the educational background of the family.

Everson (2004) in his article entitled *Beyond Individual Differences: Exploring School Effects on SAT Scores*, stated that school size, the proportion of children in poverty and the ethnic and racial composition of the schools were all important and meaningful predictors of students achievement.

Toutnoushian and Curtis (2005) in their study titled *Effects of Socioeconomic Factors on Public High School Outcomes and Rankings*, found out that socioeconomic status (SES) factors have a strong relationship with the average performance of students in public high schools in New Hampshire. They further stated that three socioeconomic factors such as unemployment, parent education and income accounted for over half of the variations in average standardized test scores and that these factors are beyond the control of the districts.

Boden, Dannette, and Fergusson (2008) in the study, *Educational Achievement in Maori*, found that the educational underachievement among Maori can largely be explained by disparities in socioeconomic status during childhood. However, Okoye (2009) stated in his study on *The Effect of Gender, Socioeconomic Status and School location on Students Performance in Nigerian Integrated Science*, found that the combined effect of gender and socioeconomic status did not produce any significant effect on students' performance in integrated science.

### **Teacher Qualifications/Experience**

In the area of personnel experience and qualifications, Croninger, Rice, Rathbun, and Nasako (2006) narrated through their study that there are positive effects for teachers' degree type and experience on reading achievement. They discovered also that there is a potential contextual effect of teachers' qualifications on student achievement with first graders demonstrating higher levels of reading and mathematics achievements. Abuseji (2007) revealed that teacher age, gender, qualifications and experience had direct causal effect on students' achievement in chemistry.

Jepsen and Rivkin (2009) in their study on *Class Size Reduction and Student Achievement: The Potential Tradeoff between Teacher Quality and Class Size*, reported that increase in the share of teachers with neither prior experience nor full certification dampened the benefits of smaller classes, particularly in schools with high shares of economically disadvantaged minority students.



### **Limited English Proficiency (LEP)**

Kieffer (2008) (as cited in August & Shanahan, 2006) stated that cross-sectional studies have consistently found that students who came from homes in which a language other than English is spoken have lower reading achievement in English than their native English speaking peers. Kieffer conducted a study on *Catching up or falling behind? Initial English Proficiency, Concentrated Poverty, and the Reading Growth of Language Minority Learners in the United States*, and came up with the result that Language Minority (LM) learners entering Kindergarten proficient in English have trajectories similar to those of native English speakers, but LM learners entering kindergarten with limited English have trajectories that diverge from those of native English speakers, yielding large differences in achievement in fifth grade. Secondly, the study also reported that by controlling for demographic risk factors, including socioeconomic status (SES) reduces the effect of initial English proficiency from large to moderate and yields differences that narrow over time. Based on the above results, Kieffer suggested the need for academic interventions for LM learners who enter school with limited English proficiency.

Early and Marshall (2008) quoted Mohan, Leung, and Davidson by reporting that there are rapidly growing numbers of students from ethnically diverse backgrounds flowing into the classrooms in English-speaking countries around the world whose presence creates both educational opportunities and challenges for students and educators. Early and Marshall went further to state that there is need to seize the opportunities to educate and support these kids since high school graduation remains an

elusive goal for an unacceptably high percentage of students for whom English is a second language. However, in a study titled *Adolescent ESL Students' Interpretation and appreciation of Literary Texts: a Case Study of Multimodality*, Early and Marshall (2008) reported that using multimodal approach to integrate language and content teaching, high school students with limited English proficiency can be supported to engage in rich, complex interpretations of literary works in English and to realize their interpretations linguistically in written academic disclosure can lead to their academic successes..

### **Leadership Style**

Digiorgio (2008) shares an ethnographic case study on *Negotiating cultural and academic expectations in a minority language school: the inclusive and exclusive effects of a principal's vision*, by exploring the role a principal had in maintaining a growing minority language school while implementing an inclusive policy for students with learning and physical difficulties. The study recorded that the school principal was very aware of the reputation and image of the school in the public eye. Maintaining a distinct identity was the key to the school's success and the principal extended this demand for independence to students, including those with disabilities, and their teachers. This led to specific policies and practices regarding language and ability grouping and the school's resource teaching model which shaped inclusive and non-inclusive policies and practices of a school leading to higher academic achievement for the school.

Egley (2003) conducted a case study on *Invitational Leadership: Does It Make a Difference*. He investigated in this study the relationship between professionally inviting

behaviors of high school principals in the state of Mississippi and (a) teacher job satisfaction, (b) principal's effectiveness, (c) principal as an agent of school improvement, (d) principal's Invitational Quotient, and (d) the computed accreditation performance index of their respective high schools.

Results from this study shows that there is a statistically significant relationship between professionally inviting behaviors of high school principals and teacher job satisfaction as measured by the leadership survey instrument. In addition, a statistically significant relationship was found between the invitational quotient of high school principals and perceptions of the principal as an agent of school improvement by high school teachers as measured by the leadership survey instrument.

### **Theory of Education Leadership**

In discussing leadership style of the principal, it might be necessary to mention one of the modern social change theories, the transformational leadership theory by James Macgregor Burns. According to Stewart (2006), Burns defines leadership as leaders inducing followers to act for certain goals that represent the values and the motivations—the wants and needs, the aspirations and expectations of both leaders and followers. Stewart further stated that Burns contrasted two types of leadership styles, the transactional and transformational leadership theories. While a transactional leader tends to exchange one thing for another in an organization such as rewarding hard-working teachers with an increase in budget allowance, the transformational leaders focus on restructuring the school by improving school conditions. They look for potential motives in followers, seek to satisfy higher needs, and engage the full person of the follower. In

every organization, especially in every school system, a transformational leader is what is needed in that transformational leaders take responsibility for their leadership and to satisfy the needs of the followers (Stewart, 2006). Stewart went on in his discussion through his study on *Transformational Leadership: An Evolving Concept Examined through the Works of Burns, Bass, Avolio, and Leithwood*, by quoting Burns (1978) as stating that leaders are neither born nor made; instead, leaders evolve from a structure of motivation, values and goals. In addition, leadership must be aligned with collective purpose and effective leaders must be judged by ability to make social changes. He argues that the role of a leader and follower must be united conceptually and that the process of leadership is the interplay of conflict and power. The transformational leadership theory of Burns states that transforming leadership occur when one or more persons engage with one another and they increase their levels of motivation and morality and the power base, in this instance, mutually supports a common purpose. This leadership model, as stated by Stewart (2006) encompasses a change to benefit both the relationship and the resources of those involved, and the result is a change in the level of commitment and the increased capacity for achieving the mutual purposes. The transformational leadership model begins on people's terms, driven by their wants and must culminate in expanding opportunities for happiness (Stewart, 2006). This leadership model is what every school system needs, for both the leaders and the led to work with a common purpose in order to increase the academic achievement of the students.

### Quality of Instruction

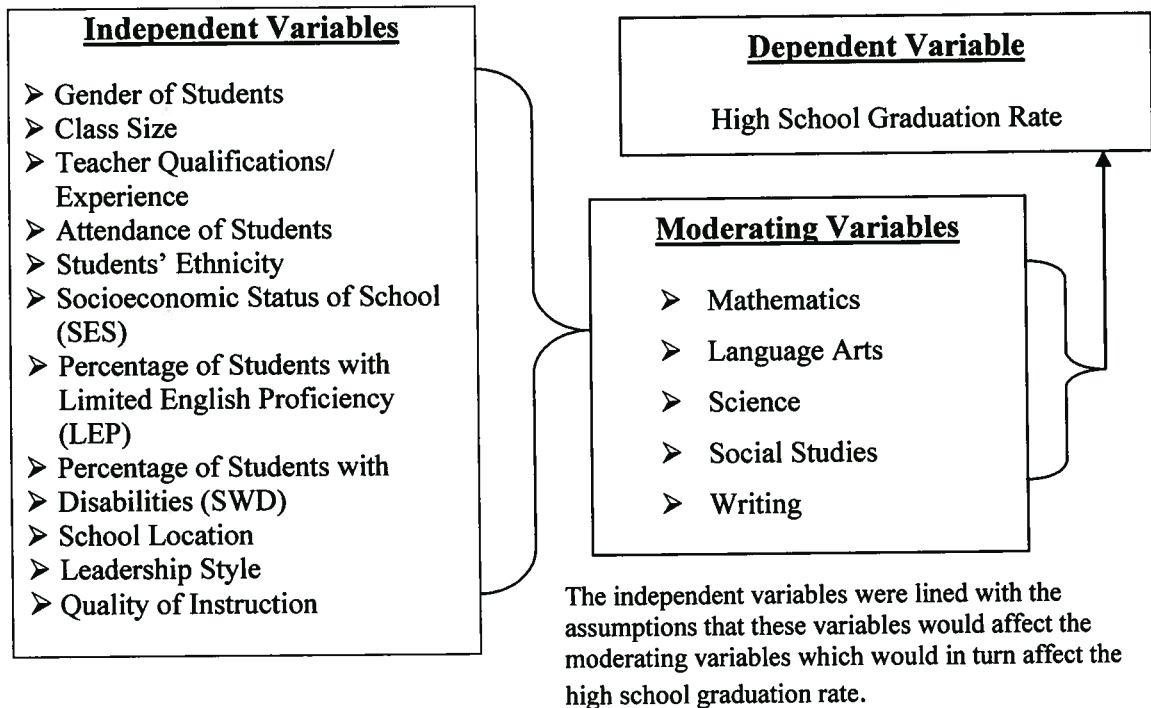
Akey, Rappaport, Quint, and Willner (2007) conducted a study on *Instructional Leadership, Teaching Quality and Student Achievement Suggestive Evidence from Three Urban School Districts*, and the result of their findings proved that instruction-related professional development for principals was indeed linked to an increase in the frequency with which teachers received professional development at their schools; that these increased professional development opportunities for teachers helped them improve the quality of their instructional practices; and that higher instructional quality was linked to higher student achievement.

Schacter and Thum (2005) conducted a study on comprehensive school reform using the 'Teacher Advancement Program (TAP)' with a goal to attract, retain, and motivate quality teachers. The study focused on the impact of TAPs on the students achievement and teacher attitudes. The study was done by aggressively recruiting new teachers, providing a career continuum, introducing teacher-led professional development, implementing rigorous teacher accountability, and paying teachers based on their position, teaching skills, and how much their students achieve. It was discovered through this study that TAP schools changed their organization structure to support and reward high-quality instructions. By using a multivariate-multileveled model for measuring student learning, the growth in achievement of students from TAP schools to the growth in achievement of students from matched controls. Results showed that TAP schools' achievement grew significantly, more than controls, even though the magnitude of the achievement gains varied by school and fidelity implementation.

**CHAPTER III**  
**THEORETICAL FRAMEWORK**

**Statement of Theory of Selected Variables**

It was expected that the school graduation rate in Georgia could be influenced by students' gender, class size, teacher experience/qualification, attendance, ethnicity, socioeconomic status, Limited English Proficiency students (LEP), students with special needs (SWD), school location, leadership style, and quality of instruction (see Figure 7).



*Figure 7.* Factors Affecting High School Graduation Rates in Metropolitan Atlanta Public Schools

This study was proposed to examine the extent to which the Georgia high school graduation rate may be impacted by students' gender, class size, teacher experience/ qualifications, school attendance, ethnicity of students, socioeconomic status of school based on number of students on free and reduced lunch, Limited English Proficient students (LEP), Students' with Disability (SWD), school location, leadership style and quality of instruction.

### **Definition of Variables**

#### **Dependent Variable**

**High School Graduation Rate:** The graduation rate also known as Lever Rate is the number of students leaving high school with a standard high school diploma, expressed as a proportion of all those documented leaving with a diploma or other completion credential or as a dropout.

#### **Moderating Variables**

These are the subjects that students in eleventh grade in high school must pass at first sitting in order to earn high school diploma. The subjects are mathematics, language arts, social studies, science, and writing.

#### **Independent Variables**

**Gender:** Gender refers to the sex of the student, either male or female.

**Class Size:** This refers to the number of students in a classroom but for the purposes of this study we will be concerned with student/teacher ratio in a class.

**Teacher Qualifications:** For the purpose of this study, teacher qualification is referred to as percentage of teachers in a school that have 4yr Bachelor's degree or

advanced degree which ranges from a 5-year masters degree, a 6-year specialist, and a 7-year doctorate.

**Teacher Experience:** In this study, teacher experience is the percentage of teachers that have less than one year teaching experience to about 30 years and above experience. Six school districts were examined in this study and 30 high schools, 5 from each to find out if the qualifications and experiences of teachers contributed to high school graduation rate of students.

**Students' Attendance:** Attendance refers to number of days that students were in or out of school. Through this variable, the study was going to find out how many days that the graduating students were absent in a school year and how it affected the graduation rate of the school. For the purposes of this study, the percentage of students that were less than five days absent in a school was compared to the graduation rate of the school.

**Students' Ethnicity:** This is the physical and cultural characteristics that make a social group distinctive. These may include, but are not limited to national origin, ancestry, language, shared history, traditions, values, and symbols, all of which contribute to a sense of distinctiveness among members of the group. In this study, the graduation rate of blacks, whites, Asians, Mexicans and others were compared

**Socioeconomic Status of School:** Cultural web dictionary defines socioeconomic status as an individual's or group's position within social structure and it depends on a combination of variables, including occupation, education, income, wealth, and place of residence. However, for the purpose of this research, an examination of the



number of students in the school that benefit from free and reduced lunch was conducted to determine if this variable plays any significant role in the high school graduation rate of the school.

**Limited English Proficiency Students (LEP):** These are students who speak other languages and are being taught English language as their second language. During this study, data from different schools will be analyzed to assess the performance of these students in Georgia high graduation test. Based on their performances, one will determine if the percentage of these students in a school district will affect the graduation rate of any school district.

**Students with Special Needs (SWD):** The Individual with Disabilities Education Act (IDEA) of 2004 defines the term “child with disability” as a child with mental retardation, hearing impairment (including deafness), speech or language impairments, visual impairments (including blindness), serious emotional disturbance, orthopedic impairments, autism, traumatic brain injury, other health impairments, or specific learning disabilities, and who by reason thereof needs special education related services (IDEA Sec. 602(3)).

**School Location:** This refers to the community in which the school is located or resides. For the purpose of this research, a comparison of schools in urban and suburban settings was done to determine if there is any influence of school location on the high school graduation rate of students. An urban school district is characterized by higher population density and vast human features in comparison to areas surrounding it.

Suburban school districts are described as having separate residential areas with a lower

population density whereas rural school districts are said to have lower school population density when compared with others and with a predominantly white students.

**Leadership Style:** Lunenburg and Ornstein (2004) described leadership style as the manner in which the leader influences subordinates in the management of human resources. They classified leadership style into two-heading continuum based on classic studies and contingency theories as task oriented and employee oriented. Task oriented leaders are said to be authoritarians, initiating structure, job centered, task motivated and directive while employee oriented leaders are democratic, considerate, employee centered, relationship motivated and supportive. In most cases, the effective leadership style to adopt depends on the leader and how the leader views the situation, and whichever sides he/she takes can negatively or positively affect the organization. Based on this, it becomes necessary that the leader at all times should the right decision under any prevailing situation.

**Quality of Instruction:** Brent and Felder (1999) defined good teaching (quality instruction) as an instruction that leads to effective learning, which in turn means thorough and lasting acquisition of the knowledge, skills, and values the instructor or the institution has set out to impart. Quality of instructions involves the use of differentiated instructions. When instructions are differentiated, no child will be left behind.

### **Explanation of Linkages among Variables**

It is proposed that gender, class size, teacher qualification and experience, students' attendance, students' ethnicity; socioeconomic status of school (SES), percentage of Limited English Proficient students (LEP), students with disabilities

(SWD), school location, leadership style and quality of instructions may negatively or positively affect graduation rate of students in Georgia State. In addition, it is proposed that failures or multiple failures in some subject areas by the students may affect high school graduation rate.

Based on literature reviews, gender was found to have no effect on students' academic performance in high school graduation (Anakwe, 2008; Carney & Stiefel, 2008; Hubbard, 2005; National Women's Law Center, 2006). Carney and Stiefel (2008) believed that school practices, peer interactions and students' lived family and community experiences are crucial factors in shaping educational outcomes. Their study further stated that the intertwining of school, family and community cultures constructs gendered attitudes and beliefs. Research studies, however, confirmed that females generally do better academically with boys falling behind both in high school graduation and university enrollment and retention (Clark, Thompson, & Vialle, 2008).

On the issue of students' ethnicity of students' academic performance, studies showed that Caucasian students outperform all other ethnic groups which include Asians, African-American students, and Hispanics (Green, 2006). Malone, Schmis, Murray, and Rabiner (2004) believed, based on their research, that an academic achievement gap exists between African-American and Caucasian students and this is mainly as a result of family structure of African-American students which leaves them with higher rates of attention difficulties. The study showed that in African-American homes, lots of activities tend to go on at the same time and this affects their attention rate. Peng and Wright (1994) however, discovered that Asian Americans have higher academic

achievement than other minority students. This he attributed to the fact that Asian American parents have higher educational expectations for their children although they did not directly help their children in school work more than other parents. In summary it is believed that the differences in home environments and educational activities, accounted for a large part of the differences in academic achievement between students of different ethnic groups.

Literature reviews shows that class size has effect on the academic achievement of students (Borland, Howsen, & Trawick, 2005; Brewer, Ehrenberg, Gamoran, & Willms, 2001; Jepsen & Rivkin, 2009; Achilles, 2003; Finn & Gerber, 2005). Borland, Howsen, and Trwick (2005) described the effect of class size on academic achievement as not only non-linear but also monotonic. Achilles (2003) added also that class size not only affect academic achievement but that it also improves students' behavior both in the classroom and outside the classroom. Achilles went further to say that class size also improves students' citizenship and participation, engagement in and outside of school and enhances their development into productive citizens in the society. Brewer et al. (2001) noted that large classroom size will bring about noisy classrooms with disruptive behaviors which inadvertently affect students' learning.

Attendance was found out through the literature review as one of the factors that has a positive correlation on students' academic achievement (Douglas, 2004; Jennjou & Tsui-Fang, 2008; Marburger, 2006). Davidson, Edward, Malcom, and Wilson (2008) reported that truancy affected the academics of students that were involved. Jennjou and Tsui-Fang (2008) reported an increase of 18.0% in examination improvement for those

who chose to attend classes and Marburger (2006) showed that enforced mandatory attendance policy significantly reduced absenteeism and improved exam performance.

Xu (2009) and Bouck (2004) reported that school location affects the academic achievement of students. Xu reported that urban students were more self-motivated than their rural counterparts. Bouck (2004) stated that students in rural schools face many personal and academic hardships which affect their academic achievements. These hardships were said to range from poverty to having less opportunity and sophistication in technology. In addition, the report showed that schools in rural settings have fewer course offerings. Bouck, compared rural, urban and suburban schools and reported that sub-urban school districts are more affluent districts, while rural and urban school districts have larger rates of poverty and more dire financial situations which do impact the educational offerings, experiences and outcomes of their students.

Literature reviews on the effect of students with disability on the graduation rate of a school shows that the percentage of these students in a school affects the graduation rate of the school (Miller, 2002; Thurlow & Wiley, 2006). This they attributed to their intellectual, socio-emotional and behavioral problems.

In the area of socioeconomic status of schools, there appeared to be varying opinions on the effect on high school graduation rate. Boden, Dannette, and Ferguson. (2008) reported that the socioeconomic status of a school affects its graduation rate, while Okoye (2009) stated that socioeconomic status of a school did not affect the academic achievement of the students. This could be as a result of family support for the students

that he used in his research study. Most Nigerian kids have strong parental and family support in their education pursuance.

On the issue of the effect of teachers' qualification and experience, literature reviews show that these factors have direct effect on the academic performance of students (Croninger, Rice, Rathbun, & Nishio, 2006; Abuseji, 2007; Jepsen & Rivkin, 2009). Articles surveyed explained that lack of experience and full certification of teachers dampened the benefits of smaller classes, particularly in schools with high number of economically disadvantaged minority students.

With regards to limited English proficiency students, Kieffer (2008) reported that students who came from homes in which a language other than English is spoken have lower reading achievement in English than their native English speakers and this lag affects their academic achievement. Kieffer advocated through his study the need for academic interventions for Limited Minority learners who enter school with limited English proficiency.

Based on the literature review on impact of leadership style, Egley (2003) reported that there is a statistical relationship between the principals' behavior, teacher job satisfaction and students' academic achievement. Akey et al. (2007) stated that professional development opportunities for teachers helped them to improve the quality of their instructional practices and that their instructional quality was linked to higher student achievement.

### **Research Questions**

- RQ1: Is there a significant relationship between high school graduation rate and students' gender?
- RQ2: Is there a significant relationship between high school graduation rate and classroom size?
- RQ3: Is there a significant relationship between high school graduation rate and teacher experience?
- RQ4: Is there a significant relationship between high school graduation rate and teacher qualification?
- RQ5: Is there a significant relationship between high school graduation rate and school attendance?
- RQ6: Is there a significant relationship between high school graduation rate and students' ethnicity?
- RQ7: Is there a significant relationship between high school graduation rate and socioeconomic status of students?
- RQ8: Is there a significant relationship between high school graduation rate and students with Limited English Proficiency?
- RQ9: Is there a significant relationship between high school graduation rate and students with disabilities?
- RQ10: Is there a relationship between high school graduation rate and school location?

- RQ11: Is there a significant relationship between the subject areas percent passed and high school graduation rate?
- RQ12: Is there a relationship between high school graduation rate and principal's leadership style?
- RQ13: Is there a relationship between high school graduation rate and quality of instruction?
- RQ14: What subjects had the highest and lowest pass rate?



## **CHAPTER IV**

### **RESEARCH METHODOLOGY**

This is a quantitative/qualitative study that investigates if gender, class size, teacher experience/qualification, attendance, ethnicity, socio-economic status (SES), percentage of students with disability (SWD), school location, percentage of limited English proficiency students (LEP), leadership style, and quality of instruction affect Georgia high school graduation rate. The study also investigated if the failures or multiple failures in some subject areas affect high school graduation rate. The outline in this chapter addresses the design of the research methodology, description of the participants, and various ways that data were collected.

#### **Research Design**

The research focuses on 30 high schools, stratified-randomly chosen from six metropolitan school districts in Georgia. The stratified-random sampling was utilized in order to control sources of error. In this study, six districts in metropolitan Atlanta public schools were chosen. From each district, five schools were randomly chosen. Names of high schools in the district were written on a piece of paper and put in a paper bag. A school was randomly chosen and dropped back in the bag, until all the five schools have been randomly chosen. By returning the school chosen back into the bag, gave every school in the district equal opportunity to be chosen.

### **Setting and Participants**

The school is the unit of analysis. The moderating factors (language arts, mathematics, social studies, science, and writing) and graduation rate for the different schools in each district were examined based on the entire graduating seniors' gender, class size, teacher qualification and experience, attendance, ethnicity, socioeconomic status of the school (SES), students with disabilities (SWD), school location, and percentage of limited English proficiency students (LEP). Data for the variables such as gender, class size, teacher experience/qualification, attendance, and ethnicity, percentage of socioeconomic status (SES), percentage of Limited English Proficient students, and percentage of SWD, and school location were drawn from on-line resources such as the Georgia department of education and the National center for education statistics. Research was also conducted in one of the school districts through surveys to determine the impact of school leadership style and quality of instructions on high school graduation rate. The two schools within the district would be both similar in SES but one would be high performing and one low performing with respect to graduation rates.

### **Statistical Analysis**

Research questions were tested using correlation analysis. On-line data collected from each school in the district were analyzed and compared with other schools and districts with or without the same geographical location and students' population to ascertain which variable or variables may have affected Georgia high school graduation. In addition, a survey was conducted in one of the school districts to find out if leadership style and quality of instruction affects high school graduation rate.

### **Limitations**

The following are limitations that might impact the findings:

1. The socioeconomic statuses of the students involved in the research were not considered.
2. The study did not find out why the strategies already tried were not yielding the expected results.

## **CHAPTER V**

### **DATA ANALYSIS**

The purpose of this study was to critically examine the graduation rate of students who enroll in high schools in Georgia, and to identify the variables that may be impacting their graduation rate. The dependent variable was graduation rate and the independent variables were socioeconomic status (SES), class size, student attendance, teacher qualifications, teacher experience, school location, percent of students passing the GHS GT mathematics test, percent of students passing the GHS GT social studies test, percent of students passing the GHS GT English/language arts test, percent of students passing the GHS GT science test, and percent of students passing the GHS GT writing test. The quantitative data were analyzed using the Statistical Package for the Social Sciences (SPSS). The data are presented in two parts—the statistical distribution of the variables to observe the extent of their variations, and the results and analyses of the statistical tests in response to the identified research questions. All of the statistical procedures were tested at the 0.05 significance level. The data were collected from state department of education for 30 schools. In addition, there were two schools surveyed to collect data on teacher perceptions on the following factors: principal leadership style, teacher motivation, teacher instructional quality, school climate, and teacher workload. This data were compared to the school's SES and graduation rate to see if there were descriptive patterns in the survey data and the schools' graduation rates. A Pearson correlation was

used to test for significant relationships of the dependent and independent variables collected from the state of education department, and a descriptive frequency analysis was used to analyze the survey data.

The survey data used a 4 point Likert scale: (4) Very Frequently Occurs, (3) Often Occurs, (2) Sometimes Occurs, and (1) Rarely Occurs. The other demographic data were coded as follows:

- **Student Attendance:** (Percent Less than 5 days absences = 1; Percent 6-15 days absent = 2; Percent greater than 15 days absent = 3)
- **School Location:** (Suburban = 1; Urban = 2),
- **Teacher Experience:** (Percent Less than 1 year = 1; Percent 1-10 years = 2; Percent 11-20 years = 3; Percent 21–30years = 4; Percent more than 30 years = 5)
- **Teacher Qualifications:** Percent 4 year Bachelor's degree = 1; Percent 5 year Masters degree = 2; Percent 6 year Percent Specialist degree = 3; Percent 7 year doctorate = 4).

The following variable categories were collapsed: Teacher Qualifications categories were combined: BA in one category; M.A., Ed.S., and Ed.D. were grouped. Teacher experience categories were combined (Percent Less than 1year and Percent 1-10 years were combined; Percent 11-20 yrs ; Percent 21–30 years; and Percent more than 30 years = 5 were combined.

The graduation rate also known as Lever Rate is the number of students leaving high school with a standard high school diploma, expressed as a proportion of all those

documented leaving with a diploma or other completion credential or as a dropout. This method is sometimes referred to as a departure-classification index and 32 states are using this method including Georgia. The possible percent values for graduation rate ranges from 0% to 100%.

### Georgia's Graduation Rate Formula

(# of students who graduate with a regular diploma)

÷

(# of 9th-12th grade dropouts from appropriate years + graduates + other completers)

A survey was used to collect descriptive data of teacher perceptions in terms of principal leadership style, teacher motivation, instructional quality, school climate, and teacher workload. A descriptive comparison was made of two sample schools: School 1 to School 2 in terms of leadership style, teacher motivation, instructional quality, school climate, and teacher workload. The descriptive data indicated that School 2 had a higher rating in terms of teachers' perception of principal leadership style, teacher motivation, instructional quality, school climate, except in the area of teacher workload where school 1 had a higher workload rating (see Tables 10 and 11).

Table 10

#### *School 1 Characteristics: Descriptive Data*

	N	Mean	STD	S.E.
Leadership Style	24	2.3826	.4825	.0984
Teacher Motivation	24	2.5139	.5448	.1112

Table 10 (continued)

	N	Mean	STD	S.E.
Instructional Quality	24	3.1250	.4302	.0878
School Climate	24	3.3185	.3779	.0771
Teacher Workload	24	2.9479	.9862	.2013

Dimension Scale: (4) Very Frequently Occurs; (3) Often Occurs; (2) Sometimes Occurs, and (1) Rarely Occurs; Graduation Rate = 87.8; SES = 74

Table 11

*School 2 Characteristics: Descriptive Data*

	N	Mean	STD	S.E.
Leadership Style	23	2.7431	.4697	.0979
Teacher Motivation	23	2.9130	.5682	.1184
Instructional Quality	23	3.3292	.4251	.0886
School Climate	23	3.4689	.5885	.1227
Teacher Workload	23	2.3587	.9348	.1949

Dimension Scale: (4) Very Frequently Occurs; (3) Often Occurs; (2) Sometimes Occurs, and (1) Rarely Occurs; Graduation Rate = 74.7; SES = 74

### Quantitative Data Analysis

A Pearson correlation was performed to test the dependent variable graduation rate and the independent variables in the following research questions.

## Research Questions

### Quantitative Research Questions Data Analysis

RQ1: Is there a significant relationship between high school graduation rate and students' gender?

The data with respect to this research question are provided in Table 12.

Table 12

#### *Correlation of Graduation Rate and GHGST Subject Performance by Gender*

Gender	Writing	Mathematics	Science	Social Studies	English
<b>Male</b>					
Pearson r	.659	.239	.299	.364	.442
Sig.	.000*	.204	.108	.048*	.015*
N	30	30	30	30	30
<b>Female</b>					
Pearson r	.728	.472	.328	.260	.449
Sig.	.000*	.008*	.076	.166	.013*
N	30	30	30	30	30

\* $p < 0.05$ .

In the table, the following significant relationships are observed: Student gender was significantly related to graduation rate: Mathematics male student's pass rate had a Pearson correlation of  $r(30) = 0.239$ ,  $p = 0.204$ , with graduation rate and was not significant at greater than 0.05 levels (calculated value being 0.204). Mathematics female student's pass rate had a Pearson correlation of  $r(30) = 0.472$ ,  $p = 0.008$ , with



graduation rate and was significant at less than 0.05 level (calculated value being 0.008). Social studies male student's pass rate had a Pearson correlation of  $r(30) = 0.364$ ,  $p = 0.048$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.048). English male student's pass rate had a Pearson correlation of  $r(30) = 0.442$ ,  $p = 0.015$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.015). English female student's pass rate had a Pearson correlation of  $r(30) = 0.449$ ,  $p = 0.013$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.013). Writing male student's pass rate had a Pearson correlation of  $r(30) = 0.659$ ,  $p = 0.000$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.000). Writing female student's pass rate had a Pearson correlation of  $r(30) = 0.728$ ,  $p = 0.000$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.000). Social studies female student's pass rate had a Pearson correlation of  $r(30) = 0.260$ ,  $p = 0.166$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.008). Science male student's pass rate had a Pearson correlation of  $r(30) = 0.299$ ,  $p = 0.108$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.108). Science female student's pass rate had a Pearson correlation of  $r(30) = 0.328$ ,  $p = 0.076$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.076).

There was a significant relationship with schools' graduation rate and the following female mathematics pass rate, male social studies pass rate, male English / language arts pass rate, female English pass rate, male writing pass rate, and female

writing pass rate. Female students had a higher pass rate than male students in mathematics, science, English, and writing. However, male had a higher but a very small difference in social studies.

RQ2: Is there a significant relationship between high school graduation rate and classroom size?

The data with respect to this research question are provided in Table 13. In the table, the following significant relationships are observed: classroom size was not significantly related to graduation rate: class room size had a Pearson correlation of  $r(30) = 0.062$ ,  $p = 0.745$ , with graduation rate and was not significant at greater than 0.05 levels (calculated value being 0.745). There was no significant relationship between classroom size and student graduation rate.

Table 13

*Correlation of Graduation Rate and Class Size*

Graduation Rate	Class Size
Pearson r	.062
Sig.	.745
N.	30

\* $p < 0.05$ .

RQ3: Is there a significant relationship between high school graduation rate and teacher experience?

The data with respect to this research question are provided in Table 14. In the table, the following significant relationships are observed: teacher experience was significantly related to graduation rate: teacher experience had a Pearson correlation of  $r(30) = -0.513$ ,  $p = 0.004$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.004). There was a significant relationship between teacher experience and student graduation rate. The data indicated that schools with a higher percent of teachers with eleven or more years of experience had lower graduation rates than schools with higher percent of teachers that had ten years of experience or less. Schools with teachers which had a greater percent of teachers with ten years or less of experience had higher graduation rates.

Table 14

*Correlation of Graduation Rate and Teacher Experience*

Graduation Rate	Teacher Experience
Pearson r	-.513
Sig.	.004
N.	30

\* $p < 0.05$ .

RQ4: Is there a significant relationship between high school graduation rate and teacher qualifications?

The data with respect to this research question are provided in Table 15. In the table, the following significant relationships are observed: teacher qualification was significantly related to graduation rate: teacher qualification had a Pearson correlation of  $r(30) = -0.555$ ,  $p = 0.001$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.001). There was a significant relationship between teacher qualification and student graduation rate. The data indicated that schools with a higher percent of teachers with higher degree qualifications such as M.A., Ed.S., or Ed.D. had lower graduation rates than schools with a higher percent of teachers with B.A. qualifications.

Table 15

*Correlation of Graduation Rate and Teacher Qualifications*

Graduation Rate	Teacher Qualifications
Pearson r	-.555
Sig.	.001
N.	30

\* $p < 0.05$ .

RQ5: Is there a significant relationship between high school graduation rate and school attendance?

The data with respect to this research question are provided in Table 16. In the table, the following significant relationships are observed: Student attendance was not significantly related to graduation rate.

Table 16

*Correlation of Graduation Rate and Student Attendance*

Graduation Rate	Student Attendance
Pearson r	.107
Sig.	.574
N.	30

\*p < 0.05.

Student attendance had a Pearson correlation of  $r(30) = 0.107$ ,  $p = 0.574$ , with graduation rate and was not significant at greater than 0.05 levels (calculated value being 0.574). There was no significant relationship between student attendance and student graduation rate.

RQ6: Is there a significant relationship between high school graduation rate and students' ethnicity?

The data with respect to this research question are provided in the Table 17. In the table, the following significant relationships are observed: percent of Asian students who passed mathematics was not significantly related to graduation rate: mathematics students had a Pearson correlation of  $r(15) = 0.026$ ,  $p = 0.928$ , with graduation rate and was not significant at greater than 0.05 levels (calculated value being 0.928). Percent of black students who passed mathematics was significantly related to graduation rate: mathematics students had a Pearson correlation of  $r(28) = 0.691$ ,  $p = 0.000$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.000).

Table 17

*Correlation of Graduate Rate and GHGST Subject Performance by Ethnicity*

Ethnicity	Writing	Mathematics	Science	Social	
				Studies	English
<b>Black</b>					
Pearson r	.823	.691	.616	.437	.532
Sig.	.000*	.000*	.000*	.016*	.002*
N	30	28	30	30	30
<b>White</b>					
Pearson r	.034	-.203	-.061	.056	-.167
Sig.	.896	.419	.817	.826	.507
N	17	18	17	18	18
<b>Hispanic</b>					
Pearson r	.475	.172	.187	.437	.032
Sig.	.054	.495	.457	.016*	.899
N	17	18	18	30	18
<b>Asian</b>					
Pearson r	-.245	.172	.485	.285	.082
Sig.	.398	.495	.067	.284	.771
N	14	18	15	16	15
<b>Others</b>					
Pearson r	.131	.388	.466	.205	.136
Sig.	.685	.213	.126	.502	.673
N	12	12	12	13	12

\*p &lt; 0.05.

The percent of Hispanic students who passed mathematics was not significantly related to graduation rate: mathematics students had a Pearson correlation of  $r(18) = 0.172$ ,  $p = 0.495$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.495). The percent of white students who passed mathematics was not significantly related to graduation rate: mathematics students had a Pearson correlation of  $r(18) = -0.203$ ,  $p = 0.419$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.419). The percent of other students who passed mathematics was not significantly related to graduation rate: mathematics students had a Pearson correlation of  $r(12) = 0.388$ ,  $p = 0.215$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.215).

The percent of Asian students who passed social studies was not significantly related to graduation rate: social studies students had a Pearson correlation of  $r(16) = 0.285$ ,  $p = 0.284$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.284). The percent of black students who passed social studies was significantly related to graduation rate: social studies students had a Pearson correlation of  $r(30) = 0.437$ ,  $p = 0.016$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.016). The percent of Hispanic students who passed social studies was not significantly related to graduation rate: social studies students had a Pearson correlation of  $r(18) = 0.161$ ,  $p = 0.524$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.524). The percent of white students who passed social studies was not significantly related to graduation rate: social studies students had a Pearson correlation of  $r(18) = 0.056$ ,  $p = 0.826$ , with

graduation rate and was not significant at greater than 0.05 level (calculated value being 0.826). The percent of other students who passed social studies was not significantly related to graduation rate: social studies students had a Pearson correlation of  $r(13) = 0.205$ ,  $p = 0.502$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.502).

The percent of Asian students who passed science was not significantly related to graduation rate: science students had a Pearson correlation of  $r(15) = 0.485$ ,  $p = 0.067$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.067). The percent of black students who passed science was significantly related to graduation rate: science students had a Pearson correlation of  $r(30) = 0.616$ ,  $p = 0.000$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.000). The percent of Hispanic students who passed science was not significantly related to graduation rate: science students had a Pearson correlation of  $r(18) = 0.187$ ,  $p = 0.457$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.457). The percent of white students who passed science was not significantly related to graduation rate: science students had a Pearson correlation of  $r(17) = -0.061$ ,  $p = 0.817$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.817). The percent of other students who passed science was not significantly related to graduation rate: science students had a Pearson correlation of  $r(12) = 0.466$ ,  $p = 0.126$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.126).



The percent of Asian students who passed English / language arts was not significantly related to graduation rate: English / language arts students had a Pearson correlation of  $r(15) = 0.082$ ,  $p = 0.771$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.771). The percent of black students who passed English / language arts was significantly related to graduation rate: English / language arts students had a Pearson correlation of  $r(30) = 0.533$ ,  $p = 0.002$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.002). The percent of Hispanic students who passed English/language arts was not significantly related to graduation rate: English/language arts students had a Pearson correlation of  $r(18) = 0.032$ ,  $p = 0.899$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.899). The percent of white students who passed English / language arts was not significantly related to graduation rate: English / language arts students had a Pearson correlation of  $r(18) = -0.167$ ,  $p = 0.507$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.507). The percent of other students who passed English/language arts was not significantly related to graduation rate: English / language arts students had a Pearson correlation of  $r(12) = 0.136$ ,  $p = 0.673$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.673).

The percent of Asian students who passed writing was not significantly related to graduation rate: science students had a Pearson correlation of  $r(14) = -0.245$ ,  $p = 0.398$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.398). The percent of black students who passed writing was significantly related

to graduation rate: writing students had a Pearson correlation of  $r(30) = 0.823$ ,  $p = 0.000$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.000). The percent of Hispanic students who passed writing was not significantly related to graduation rate: writing students had a Pearson correlation of  $r(17) = 0.475$ ,  $p = 0.054$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.054). The percent of white students who passed writing was not significantly related to graduation rate: writing students had a Pearson correlation of  $r(17) = 0.034$ ,  $p = 0.896$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.896). The percent of other students who passed writing was not significantly related to graduation rate: writing students had a Pearson correlation of  $r(12) = 0.131$ ,  $p = 0.685$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.685).

Thus, there was a significant relationship between students' ethnicity and student graduation rate. The results indicate that there was direct correlation with the schools' graduation rate and pass rate of black students in all subject areas. There was not a significant correlation with Asian, Hispanic, white, and others. The descriptive data show that Asian, whites, and others have higher pass rate than Blacks and Hispanic students.

RQ7: Is there a significant relationship between high school graduation rate and socioeconomic status of students?

The following significant relationships are observed with respect to socioeconomic status: socioeconomic status (SES) was not significantly related to

graduation rate: Socioeconomic status (SES) had a Pearson correlation of  $r(30) = -0.158$ ,  $p = 0.405$ , with graduation rate and was not significant at greater than 0.05 levels (calculated value being 0.405). There was no significant relationship between socioeconomic status (SES) and student graduation rate. The data with respect to this research question are provided in Table 18.

Table 18

*Correlation of Graduation Rate and Socioeconomic Status (SES)*

Graduation Rate	Socioeconomic Status (SES)
Pearson r	-.158
Sig.	.405
N.	30

\* $p < 0.05$

RQ8: Is there a significant relationship between high school graduation rate and students with Limited English Proficiency?

The data with respect to this research question are provided in Table 19. In the table, the following significant relationships are observed: limited English proficiency was not significantly related to graduation rate. Mathematics limited English proficiency had a Pearson correlation of  $r(11) = 0.380$ ,  $p = 0.249$ , with graduation rate and was not significant at greater than 0.05 levels (calculated value being 0.249).

Table 19

*Correlation of Graduation Rate and Limited English Proficiency (LEP)*

LEP	Writing	Mathematics	Science	Social Studies	English
Graduation Rate					
Pearson r	.308	.380	.528	.544	.170
Sig.	.386	.249	.116	.084	.618
N	10	11	10	11	11

\*p &lt; 0.05

English/language limited English proficiency had a Pearson correlation of  $r(11) = 0.170$ ,  $p = 0.618$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.618). Social studies limited English proficiency had a Pearson correlation of  $r(11) = 0.445$ ,  $p = 0.084$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.084). Science limited English proficiency had a Pearson correlation of  $r(10) = 0.528$ ,  $p = 0.116$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.116). Writing limited English proficiency had a Pearson correlation of  $r(10) = 0.308$ ,  $p = 0.386$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.386). There was no significant relationship between limited English proficiency and student graduation rate.

RQ9: Is there a significant relationship between high school graduation rate and students with disabilities?

The data with respect to this research question are provided in Table 11. In the table, the following significant relationships are observed: students with disability were significantly related to graduation rate: mathematics students with disability had a Pearson correlation of  $r(27) = 0.466$ ,  $p = 0.014$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.014). English/language students with disability had a Pearson correlation of  $r(27) = 0.491$ ,  $p = 0.009$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.009). Social studies students with disability had a Pearson correlation of  $r(26) = 0.418$ ,  $p = 0.034$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.034). Science students with disability had a Pearson correlation of  $r(27) = 0.524$ ,  $p = 0.005$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.005). Writing students with disability had a Pearson correlation of  $r(25) = 0.540$ ,  $p = 0.005$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.005). There was a significant relationship between students with disability and student graduation rate. The data show that there is a correlation with schools' graduation rate and student with disabilities pass rate in all subject areas.

Table 20

*Correlation of Graduation Rate and Students with Disabilities (SWD) by Subject*

SWD	Writing	Mathematics	Science	Social Studies	English
Graduation Rate					
Pearson r	.540	.466	.524	.418	.491
Sig.	.005	.014*	.005*	.034*	.009*
N	25	27	27	26	27

\*p &lt; 0.05

RQ10: Is there a relationship between high school graduation rate and school location?

The data with respect to this research question are provided in Table 21. In the table, the following significant relationships are observed: school location was not significantly related to graduation rate: school location had a Pearson correlation of  $r(30) = -0.238$ ,  $p = 0.206$ , and was not significant at greater than 0.05 levels (calculated value being 0.206). There was no significant relationship between school location and student graduation rate.

Table 21

*Correlation of Graduation Rate and School Location*

Graduation Rate	School Location
Pearson r	-.238
Sig.	.206
N.	30

\*p &lt; 0.05

RQ11: Is there a significant relationship between the subject areas percent passed and high school graduation rate?

The data with respect to this research question are provided in Table 22. In the table, the following significant relationships are observed: mathematics was significantly related to graduation rate: Mathematics had a Pearson correlation of  $r(30) = 0.375$ ,  $p = 0.041$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.041). Social studies was not significantly related to graduation rate: social studies had a Pearson correlation of  $r(30) = 0.336$ ,  $p = 0.069$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.336). Science was not significantly related to graduation rate: science had a Pearson correlation of  $r(30) = 0.337$ ,  $p = 0.068$ , with graduation rate and was not significant at greater than 0.05 level (calculated value being 0.337). English /language arts was significantly related to graduation rate: English/language arts had a Pearson correlation of  $r(30) = 0.467$ ,  $p = 0.009$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.009).

Table 22

*Correlation of Graduation Rate and GHSGT Subjects*

GHSGT Subjects	Writing	Mathematics	Science	Social Studies	English
<b>Graduation Rate</b>					
Pearson r	.715*	.375*	.337	.336	.467*
Sig.	.000	.041	.068	.069	.009
N	30	30	30	30	30

\*p &lt; 0.05

Writing was significantly related to graduation rate: writing had a Pearson correlation of  $r(30) = 0.715$   $p = 0.000$ , with graduation rate and was significant at less than 0.05 level (calculated value being 0.000). There is a significant relationship between percent of students who passed writing, English/language arts, and math. There is no significant correlation with science or social studies with graduation rate.

### **Descriptive Research Questions Data Analysis**

RQ12: Is there a relationship between high school graduation rate and principal's leadership style?

In a descriptive observation, data showed that there is an inverse incidence between teacher's perception of principal leadership and the school's graduation rate. School 1 leadership style rating of the principal was lower than School 2, while School 1 had a higher graduation rate than School 2. School 1 graduation rate = 87.8%, SES = 74% School 2 graduation rate = 74.7, SES = 74% (see Tables 10 and 11).



RQ13: Is there a relationship between high school graduation rate and quality of instruction?

There is a descriptive observation that showed that there is an inverse incident between teacher's perception of quality of instruction of teachers and the school's graduation rate. School 1 quality of instruction rating of teachers was lower than school 2, while school 1 had a higher graduation rate than school 2 (see Tables 10 and 11).

RQ14: What subjects had the highest and lowest pass rate?

The subjects with the highest pass rate in the listed order are mathematics, writing, English/language arts, science, and social studies (see Table 23).

Table 23

*GHSQT Subject Pass Rate*

	N	Mean	STD	S.E.
Mathematics	30	93.66	4.71	.861
Writing	30	92.45	4.42	.807
English/Language	30	91.91	6.59	1.204
Science	30	88.16	5.12	.935
Social Studies	30	87.83	7.266	1.326

### Summary of Findings

In summary, the data showed that female students in the thirty schools used in the study on average performed better than male students in mathematics, science, English, and writing. Female percent pass rate correlated with graduation pass rate more than male students. The analysis indicated the black students in every subject had a

correlation with the school graduation rate. There was not a significant correlation with Asian, Hispanic, white, and others in subject area pass rate. The descriptive data showed that Asian, whites, and others have higher pass rate than black and Hispanic students. In terms of students with the disabilities, the data showed that there was a correlation with schools' graduation rate and students with disabilities pass rate in all subject areas. There is a significant relationship between percent of students who passed writing, English/language arts, and math and graduation rate. There is no significant correlation with student pass rate in science or social studies with graduation rate. In review of the descriptive analysis the following summary was made. The subjects with the highest pass rate in the listed order are mathematics, writing, English/language arts, science, and social studies. The descriptive data indicated that School 2 had a higher rating in terms of teachers perception of leadership style, teacher motivation, instructional quality, school climate, except in the area of teacher workload while School 1 had a higher workload rating, and that there is an inverse incident between teacher's perception of principal leadership style, teacher motivation, instructional quality, school climate and the school's graduation rate. School 1 with higher teacher perception rating of teacher workload was reflected with a higher graduation rate, while School 2 with a lower teacher perception of teacher workload had a lower graduation rate.

### **Specific Findings in Terms of Research Questions**

RQ1: There was a significant relationship with schools' graduation rate and the following female mathematics pass rate, male social studies pass rate, male English/language arts pass rate, female English pass rate, male

writing pass rate, and female writing pass rate. Female students had a higher pass rate than male students in mathematics, science, English, and writing. However, male had a higher but a very small difference in social studies.

- RQ2: There was no significant relationship between high school graduation rate and classroom size.
- RQ3: There was a significant relationship between high school graduation rate and teacher experience. The data indicated that schools with a higher percent of teachers with 11 or more years of experience had lower graduation rates than schools with higher percent of teachers that had 10 years of experience or less. Schools with teachers which had a greater percent of teachers with ten years or less of experience had higher graduation rates.
- RQ4: There was a significant relationship between teacher qualification and student graduation rate. The data indicated that schools with a higher percent of teachers with higher degree qualifications such as M.A., Ed.S., or Ed.D. had lower graduation rates than schools with a higher percent of teachers with B.A. qualifications.
- RQ5: There was no significant relationship between high school graduation rate and school attendance.
- RQ6: There was a significant relationship between high school graduation rate and students' ethnicity. The results indicated that there was direct

correlation with the schools' graduation rate and pass rate of black students in all subject areas. There was not a significant correlation with Asian, Hispanic, white, and others. The descriptive data show that Asian, whites, and others have higher pass rate than black and Hispanic students.

- RQ7: There was no significant relationship between high school graduation rate and socioeconomic status of students.
- RQ8: There was no significant relationship between high school graduation rate and limited English proficiency students.
- RQ9: There was a significant relationship between high school graduation rate and students with disability. The results indicated that there was a correlation with the percent of students with disabilities and the graduation pass rate. The data showed that there was a correlation with schools' graduation rate and student with disabilities pass rate in all subject areas.
- RQ10: There was no significant relationship between high school graduation rate and school location.
- RQ11: There was a significant relationship between the subject areas percent passed and high school graduation rate. There was a significant relationship between percent of students who passed writing, English/language arts, and math and graduation rate. There was no

significant correlation with Science or Social Studies with graduation rate.

- RQ12: There was a relationship between high school graduation rate and principal's leadership style. In a descriptive observation data showed that there is an inverse incident between teacher's perception of principal leadership and the school's graduation rate. School 1 leadership style rating of the principal was lower than School 2, while school 1 had a higher graduation rate than school 1.
- RQ13: There was a relationship between high school graduation rate and quality of instruction. There was a descriptive observation that showed that there is an inverse incident between teacher's perception of quality of instruction of teachers and the school's graduation rate. School 1 quality of instruction rating of teachers was lower than School 2, while School 1 had a higher graduation rate than School 2.
- RQ14: The subjects with the highest pass rate in the listed order are mathematics, writing, English/language arts, science, and social studies.

## CHAPTER VI

### SUMMARY, FINDINGS, AND RECOMMENDATIONS

The purpose for conducting this study was to find out the variables that might be affecting high school graduation rate in Georgia. The high school graduation rate in Georgia has been very low compared with other states. *Goals 2000* advocated for on time graduation and increase in graduation rate to at least 90%. Fifteen years after this Act, Georgia and all other states are still far from reaching this goal. On-time national public high school graduation rates are said to be approximately 66% to 70% with Georgia's high school graduation rate ranking at the 49th percentile. The results of these findings are believed to help teachers, administrators, and school districts to employ teaching, remediation, and administrative strategies that will help each school and districts in attaining the national projected graduation rate as stipulated by the Educate America Act of 1994.

Georgia defines a graduate as a student who leaves high school with a Regular diploma (this does not include certificates of attendance or special education diploma) in the standard time (i.e. 4 years) (Governor's Office of Student Achievement, 2007). In calculating high school graduation rate, Georgia, together with 30 other states, uses the "Lever Rate." The "Lever Rate" is calculated as the number of students leaving high school with a standard high school diploma, expressed as a proportion of all those documented leaving with a diploma or other completion credential or as a dropout.

### Georgia's Graduation Rate Formula

(# of students who graduate with a regular diploma)

÷

(# of 9th-12th grade dropouts from appropriate years + graduates + other completers)

In this study, the high school graduation rate in Georgia was proposed as being caused by the following variables: (a) poor students' attendance to school, (b) class size, (c) socioeconomic status of the school, (d) students with limited English proficiency (LEP), (e) students with disabilities (SWD), (f) school location, (g) gender, (h) students' ethnicity, (i) teachers' experience and qualifications, (j) leadership style, and (k) quality of Instruction.

The following research questions were proposed; data were collected and analyzed:

- RQ1: Is there a significant relationship between high school graduation rate and students' gender?
- RQ2: Is there a significant relationship between high school graduation rate and classroom size?
- RQ3: Is there a significant relationship between high school graduation rate and teacher experience?
- RQ4: Is there a significant relationship between high school graduation rate and teacher qualification?

- RQ5: Is there a significant relationship between high school graduation rate and school attendance?
- RQ6: Is there a significant relationship between high school graduation rate and students' ethnicity?
- RQ7: Is there a significant relationship between high school graduation rate and socioeconomic status of students?
- RQ8: Is there a significant relationship between high school graduation rate and students with Limited English Proficiency?
- RQ9: Is there a significant relationship between high school graduation rate and students with disabilities?
- RQ10: Is there a significant relationship between high school graduation rate and school location?
- RQ11: Is there a significant relationship between the subject areas percent passed and high school graduation rate?
- RQ12: Is there a relationship between high school graduation rate and principal's leadership style?
- RQ13: Is there a relationship between high school graduation rate and quality of instruction?
- RQ14: What subjects had the highest and lowest pass rate?

The moderating variables in this research were mathematics, language arts, science, social studies, and Writing tests. In testing these variables, 30 high schools were stratified-randomly selected from six metro Atlanta public schools. Quantitative data on



gender, classroom size, socioeconomic status of the school, students' ethnicity, teacher qualifications and experience, students' attendance, limited English proficiency (LEP), and students with disabilities data were drawn from the Georgia Department of Education for the year 2009. The graduation rate of each of the schools was also drawn from this source. How each of these demographics contributed to the graduation rate of the school were analyzed and compared using the correlations factor. Results of the analysis showed that:

1. There was a significant relationship between subjects passed by the different gender groups and the school's high school graduation rate. Females were found to score higher in mathematics, science, English, and writing than their male counterparts, while the males scored better with a small difference in social studies than their female counterparts. This fact is supported by the literature review in which Clarck, Thompsialle, and Vialle (2008) stated that international education statistics reported gender gaps exists between the high school graduation rate of male and female students. In addition, the National Women's Law Center (2007) was quoted in the literature review as reporting that nationally, 72% of female students graduated compared to 65% of males. However one can attribute this to the fact that female students are subject motivated or prefer instructions in these areas.
2. There was no significant relationship between class size and the school's high school graduation rate. This result is contrary to what most researchers have stated on the effect of classroom size and graduation rate. For example,

Jepsen and Rivkin (2009) found, based on their research, that smaller classes raised mathematics and reading achievement. Achilles (2003) also stated that smaller class sizes improve students' academic achievement, improve their behavior and discipline both in the classroom and outside of school.

3. On teacher experience, results of the data analysis showed that there was a significant relationship between teacher experience and students' graduation rate. Results showed that schools with a high percentage of teachers with less than 11 years of teaching experience have a higher high school graduation rate than schools with a higher percentage of teachers with teaching experience of more than eleven years. The results seem to correlate with the findings of Abuseji (2007). Abuseji reported through his research that teacher age, gender, qualification and experience had direct causal effect on student's achievement in chemistry. However, one would infer that this inverse relationship between teacher experience and students graduation rate could be as a result of the fact that the young teachers with less than 11 years of experience are more enthusiastic about teaching and learning, spending more time with the students during and after school hours than the teachers with 11 years experience and above. It can be understood that the more experienced one is on a job, the better that individual will perform on the job. The inverse relationship found in this research may be attributed to lack of motivation, rewards, recognition and appreciation of these experienced

teachers by the leadership team. On the other hand, it can also be as a result of burn-out for the older teachers.

On the same note, an analysis of the data also showed that teacher qualification has a significant relationship on high school graduation rate of schools. Schools with high percentage of teachers with first degrees have a higher high school graduation rate than high schools with a higher percentage of teachers with advanced degrees.

4. In the area of attendance the data analyzed showed that there was no significant relationship between student attendance and student graduation rate. This is contrary to what almost all the literature reviews had stated. Douglas (2004) in his study, showed that there is a significant relationship between students' attendance and achievement. Wilson (2006) also reported that truancy adversely affected the academics of students that were involved. Attendance is defined in this study as the number of days that students were in and out of school. This does not mean truancy. It is the writer's opinion that these students, though absent were able to make up their missed assignments otherwise there is no possibility that a student who has had too many absences and who may not have made up the missed assignments will pass high school graduation tests.
5. Analysis of the data collected showed that there was a significant relationship between students' ethnicity and graduation rate. Schools where blacks score high on GHGT tests had a higher graduation rate than schools

where blacks scored lower. This is in accordance with almost all literature reviews. Greene (2006) reported a wide disparity between public high school graduation rate for whites, Asian students, African-American students, and Hispanics. However, one implication of this finding is the need for further research into why some black students do better than other black students on the same test. Since black students are driving the graduation rate, then the implication is that schools should do all they can to get more black students to achieve.

6. On the socioeconomic status of the school, result showed that there was no significant relationship between socioeconomic status (SES) and students' graduation rate. Toutnoushian and Curtis (2005) in their study titled *Effects of Socioeconomic Factors on Public High School Outcomes and Rankings*, found that socioeconomic status (SES) factors have a strong relationship with the average performance of students in public high schools in New Hampshire. They further stated that three socioeconomic factors such as unemployment, parent education and income accounted for over half of the variations in average standardized test scores and that these factors are beyond the control of the districts. However, Okoye (2009) had reported that the combined effect of gender and socioeconomic status did not produce any significant effect on students' performance in integrated science. Generally, students from low socioeconomic status usually have parents doing more

than one jobs and these parents are rarely at home to encourage and support them.

7. Data analysis on the impact of limited English proficiency on the graduation rate of the students revealed that there was no significant relationship between limited English proficiency and student graduation rate. This result is supported by most literature reviews. Keifer (2006) had stated that students with limited English proficiency have lower reading achievement in English than their native English speaking peers, but Keifer went on to say that the discrepancies can be lowered from large to moderate and with time the differences could be narrowed over time as a result of the socio-economic status of the families. (Most of the schools surveyed however, were predominantly black schools with little or no populations of students with Limited English Proficiency speaking students).
8. In the area of students with disability, data showed that there is a significant relationship between students with disability and high school graduation rate. This is in alignment with what the research says about the academic achievement of students with special needs. Miller (2002) reported that a wide range of characteristics exists with students with special needs which inhibit their ability to learn. Students with special needs among other things, have difficulty with academics, social-emotional and behavioral difficulties. These behaviors, affect the learning of those groups of students, which eventually affect the graduation rate of the schools.

9. Quantitative data analyzed, as could be seen in chapter five showed that there was no significant relationship between school location and high school graduation rate. This result contradicts previous research and literature reviews conducted in chapter two. Xu (2009) stated that students in urban schools were more self motivated than their rural counter parts. But the schools chosen in this research were mainly urban schools and cannot be compared adequately with the suburban schools.
10. Based on the data, there was a relationship between the subject areas passed, especially English, mathematics, science and writing on the graduation rate of the school. Schools with low test scores in English and mathematics have low graduation rate.
11. In the area of quality of instructions, the data analysis showed that there was an inverse incident between teacher's perception of quality of instruction of teachers and the school's graduation rate. School 1 quality of instruction rating of teachers was lower than School 2, while School 1 had a higher graduation rate than School 2. This result is contrary to the findings of Schacter and Thum (2005) which stated that teachers that were subjected to good professional development programs had their students performing at high level academically.
12. On the effect of leadership style and graduation rate, data analysis showed that there was also a relationship between the leadership style and graduation rate of a school. School one from the study had principals' leadership style

lower than school two, but the graduation rate of school one is higher than school two. This can be attributed to a higher teachers' workload in school one than school two.

### **Summary**

In summary, even though some literature reviews have a different result on the factors that affect academic achievement of students in high school, data based on this research supports only the fact that graduation rate in Georgia are affected by ethnicity, gender, SWD, teacher qualifications and teacher experience, leadership style and quality of instructions. The onus then falls on us to model instructions in such a way that every child's needs are met in the classrooms. Quality of instructions should be implemented in every classroom and leadership style should be a motivating factor for teachers to be enthusiastic in the delivery of their daily functions and teachings in the classrooms. Teachers with more than 11 years of experience should be highly motivated so that they can use their experience positively in the education of the students.

### **Recommendations**

#### **Recommendations for Principals and Teachers**

The following recommendations were based on the findings derived from the research:

1. In order to encourage males to score as high as their female counter parts in mathematics, science, English, and writing, school administrators can do the following:

- A. Administrators can invite educated influential male figures to speak to all male students every six weeks of school. That can make a great difference in their academic pursuit.
  - B. Teachers may be encouraged to design instructions so that the male students can choose from different activities to work with to get them involved more in these subject areas.
  - C. Males should be encouraged by teachers and administrators to participate in sports to make schooling more interesting to them.
2. In the area of teacher experience, the following recommendations can be a motivating factor to all teachers especially teachers with more than ten years of experience:
    - A. Administrators may be required to organize programs that will motivate and reward all levels of teachers. Such programs can include teacher of the month, teacher with best teaching practices, best classroom management techniques, or teacher with most differentiated instructions classroom.
    - B. It may be necessary for administrators to give their teachers lunch once in a while in appreciation for what they do and this can be a motivating factor for them.
  3. In the area of teacher Qualifications, principals may need to utilize the resources that are embedded in teachers with advanced degrees by giving teachers with advanced degrees more responsibilities. Have them speak



during workshops and engage them to plan programs that will benefit other staff members that will lead to high academic achievement for the students.

4. Administrators should employ the services of experienced special education teachers in the teaching and learning of students with special needs and these teachers should implement the accommodations in their IEPs to the last letter in the classrooms.
5. Best practices on how blacks learn best should be researched and applied in teaching black students.
6. All administrators may ensure that reading is taught in all classrooms. English still stands as a means of communication in all subject areas in the school and if students can read and comprehend, they will do better in all subject areas.
7. Districts may be encouraged to conduct leadership workshops for principals as often as possible to improve their leadership styles and rapport with their teachers and this behavior can impact positively the teaching and learning in the classrooms.
8. Staff development programs on the effect of quality of instructions on the academic achievement of students should be implemented in every school. Perception of teachers on what quality of instructions is, did not correlate with the educational achievement of the students and since teachers with eleven years and above experience and advanced degrees had a low graduation rate, I am of the opinion that teachers with more than 11 years should be motivated

and re-trained on how to use high order thinking skills and other skills if appropriate in designing their instructions.

### **Recommendations for Further Research**

Even though this study showed that there is no relationship between attendance, class size, school location, and socioeconomic status on high school graduation rate, the writer recommends that further study should be conducted in the following areas:

1. There will be the need for further research into why some black students do better than other black students on the same test.
2. This study can be extended to compare schools in other states with a higher high school graduation rates than schools in Georgia.
3. More research should be conducted on the impact of socioeconomic status on the educational achievement of students because one will tend to agree that the socioeconomic achievement of a student should be proportional to the educational achievement of the student which is contrary to what this research has shown.
4. More research should be done on the impact of school location on the educational achievement of students.

**APPENDIX A**  
**CORRELATION TABLES**

Table A-1

*School Characteristics Descriptive Data Measured in Percent*

	N	Mean	STD
Graduation Rate	30	84.32	10.23
Student Attendance < 5 days absent	30	51.03	11.90
Teacher Qualifications 1	30	38.90	9.25
Teacher Qualifications 2	30	61.09	9.25
Teacher Experience 1	30	57.48	13.23
Teacher Experience 2	30	42.51	13.23

Student Attendance = Less than 5 days absent; Teacher Qualifications 1 = BA;  
Teacher Qualifications 2 = M.A., Ed.S., and Ed.D.; Teacher Experience 1 = Less than 1  
year to 10 years; Teacher Experience 2 = 11 years to more than 30 years

## Appendix A (continued)

Table A-2

*Correlation of Graduation Rate and School Student Attendance, Teacher Qualifications and Teacher Experience Measured in Percent*

		Graduation Rate
Student Attendance <5 Days Absent	Pearson Correlation	.107
	Sig.	.574
	N	30
Teacher Qualifications 1	Pearson Correlation	.555*
	Sig.	.001
	N	30
Teacher Qualification 2	Pearson Correlation	-.555*
	Sig.	.001
	N	30
Teacher Experience 1	Pearson Correlation	.513*
	Sig.	.004
	N	30
Teacher Experience 2	Pearson Correlation	-.513*
	Sig.	.004
	N	30

\* $p < 0.05$ .

Student Attendance = Less than 5 days absent; Teacher Qualifications 1 = BA;  
 Teacher Qualifications 2 = M.A., Ed.S., and Ed.D.; Teacher Experience 1 = Less than 1  
 year to 10 years; Teacher Experience 2 = 11 years to more than 30 years

## APPENDIX B

### SURVEY QUESTIONS

DIRECTIONS: THESE ITEMS MEASURE DIFFERENT VARIABLES—LEADERSHIP STYLE, SCHOOL CLIMATE, TEACHER MOTIVATION, INSTRUCTIONAL QUALITY AND TEACHER WORKLOAD. PLEASE INDICATE THE EXTENT TO WHICH EACH STATEMENT CHARACTERIZES YOUR SCHOOL BY CIRLING THE APPROPRIATE RESPONSE.

RO = RARELY OCCURS  
O = OFTEN OCCURS

SO = SOMETIMES OCCURS  
VFO = VERY FREQUENTLY OCCURS.

#### LEADERSHIP STYLE:

- |   |    |    |   |     |
|---|----|----|---|-----|
| 1. The principal encourages teacher autonomy  | RO | SO | O | VFO |
| 2. The principal rules with an iron fist  | RO | SO | O | VFO |
| 3. The principal goes out of his/her way to help teachers when assistance is needed   | RO | SO | O | VFO |
| 4. The principal is available after school to help teachers when assistance is needed | RO | SO | O | VFO |
| 5. The principal looks out for the personal welfare of the faculty                    | RO | SO | O | VFO |
| 6. The principal supervises teachers closely  | RO | SO | O | VFO |
| 7. The principal listens and accepts teachers' suggestions                            | RO | SO | O | VFO |
| 8. The principal keeps a close check on sign-in times                                 | RO | SO | O | VFO |
| 9. The principal watches everything teachers do                                       | RO | SO | O | VFO |
| 10. The principal uses constructive criticism   | RO | SO | O | VFO |
| 11. The principal accepts and implements ideas suggested by faculty members           | RO | SO | O | VFO |

## Appendix B (Continued)

**TEACHER MOTIVATION**

- |  |    |    |   |     |
|--|----|----|---|-----|
| 12. The principal goes out of his/her way to show appreciation to teachers | RO | SO | O | VFO |
| 13. The principal sets an example by working hard himself/herself          | RO | SO | O | VFO |
| 14. The principal compliments teachers                                     | RO | SO | O | VFO |
| 15. The principal looks out for the personal welfare of the Teachers       | RO | SO | O | VFO |
| 16. The school celebrates teacher of the month                             | RO | SO | O | VFO |
| 17. The principal celebrates teacher of the year                           | RO | SO | O | VFO |

**INSTRUCTIONAL QUALITY**

- |   |    |    |   |     |
|---|----|----|---|-----|
| 18. Teachers "go the extra mile with their students to facilitate teaching and learning | RO | SO | O | VFO |
| 19. Teachers teach based on Georgia performance standard                                | RO | SO | O | VFO |
| 20. Teachers use high order thinking strategies in teaching, learning and assessment    | RO | SO | O | VFO |
| 21. Teachers plan lessons with ends in mind (backward design)                           | RO | SO | O | VFO |
| 22. Teachers use effective co-teaching models in teaching and learning                  | RO | SO | O | VFO |
| 23. Teachers are committed to helping their students                                    | RO | SO | O | VFO |
| 24. Teachers help students with concepts on their own time                              | RO | SO | O | VFO |

**SCHOOL CLIMATE**

- |   |    |    |   |     |
|---|----|----|---|-----|
| 25. Teachers interrupt other teachers who are talking in staff meetings | RO | SO | O | VFO |
|---|----|----|---|-----|

## Appendix B (Continued)

26. Teachers spend time after school with students who have individual problems	RO	SO	O	VFO
27. Teachers accept additional duties if students will benefit	RO	SO	O	VFO
28. Teachers leave school immediately after school is over	RO	SO	O	VFO
29. Teachers exert group pressure on non-conforming faculty Members	RO	SO	O	VFO
30. Teachers are rude to other staff members	RO	SO	O	VFO
31. Teachers make "wise cracks" to each other during Meetings	RO	SO	O	VFO
32. Teachers mock teachers who are different	RO	SO	O	VFO
33. Teachers like to hear gossip about other staff members	RO	SO	O	VFO
34. Teachers respect the professional competence of their Colleagues	RO	SO	O	VFO
35. Teachers help and support each other	RO	SO	O	VFO
36. The interactions between team/unit members are cooperative	RO	SO	O	VFO
37. Teachers volunteer to sponsor after school activities	RO	SO	O	VFO
38. Teachers are polite to one another	RO	SO	O	VFO
<b>TEACHER WORKLOAD</b>				
39. Assigned non-teaching duties are excessive	RO	SO	O	VFO
40. Teachers are burdened with busy work	RO	SO	O	VFO
41. Administrative paperwork is burdensome at this school	RO	SO	O	VFO
42. Routine duties interfere with the job of teaching	RO	SO	O	VFO

**APPENDIX C**

**LETTER REQUESTING PRINCIPAL'S PERMISSION TO  
CONDUCT RESEARCH**

Dear Principal:

I am currently a Doctoral candidate at Clark Atlanta University, and I am writing a dissertation entitled, "Factors Affecting High School Graduation Rates in Metro Atlanta Public Schools". I need to disperse data collection instruments for my research project regarding the impact that school leadership style and quality of instructions have on the graduation rate of students to your teachers.

I believe that the information gathered will be useful in evaluating the impact of leadership style and quality of instructions on high school graduation rate. An analysis of the data collected will be designed to assist schools in attaining the graduation rate projections given by the Adequately Yearly Progress (AYP) criteria.

The research has been reviewed and approved by the Atlanta Public Schools System's Research and Accountability Department. I am asking that the surveys be placed into the mailboxes of all the teachers that serve at your school. I will advise the participants of the requested time to have survey responses returned to me.

If you have any questions please feel free to contact me at (404) 578-6007

If approved, please sign here: \_\_\_\_\_

Respectfully Yours,

Arunma B. Christy Ogbuagu (Mrs.)  
Clark Atlanta University



## APPENDIX D

### LETTER REQUESTING TEACHER PARTICIPATION

Dear Teachers:

I am currently a Doctoral candidate at Clark Atlanta University and I am writing a dissertation entitled, "Factors Affecting High School Graduation Rates in Metro Atlanta Public Schools". I need to disperse data collection instruments for my research project regarding the impact that school leadership style and quality of instructions have upon the graduation rate of students.

Your response is very important and valuable in creating data about the effect of leadership style and quality of instructions on students' graduation rate. In addition, your response will further assist with the needed research on the factors that impact high school graduation rate in Georgia.

Your participation is strictly voluntary and there are no rewards for participating or repercussions for refusing. You are free to withdraw from the study at any time and all information collected will be strictly confidential

If you have any questions, please feel free to contact me at (404) 578-6007.

If you are willing to participate, please sign here \_\_\_\_\_

Respectfully Yours,

Arunma B. Christy Ogbuagu (Mrs.)  
Clark Atlanta University

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