

FACTORS ASSOCIATED WITH THE BLACK AND WHITE ACHIEVEMENT GAP:  
AN EXPLORATORY STUDY

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Joy Joiner Branch

Certificate of Approval:

---

Kimberly P. Brackett  
Auburn University at Montgomery  
Associate Professor  
Sociology

---

Carole B. Zugazaga, Chair  
Assistant Professor  
Social Work

---

Paul D. Starr  
Professor  
Sociology

---

Stephen L. McFarland  
Dean  
Graduate School

FACTORS ASSOCIATED WITH THE BLACK AND WHITE ACHIEVEMENT GAP:  
AN EXPLORATORY STUDY

Joy Joiner Branch

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## THESIS ABSTRACT

### FACTORS ASSOCIATED WITH THE BLACK AND WHITE ACHIEVEMENT GAP: AN EXPLORATORY STUDY

Joy Joiner Branch

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(B.S., University of North Alabama, 1993)

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This paper discusses some of the possible contributors to the differences found between black- white Stanford Achievement Test (SAT) scores for elementary and middle school students. This study examines the following variables related to achievement: intelligence, underachievement, population increase of African Americans, family composition and poverty, parental education, access to educational resources, and schools. Findings from the study showed that the black student population made up a majority of the free/reduced lunch population and as such: student population, family composition, poverty, parental education, access to educational resources and schools had more significant effects on black free/reduced lunch student achievement. Moreover, data from the U.S. Census, the National Center for Educational Statistics, and the Alabama Department of Education further explain the problem.

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## CHAPTER 1: INTRODUCTION

There have been numerous research studies conducted and theories suggested in an attempt to explain the continuing achievement gap between black and white students. This study examines some possible explanations for the gap and applies these explanations to the 62 city school systems in the State of Alabama.

According to the United States Census Bureau (2002), there is an achievement gap between white and black students. In 2002, the Alabama average percentile score for the Stanford Achievement Test for black students in grades three through eight was 39.8 while the average for white students was 65. In 2003, the average was 37 for black students and 60 for white students. Much research has been done to explain the reasons for this gap (Jenks and Phillips, 1998; Fryer and Levitt, 2003). Research to date has been unable to identify a single cause for this difference in test scores. What is known is that during the 1970s and 1980s the gap decreased. During this time blacks improved their scores while white students remained the same. Yet in the 1990s the gap again began to widen when white students began performing better on achievement tests and black students began doing worse (Lee, 2002). Research shows that during the first two years of school, black students begin to lose ground on standardized test performance. This is true even after controlling for socioeconomic status. Black students on average lose .10 standard deviations each year, so by 5th grade, it is possible that they could be .5

standard deviations behind white students (Fryer and Levitt, 2003).

A look at the history of segregation, inequality and discrimination of African Americans aids in finding the source of the achievement gap. According to Luhman, (2000) black slaves were freed during the Civil War, yet this did not make life equal for African Americans. As soon as 1865, southern states were passing black codes that served to limit jobs, rights to buy or rent land and owning weapons. In addition, freedom of movement was limited. The former slaves wanted to own land and receive an education like the European Americans, but instead they ended up as sharecroppers and lived a life of poverty and debt. African Americans were subjected to segregation supported by the Jim Crow laws and laws that forbade residence in certain areas. Additional laws were passed that restricted jobs, education and voting. An 1890 Louisiana statute mandated racially segregated but equal railroad cars. This law was violated by Homer Plessey and he was arrested. The case was taken to the Supreme Court in the landmark case of Plessey v. Ferguson in 1896. The Supreme Court upheld the conviction which called for “separate but equal.” This was overturned in the famous Brown v. Board of Education in 1954, ending legal segregation.

Education was a part of desegregation, but segregation still exists in the United States, in its neighborhoods and its schools. This segregation can only hinder race relations and makes it more difficult to practice tolerance. Ethnic stratification is a large factor in the gap between black and white students. High school drop out rates for black students can be as much as thirty percent higher than for white students and much of this can be attributed to lower income levels. Furthermore, black students repeat grades more than do white students (National Center for Educational Statistics [NCES], 2000). Research has



shown that as the black population of a city or school increases, the education level of the black students decreases due to the combining of poverty and minority status that often go hand in hand (Taylor, 1998). Thus since the dawn of desegregation there has been an achievement gap between black and white students. Many have shown that the gap has lessened, but it still persists and in some cases, continues to widen (Jencks and Phillips, 1998; Hedges and Nowell, 1999; NCES, 2000).

Instead of indicting a racist history, others blamed achievement disparities on the lack of resources spent on black schools and the poverty that pervaded the black populations. Yet when desegregation took place, the optimism began to fade as the pronounced differences, that many attributed to desegregation, did not disappear as much as had been hoped (Jencks and Phillips, 1998) When desegregation occurred and schools became open to all, the gap was then attributed to prior poor schooling for the black students, yet still the notion of biological inferiority pervaded the reasoning. There have been periods of the gap lessening, (Jencks and Phillips, 1998) but it remains today in much of the nation and it is consistent from kindergarten through adulthood.

### Purpose

The purpose of this study is multi faceted. The first part consists of researching the various theories about the achievement gap between white and black students. The next goal is to examine achievement scores for white, black and free/reduced lunch eligible students in reading and math on the Stanford Achievement Test in the 2003-2004 school year for 3rd, 5th, and 7th grades in the 62 city school systems in Alabama to determine if there are significant differences. Students are tested for Reading, Math, Social Studies,

and Science aptitude. The scores researched for this study were Reading and Math scores. Moreover, achievement scores will be examined in relation to the black, white, and free/reduced lunch populations. The white, black, and free/reduced lunch eligible populations of each school system will be analyzed to determine the percentage of the students in the populations in the schools. The total populations, racial populations, and female single parent population of the sixty two cities will be analyzed to determine the percentage of each population and their impact on achievement as well. Factors which may explain the difference in achievement scores of black and white students will also be explored, as well as ways that the schools are attempting to combat the gap.

## CHAPTER 2: LITERATURE REVIEW

Being a member of a minority means experiencing stereotypes, mistrust, alienation, prejudice, discrimination, hostility, etc. from the majority group. However, being a poor minority person enhances those attributes even more. The research from the Alabama Department of Education demonstrates that poor black students have persistently lower scores on the Stanford Achievement Tests in reading and math when compared to their white counterparts (Alabama Department of Education, 2004). Various hypothesized reasons for the achievement gap include inferior intelligence of blacks, racial population, family background, poverty levels, lack of cultural capital, inadequate schools, fear of academic failure, and self esteem issues. Literature concerning each of these will be explored in this chapter.

### Intelligence

The first factor related to the achievement gap explored in this study is intelligence. In the past scientists have attempted to prove that African Americans were less intelligent than whites due to biological factors (Jensen, 1969). Jensen published an article that proposed the black white gap was due to genetic differences with a 15-20 point difference between black and white IQ scores, suggesting the gap can not be attributed wholly to the environment. Thus the school achievement gap would be hypothesized to

result from genetics. Researchers Herrnstein and Murray (1994), studied all parts of the person to determine where the difference lay: brain, bones, etc. If it could be found that genetics proved intelligence, then all of the inequalities of the black man would be justified. Today the issue of intelligence still exists in the minds of many. Herrnstein and Murray posit that there is a lack of intelligence in many people. They compare IQ scores to a bell curve in which most fall in the center, which is the normal level, while others fall to the left, which is the dull level, or the right, which is the bright level. Scores of African Americans often fell to the left and they attributed that to genetics. Moreover, they claim that socioeconomic status is not a factor. However, if there are no biological reasons for an achievement gap between white and black students, then why do African Americans consistently score lower than white students on test scores and high school graduation scores? This question has baffled educators for the last fifty years.

There have been many theories about this. One argues it is due to enculturation (Ogbu, 1998). Though African Americans have equal rights, the history of their inequality still persists. Thus if an African American student perceives that others de-value his intelligence, this causes him to de-value education. One may feel this way because stereotypes are hard to break and the stereotype that African Americans are less intelligent than white students has an effect on them mentally. This in turn can cause them to look at the education system as a whole as an entity of distrust (Jencks and Phillips, 1998). The notion that blacks are inferior intellectually has not disappeared and as a result this has been used as an excuse to not try harder because it is not in the genes to perform well in math, science, or whatever course that is hard for the student. So instead of working harder to be better in a class, the excuse is given that they cannot do it

and lack those skills. So to use the excuse of heredity is even more damaging to black children because they start off behind white children and must be encouraged to catch up (Jencks and Phillips, 1998). To refute the hypothesis that blacks were intellectually inferior due to genetics, Gordon (1987) conducted a study to show that students with average IQ scores did not score the same on achievement tests. The study was conducted in Chicago with 1,102 5<sup>th</sup> and 6<sup>th</sup> graders. The students studied were black and white students from middle and working class homes and each had approximately equal IQ scores. Achievement scores were then predicted based on IQ scores. Results revealed that race and class interact and aid in producing over and under achieving students. White middle class boys were over achievers at every IQ level except the extremes (below 75 and above 125). White students had higher scores than working class blacks and middle class blacks. Middle class children had higher scores than those in the working class, yet there was a similarity between black middle class and white working class children. Often, however, it is environmental effects such as racial population, family composition, poverty, and negative stereotypes, rather than genetic effects that aid in determining the gap (Brooks-Gunn, Crane, Duncan, Klebanov, and Phillips, 1998).

### Underachievement

Along with the stereotype that black students are less intelligent than white students come theories about the possible reasons that black students do not perform as well as white students on standardized tests. Black students score lower on tests whether they are at the poverty level or whether they come from more affluent families. Some argue that tests are biased and have no value in the real world. Ogbu (1986) argued that as a result

of the limited opportunities in America, African Americans became “oppositional” to schools and believe that excelling in school is one “acting white.” Another arm of this argument was made by Howard and Hammond (1998) who suggested that academic success means competition, and because many blacks know that others think they are inferior, they are reluctant to compete. Aronson and Steele (1998) furthered that by adding the black student is aware that others believe he is inferior in academics and therefore does not want to compete. To him, it is not worth the effort to deal with that stereotype.

The issue of self esteem can be a harbinger of academic success. One needs to identify with academics in order to be successful and one argument is that black youth do not identify with academics. They see no “intrinsic reward” for performing well academically, nor do they view performing poorly as “intrinsically punishing” (Osborne, 1999). Drury (1980) found that black self esteem is lower in schools with a black majority. Contrary to that, those black students who value academics intrinsically perform better and demonstrate more motivation to be successful and in turn can have more self esteem and demonstrate more persistence and motivation (Osborne, 1999).

Race is central to the lives of African Americans and, depending on how they handle stereotypes, can often determine their coping strategies. Unfortunately when African Americans fall prey to negative stereotypes such as lack of intelligence, tendencies toward laziness and violence, ineptness, and an increased boastful attitude, it can affect their educational attainment (Aronson and Steele, 1998). What then can occur is what Aronson and Steele (1998) called “stereotype threat.” Aronson and Steele found that the African American students do better on tests when they think that the test results will be

compared to other black students, not white students. Moreover, through their studies, Aronson and Steele found that black students did worse when told that the test they were taking would aid in discovering intellectual ability. Whereas their counterpart black students did better when told that the test was a problem solving occurrence, not a test on intellectual ability. He even went further to show that simply requiring a participant to indicate race on a questionnaire, “race priming,” resulted in the black students who were asked about race, scoring lower than those who were not asked about race. As such, stereotype threat can cause disruptions for African American students who might fear that they are conforming to those stereotypes.

Unfortunately it is the more motivated who can fall prey to stereotype threat. The African American students who want to do well in school are affected more. This can lead to lower performance scores and dis-identification with school. Thus African American students have been compelled to do poorly on tests that attempt to measure intelligence due to the main negative stereotype that they are less intelligent than whites. It has become too much of a burden to attempt to dispel the stereotype, and thus they do not try to counter it by performing better on tests (Aronson and Steele, 1998). Thus black students must deal with the persistent stereotype that they are not as smart as white students and in turn deal with this by becoming underachievers in education rather than competing with the stereotype of academic inadequacy.

### Racial Population Increase

As mentioned, the stereotype of the black student being less intelligent than the white student can lead to underachieving. Furthermore, negative stereotypes increase as the

black student population increases. As a minority population increases, there is an increase in negative attitudes by many of those in the white population. Moreover, a sense of competition and threat among the white population can manifest as the minority population rises. Racial conservatism follows that pattern in the South and rises as the concentration of blacks in the population rises in southern communities (Fossett and Kiecolt, 1989; Post, Rinden, and Stein, 2000). Post and colleagues (2000), contend that prejudice can increase or decrease depending on the inter group contact between white and black people and its two forms of context and contact. It is the context form, which is the number of the minority population in a given city, neighborhood, state, etc. that increases prejudice. The contact form focuses on individual behavior or the contact between the black minority and the white majority such as in schools, sports activities, or club meetings, and reduces prejudice. Taylor (1998) found that an increase in racial population causes an increase in segregation and hostility among Southerners that differs from the national norm, thus building on the context form of inter group contact. Taylor also found that the higher the black population increase, the more inequality in education and residential segregation occurs.

Black reading scores have been consistently better in schools of predominantly white students, while those of blacks in predominately black schools have been lower (NCES, 2004). A ten point rise in the percentage of blacks in the local population increases anti-black prejudice at a rate such that 1.9 additional years of education would be needed to decrease it. When the black population in a school rises past 20 percent, an increase in stereotypes is seen. Taylor (1998) also found that less than 20 percent black student enrollment did not cause objections by white respondents in her study, but when black



enrollment rose, negative stereotypes rose and opposition to the increased black population rose. In fact, only a small number had no objection to living in an area of 50 percent blacks. However, as the racial level rose in schools, parents of as many as 24 percent of the students stated that they moved to their neighborhood to ensure their children went to a certain school that did not have a high percentage of black students or chose to send their student to a private school. Moreover, research has shown that when the black percentage of the population in a school rises beyond 42 percent, education levels can fall for both white and black students. Thus when black students view white students leaving their schools and neighborhoods this in turn can cause them to become disengaged with education and further build racial tension (Jencks and Phillips, 1998).

Even in cities with a high concentration of blacks, segregation develops. This can further enhance racial prejudice and negative stereotypes. An example is the perceived physical threats by the black members of the population. The stereotype of the violent black population of an inner city increases animosity among whites. (Taylor, 1998; Fosset and Kiecolt, 1989). Frankenberg, Lee, and Orfield (2003) conducted a study of school desegregation that showed that the South is moving backwards as desegregation orders have been cancelled. It further showed that whites in the South and West attend more interracial schools and over half of public schools in the South are non-white. Conclusions from the Civil Rights study at Harvard (2003) were that desegregation saw the achievement gap narrowing in racial test scores until the 1990's which is attributed to the revoking of desegregation laws by the Supreme Court.

One way to seek to ignore negative stereotypes is with fictive kinship, which is a “kinship like connection between and among sons in a society, not related by blood or marriages, who have maintained essential reciprocal social or economic relationships” (Fordham, 1988, p. 234). Fordham uses fictive kinship to explain the achievement gap between white and black students. She describes the behaviors of African American youth as having a sense of “brotherhood and sisterhood.” This lends itself to a distinct social identity. Thus the idea of praising individual achievements of African Americans has turned instead to praising the black community as a collective. That in itself would be a wonderful and socially desirable community, but Fordham believes that having that black brotherhood identity is in contrast to education.

Ogbu (1992) labeled this as a collective identity and a cultural frame of reference. He detailed that throughout history blacks have been labeled as outcasts with status problems that develop due to outside influences (the white community) which serve to instill the message that blacks do not belong to the dominant group (white population). This in turn leads to hostility towards the dominant group. Moreover, the minority status that is attributed to the black community is an involuntary one rooted in forced slavery. This collective or kinship can grow through a common need to self protect. This could have developed due to the history of blacks being blamed as a collective for the infraction of one. During slavery, as punishment and as a message to all, if one broke a rule, the whole were whipped.

Blacks were forced to give up their African language and culture and adopt the white language and culture. Out of this came the desire to oppose white domination through music and “Black African English dialect.” By changing words and meanings from the

White American Standard English, the collective was kept alive. Words such as “bad” mean bad in White American English but mean good in Black English. Continued oppression in education, jobs, and residential areas increased black loyalty. As a result the mistrust of white people increased and in turn increased the oppositional collective identity. The Black Power Movement of the 1960’s increased the collective identity and encouraged pride in being black which further strengthened the collective identity (Ogbu, 1992).

This kinship developed due to the exploitation of blacks at the hands of whites before and after slavery and the continuance of the exploitation and inequalities. This “ethnic consolidation” is a direct result of the mistreatment and incorrect assumptions of African Americans. An example of mistreatment is discrimination and incorrect assumptions are the negative stereotypes associated with African Americans such as being less intelligent than white people or they do not care about education. This “collective ethos” of the kinship is challenged by the “individual ethos of the dominant culture when they enter school and when children experience the competition between the two for loyalty” (Fordham, 1988, p. 235). So in order to rebel against the impeding system, they bring their “indigenous culture” to the school through the use of black speech, clothing, music, etc. It is they who are sealing a future of failure. Those who assimilate into the school culture consciously or unconsciously attempt to be “raceless” and prevent the stigma that is attached to race to insure more success (Fordham, 1988).

School, to many who follow the fictive kinship, is something to be fought against for it stands for white dominance. The result is the view of anti-achievement. In order to make it and be successful, many in the kinship feel that the high achievers are selling out.

The goal is to break through the glass ceiling that has plagued African Americans for years in schools, the job market, political arena, etc. A result of this racelessness can be alienation and discrimination among the community. Those who favor racelessness must juggle two roles, one as the hard working student who ascribes to the ingrained success motivation, and the other as still a member of Black Americans. Thus two personas develop depending on the audience present. Being smart is looked on as being strange and thus many try to mask their efforts of achievement (Fordham, 1988; Ogbu, 1986).

### Cool Pose

Along with fictive kinship as an attempt to move beyond negative stereotypes, is the cool pose. Ogbu (1986) termed the disinterest with school as the “cool pose.” If one appears disinterested and emotionless, it can counter any feelings of low self esteem. It is a way to cope with prejudice and protect oneself. He posits that there are two minorities, one comes to a country voluntarily while the other comes involuntarily. The African Americans would fall into the latter category. Those who arrive involuntarily do not develop the same social identity of the dominant group, which would in this case, be the white population. Instead they develop their own identities counter to the dominant white identity. In terms of academic success, following that line of thought would mean that to the African American, education represents conformity to the white dominance that controls the educational system. They instead choose to value other things that are not viewed by them as oppressive, and hence, white dominated (Ogbu, 1986).

At issue can also be that African Americans do not perform well for fear of being accused of “acting white.” If one behaves at variance with the ascribed group, one is

considered different and going against the norm. There is an “us” and a “them,” and this united front can be in opposition to white middle class. Ogbu (1986) found that even when blacks talked and behaved like whites to have more success, they were still not accepted. Thus there is a difference between being smart and acting smart, which to some means one is crossing the line into conformity with white values. Good grades are not rejected by black students, but the belief that they are conforming to white ways to get those good grades is rejected. These ways include, “talking proper, studying a lot or doing homework everyday, having mostly white friends, taking hard placement courses, acting like a nerd, taking math and science classes, and reading a lot” (Ogbu, 1986 p. 88). Moreover, the African American student may see that even if others do well, they are not rewarded as much as the white students. To them, their identity comes from family and community, not educational success (Ogbu, 1986; Jencks and Phillips, 1998). Thus as a means to disregard negative stereotypes, the black population looked more to the collective with fictive kinship and in schools, black students could compensate for negativity with the “cool pose” or by “acting white.”

#### Family Composition and Poverty

Along with the psychological effects of stereotypes and the ways that black students deal with them, is the issue of family composition and poverty. The family composition of the black student can play a major role in his/her academic success. Two parent families often provide more stability to their children and may have more income than single parents. There is a difference between white and black family median income. According to the Census 2000 for Alabama, the median family income of the black

population was \$26,182 compared to the median family income of the white population of \$46,939. Another factor to consider is that the rise in single parent homes can contribute to low achievement and female single parent households are often below poverty level. This area also has a difference between black and white female single parent households. Black female single parents below poverty level made up 18 percent of the black population compared to the white female single parents population which made up 2 percent of the white population in the 62 cities of Alabama (U.S. Census, 2000). Thus single parent households may lack the financial stability of a two parent family.

There can be many destructive psychological consequences due to poverty. Chief among them can be the issue of achievement and learning. Orland (1999) conducted a national investigation on achievement scores, poverty, and other demographic data. He found that the longer a family is in poverty, the more they will be “low achievers” in achievement test scores.

A child whose family income is at or below poverty level is eligible to receive free/reduced priced lunches. The number of free/reduced lunch eligible students in the 2003-2004 school year for the state of Alabama was 369,289 while the average for all states was 365,598. Alabama is number thirteen when ranked with all fifty states in number of free/reduced lunch eligible students. Thus there is a higher than average number of free/reduced lunch eligible students in Alabama (NCES, 2004). This too can be psychologically harmful for the student due to the stereotype of being less intelligent that can follow a poor child (Orland, 1999).

With poverty comes stress, stress to find a better job or any job, stress to keep food on the table, stress to supply clothing to the children, stress to provide a proper home for the children. These are all incredible loads to bear and unfortunately the issues of education and achievement take a back seat to the other more important needs. Moreover, poor parents may not have the time to go over homework, encourage stimulating conversations, read to their child, or participate in school activities, and in some cases, the parents have not pushed for higher standards for their children. Early intervention is the key, but it must continue through all years of school (Ainsworth-Darnell and Roscigno, 1999).

The Early Elementary Act of 1965 led to the creation of Head Start. This government sponsored program was designed to promote school readiness by aiding social and cognitive development of low income children from birth to five years of age. However, it did not enable the poor child to get through high school because it only applies to pre-school. Moreover, it does not serve all eligible children largely due to lack of funding (Schwebel, 2000). Poverty alone cannot explain the achievement gap. Affluence has risen in the black community, but the scores of black students still fall behind those of the white students of the same affluence (Jenks and Phillips, 1998; Brooks-Gunn et al., 1998).

### Parental Education

Once family composition and poverty are factored into explaining the academic discrepancy between white and black students, one must also consider that parental education can be a factor in the test score gap. The education level of black heads of

household is lower than white family head of households on average (NCES, 2004). This was supported by the Census 2000 for the 62 cities in Alabama that revealed 33 percent of the black population had an education below twelfth grade and 36 percent had some college or an associates, bachelors, or graduate degree. The white population of below twelfth grade education was 22 percent and 47 percent had some college or an associates, bachelors, or graduate degree (U.S. Census, 2000).

Students with parents having less than high school education, score lower in math and reading (NCES, 2004). Parents who have more education tend to encourage their children more and are more attentive to the student's grades, plans, and school activities. Those of less education i.e., high school drop outs, may not feel adequate to aid in homework. At issue is not whether parents inculcate values which promote school success, but whether they are in a position to help develop the necessary skills. A parent who had little success during his or her education may not feel confident. This may also occur if the parent does not work in a job that requires reading, writing, or comprehension strategies. They may want to help but do not know the best way to do so. These are not obstacles for children with educated parents (Brooks-Gunn et al., 1998).

### Cultural Capital

When one is exposed to more learning via outside sources, and not wholly dependent on school, these outside sources are referred to as cultural capital. The definition of cultural capital has been used by many (Ainsworth-Darnell and Roscigno, 1999; Lareau 1987). Lareau (1987) defined cultural capital as “widely shared high status cultural signals attitudes, preferences, formal knowledge, behaviors, goods, and credentials used



for social and cultural exclusion” (p. 73). Research on this began in the 1970’s, and Bourdieu defined it as a way, “to analyze how culture and education interact, thereby contributing to the social reproduction of inequality” (p.82). The community can aid its schools in the development of the student by providing activities such as before and after school care, clubs, sports, religious activities, and various classes (NCES, 2004). Yet the issue of socioeconomic status may hinder poor youth from access to these activities.

It has been assumed that cultural capital involves those who engage in “high brow” culture which is often associated with those with higher socioeconomic status and usually those with more educational success. Students who live in poverty have less access to outside activities that could further enhance their achievement and begin to bridge the black and white test score gap (Jenks and Phillips, 1998). Yet there are numerous examples of cultural capital activities that do not require a hefty investment other than time. Some examples could be plays, museum trips, dance recitals and the like. Also computer access, magazine and newspaper access, or books are activities that could be achieved by going to the local library (Ainsworth-Darnell and Roscigno, 1999). Anything culturally enlightening would be in these categories. Yet these can also promote stratification because those without the economic resources may not have access to such events. Darnell found that African Americans have fewer resources, and less participation in these “extracurricular classes” (Ainsworth-Darnell and Roscigno, 1999, p.165).

Family background can contribute to one’s cultural capital. If a family can supply outside resources to encourage learning, then the achievement level is advanced. Such home items could be computers, books, newspapers, or magazines. Family background

has influence on the access one has to education at school and beyond- camps, classes in art, dance, crafts, etc. This all develops into a direction or “track” that the student takes (Ainsworth-Darnell and Roscigno, 1999).

Some have attributed the difference between black and white students to family characteristics such as the ability and willingness to provide activities outside of school that can stimulate the student. This ability and willingness can be hindered due to poverty (Hallinan, 2001; The Condition of Education, 2004). Children whose parents read to them or have more than ten books in the home can contribute to their cultural capital as well as can trips to museums, plays, and recitals. Also those with computer access and access to more extra curricular activities such as dance and art classes receive cultural capital. These influences beyond the school aid in the achievement of children. Middle and upper class families tend to provide these motivators more than do those of lower socioeconomic status (Brooks-Gunn et al., 1998).

Thus, family composition, the discrepancies in female single parent households, poverty, the education level of parents, and the ability to provide cultural capital can be theorized to have an impact on black students’ achievement along with negative stereotypes.

### Schools

Other explanations for lower achievement among black students look at the schools as a source of the achievement gap. Such theories suggest that the gap is due to schools that have high minority populations and are of less quality, or the teachers lack the skills to sufficiently teach in schools with high minority populations. Others suggest there is

overcrowding, or that some school with higher poverty and black populations have fewer resources than others. In response to the theory that black students perform poorly compared to white students due to fewer resources in the schools, Jencks and Phillips et al. (1998) discovered, that besides a few influential rich areas, the average school district spends the same per pupil and the teacher per pupil ratio is the same across the schools in a district. However, research has shown that black and white teachers in predominantly black schools have less education and experience than the teachers in predominately white schools (Jencks and Phillips, 1998 and Clotfelder et al., 2003). Clotfelder et al., (2003) also found that most black students are in remedial courses and a low number was found in advanced courses. Furthermore, they found that there were more inexperienced teachers in remedial courses and less in advanced courses. In standard math course, black students are 57% more likely to have an inexperienced teacher than white students and they are 37% more likely to have an inexperienced teacher in English.

Of note, in schools with predominately black populations, the enrollment is higher for those with academic and behavioral problems. So while the teacher per pupil ratio is on par with other schools, the teacher is forced to devote more time and energy to disruptive students. Additionally, more resources are spent on those children for reading specialists. The result is less money for regular teachers. So even though the average amount of money spent per child is similar, the average black child receives less attention, possibly is placed in larger classes, and the skill level of the teacher may be lower than in white schools (Jencks and Phillips, 1998).

The gap in achievement actually begins very early, even prior to kindergarten, and widens as students reach high school (Alvarez and Bali, 2004). Elementary age black children are engaged, excited, and motivated for academic success (Tyson, 2003; Drury, 1980), so any loss of identification with school of black youth is not seen in the beginning of their education, but grows as they proceed (Ferguson, 1998).

As mentioned previously, the gap is seen in kindergarten but also there is a significant vocabulary difference between three and four year old black and white children. In vocabulary tests, black three and four year olds scored below the twentieth percentile while the average is the fiftieth percentile (Brooks-Gunn et al., 1998).

Attending a pre-school program could bridge that gap for black children, but according to a survey based on social and economic characteristics of students gathered by the United States Census in 1999, 66% of children in nursery school, were white. A contributor to that large percentage is that most nursery schools are private, so low income families may not be able to afford them. A study of the 62 city school systems in Alabama revealed that there were 9,093 white children in private nursery schools, compared to 2,813 black children (Condition of Education, 2004).

Another school factor that should be considered is out-of-field teaching. According to the NCES (2004) for the 1999-2000 school year middle and high schools that had high poverty and high minority students had more out of field teachers, those who do not have a major in the subject they are teaching, than those low poverty and low minority schools. Fifteen percent were out of field teachers in math, while in English 11 percent were out of field.

Overall the literature has identified several factors that may explain the achievement gap between white and black students. These factors include intelligence differences between black and white students, a rise in minority population that results in negative attitudes and stereotypes, underachievement due to fictive kinship or cool pose, family composition, poverty, parental education, cultural capital, and the quality of schools. All of these attempts to explain the lower achievement on standardized tests of black students can serve as factors to possibly explain the persistent gap in the 62 city school systems in Alabama. Moreover, each of these factors may also be used in considering how the school systems in Alabama are addressing these issues.



## CHAPTER 3: METHODOLOGY

In an effort to better understand factors which influence the achievement gap based on the available literature, the following hypotheses were developed:

Hypothesis 1: There is a significant difference between the achievement levels of black and white students.

Independent Variable: race

Operational definition: Number of black and white students in 62 city school systems in the State of Alabama

Dependent Variable: achievement

Operational definition: Achievement will be measured via Stanford Achievement Test scores in the 62 city school system in the State of Alabama.

Hypothesis 2: As the black student population increases, the number of students from low income families increases.

Independent variable: black student population

Operational definition- The number of black students in 62 city school systems in the

State of Alabama

Dependent variable: students from low income families

Operational definition: Number of students who receive free/reduced priced lunches in the 62 city school systems in the State of Alabama.

Hypothesis 3: As the black student population increases in schools, the achievement level of black students decreases.

Independent variable: black student population;

Operational definition: The black student population in 62 city school systems in the State of Alabama

Dependent variable: black student achievement

Operational definition: Achievement will be measured via Stanford Achievement Test scale scores in the 62 city school systems in the State of Alabama for the achievement of black students.

Hypothesis 4: As the black student population increases in schools, the achievement level of low income students decreases.

Independent variable: black student population

Operational definition: The black student population in 62 city school systems in the State of Alabama

Dependent variable: low income student achievement



Operational definition: Achievement will be measured via Stanford Achievement Test scale scores in the 62 city school systems in the State of Alabama for the achievement of low income students.

Hypothesis 5: As the black student population increases in schools, the achievement level of white students decreases.

Independent variable: black student population;

Operational definition: The black student population in 62 city school systems in the State of Alabama

Dependent variable: white student achievement

Operational definition: Achievement will be measured via Stanford Achievement Test scores in the 62 city school systems in the State of Alabama for the achievement of white students.

Hypothesis 6: As the white population increases in schools, the achievement level of black students increases.

Independent variable: white student population

Operational definition: The white population in 62 city school systems in the State of Alabama

Dependent variable: black student achievement

Operational definition: Achievement will be measured via Stanford Achievement Test scores in the 62 city school systems in the State of Alabama for black students.

Hypothesis 7: As the white population increases in schools, the achievement level of low income students increases.

Independent variable: white student population

Operational definition: The white population in 62 city school systems in the State of Alabama

Dependent variable: low income student achievement

Operational definition: Achievement will be measured via Stanford Achievement Test scores in the 62 city school systems in the State of Alabama for low income students.

Hypothesis 8: As the number of students from low income families increases, the achievement level of black students decreases.

Independent variable: students from low income families

Operational definition: Number of students who receive free/reduced priced lunch in the 62 city school systems in the State of Alabama.

Dependent variable: black student achievement

Operational definition: Achievement will be measured via Stanford Achievement Test scores in the 62 city school systems in the State of Alabama for black students.

Hypothesis 9: As the number of students from low income families increases, the achievement level of white students decreases.

Independent variable: students from low income families

Operational definition: Number of students who receive free/reduced priced lunch in the 62 city school systems in the State of Alabama.

Dependent variable: white student achievement

Operational definition: Achievement will be measured via Stanford Achievement Test scores in the 62 city school systems in the State of Alabama for white students.

Hypothesis 10: As the black female single parent population increases, the achievement level of black students decreases.

Independent variable: black female single parent households

Operational definition: The number of households in the 62 cities in Alabama headed by a black female single parent

Dependent variable: black student achievement

Operational definition: Achievement will be measured via Stanford Achievement Test scores in the 62 city school systems in the State of Alabama for black students.

Hypothesis 11: As the black female single parent population increases, the achievement level of low income students decreases.

Independent variable: black female single parent households

Operational definition: The number of households in the 62 cities in Alabama headed by a black female single parent

Dependent variable: low income student achievement

Operational definition: Achievement will be measured via Stanford Achievement Test scores in the 62 city school systems in the State of Alabama for low income students.

Hypothesis 12: There is a significant relationship between the education of the population and single parent households

Independent variable: low educated population

Operational definition: The number of black males and females in the 62 cities in Alabama with education below twelfth grade.

Dependent variable: the black female single parent population

Operational definition: The number of households in the 62 cities in Alabama headed by a black female single parent

Hypothesis 13: As the white female single parent population increases, the achievement level of white students decreases.

Independent variable: white female single parent households

Operational definition: The number of households in the 62 cities in Alabama headed by a white female single parent

Dependent variable: white student achievement

Operational definition: Achievement will be measured via Stanford Achievement Test scores in the 62 city school systems in the State of Alabama for white students.

Hypothesis 14: As the improvements in the schools increase, the achievement level of white students increases.

Independent variable: improvements

Operational definitions: Number of students per computer in schools, spending per student, level of education of teachers, and number of highly qualified teachers.

Dependent variable: white student achievement

Operational definition: Achievement will be measured via Stanford Achievement Test scores for white students.

Hypothesis 15: As the improvements in the schools increase, the achievement level of black students increases.

Independent variable: improvements

Operational definitions: Number of students per computer in schools, spending per student, level of education of teachers, and number of highly qualified teachers.

Dependent variable: black student achievement

Operational definition: Achievement will be measured via Stanford Achievement Test scores for black students.

Hypothesis 16: As the improvements in the schools increase, the achievement level of low income students increases.

Independent variable: improvements

Operational definitions: Number of students per computer in schools, spending per student, level of education of teachers, and number of highly qualified teachers.

Dependent variable: low income student achievement

Operational definition: Achievement will be measured via Stanford Achievement Test scores for low income students.

### Achievement

Achievement refers to the SAT scores for white, black and low income students. In this case, achievement will be analyzed by gathering Stanford Achievement Test scores in reading and math for 3rd, 5th, and 7th grade for black, white, and low income students in the 2003-2004 school year from the 62 city school systems in the State of Alabama. Data from these tests scores will be used to create an overall achievement scale score for black students, white students and low income students.

### Population

Population refers to the number of people in a given area. Population in this case refers to the black, white, black female single parents, black female single parents below poverty level, and black female single parents with less than a twelfth grade education. Population totals will be gathered from the 2000 United States Census. The total

population will be collected as well as the total number of black and white people living in the 62 cities of Alabama. There are city and county school systems in Alabama but analysis will be conducted with the 62 city school systems according to the Alabama Department of Education.

Black and white female single parent population refers to a portion of the population that is a single female headed household with her own children under the age of 18. In order to get a more concise percentage of the black and white female single parent populations, the female single parent population of both races was calculated from the female population age 15 to 59. It was determined by the researcher that the range would sufficiently represent the female single parent populations. This data will be collected to determine if the literature is correct that most female single parents are below poverty and have a below twelfth grade education and as such, can affect student achievement (Ainsworth-Darnell and Roscigno, 1999; NCES, 2000). Data for the black and white population with below twelfth grade education will be comprised of both male and females above age 25. The census does not give data on the education of the population below age 25. This data will be gathered and analyzed from the 2000 U.S. Census.

Population will also refer to the black, white and low income student populations of the 62 city school systems. The number and percentage of the school population for each student group for the 3rd, 5th and 7th grade population will be gathered from the Alabama Department of Education for the 2003-2004 school year for the 62 city school systems of the State of Alabama.

Improvements within the school refer to four components. Each of these is intended to further the achievement of all students. Spending per student refers to the amount of money allocated per student; students per computer refers to the number of students that have access to each computer in the classroom. Education levels of faculty are the percentages of each school system with teachers that have a masters or 6-year through doctorate level. In this case, all teachers are required to have a bachelor's degree, but a masters or a 6-year through doctorate degree would be an improvement. Highly Qualified Teacher refers to the qualifications teachers must adhere to as legislated by the No Child Left Behind Act of 2001. To gain the Highly Qualified Teacher title, a teacher must "hold at least a valid Class B Professional Educator Certificate, Special Alternative Certificate, or Preliminary Certificate in Early Childhood Education, Elementary Education, or if teaching above Grade 6, for every core academic subject the teacher teaches and is assigned to a grade covered by the certificate and has passed an appropriate state subject matter test; or has earned at least 12 semester hours of credit in each of four disciplines: English Language Arts, math, science, and social studies; or holds a Class A or Class AA Professional Educator Certificate or has 5 years of full-time teaching experience in the assignment area and holds a valid National Board for Professional Teaching Standards Certificate appropriate to the teacher's assignment area.

### Data Analysis

The mean, median, mode, and standard deviation will be computed for the following variables: total population of the 62 cities, white and black female single parents, white and black female single parents below poverty level, and white and black population age



25 and older with an education below twelfth grade. The information will be gathered from the 2000 U.S. Census.

The mean, median, mode, and standard deviations will be computed for the following variables from the 62 school systems: black, white, free/reduced population and overall achievement scores and the 6 SAT scores for each, spending per student, computer availability, teachers with Masters, teachers with 6-Year through Doctorate, and teachers with Highly Qualified titles. The information will be gathered and analyzed from the Alabama Department of Education and The National Center for Educational Statistics (NCES).

To compare the difference in the means of black and white student achievement, a Paired samples t- test will be used. This will evaluate the mean difference between black and white students overall achievement scores to determine if there is a statistically significant difference between the means.

The low income student population is not aggregated. Thus to determine a relationship between black students and low income students, Pearson product – moment correlations will be performed between the black student population and low income student population to determine significance. Moreover, the 10 cities with the highest black and low income student populations will be studied to determine a further correlation between black students and low income students.

Further Pearson product-moment correlations will be used to test for significance between; black student population and low income student population; black student population and black student population and white student population and low income student achievement; low income student population and black student achievement; low

income student population and white student achievement; black female single parent households and black student achievement; black female single parent households and low income student achievement; black and white populations with below 12<sup>th</sup> grade education and female single parent households; money spent per student by each city and white, black and low income student achievement; number of students per computer and white, black and low income student achievement; education level of teacher: masters and white, black and low income student achievement; education level of teacher: 6 year through doctorate and white, black and low income student achievement; Highly Qualified teacher and white, black and low income student achievement.

## CHAPTER 4: FINDINGS

Descriptive statistics for the population variables are presented in Table 1. The populations shown represent the 62 cities being studied. The mean population in these cities is 22,956 with Birmingham having the largest population of 242,820 and Linden having the smallest population of 2,424. The mean number of white residents in the cities is 14,186 with the largest in Huntsville with 101,660 and the lowest in Fairfield with 1,088. The mean number of black residents in the cities is 7,949 with Birmingham having the largest number with 178,244 and Arab having the smallest with 11. After dividing the means of the black and white populations by the total population, it was computed that the white population is 62% of the total population of the 62 cities and the black population is 35%. Thus the white population represents almost double the black population for the 62 cities under study.

The mean number of white females age 15 to 59 is 4,358. The highest population is 30,605 in Huntsville and the lowest is 186 in Fairfield. The mean number of white female single parents per city is 273. The highest number is 1,971 in Huntsville and the lowest is 11 in Fairfield. The mean number of black females age 15 to 59 is 2,732. The mean number of black female single parents per city is 596 with the highest population of 12,668 in Birmingham and the lowest is 0 in Arab. The white female single parent

population represents 6% of the white female population age 15 to 59, while the black female single parent population represents 22%. In this case, the black female single parent population is more than three times the white female single parent population. The mean number of the white female single parent below poverty level per city is 96 with the highest number in Huntsville with 553 and the lowest in Mountain Brook with zero. The mean number of the black female single parent below poverty level per city is 343. The highest number is in Birmingham with 7,321 and the lowest is in Mountain Brook with zero. The percentage of the white female single parent below poverty level is 35% of the total white female single parent population, and the black female single parent below poverty level is 57%.

The mean number of the white population age 25 and older with an education below twelfth grade is 1,687 with the highest number in Birmingham with 4,865 and the lowest in Linden with 95. This population represents 10% of the total white population age 25 and older with education ranging from ninth grade to graduate level. The mean number of the black population with an education below twelfth grade is 758 with the highest in Birmingham with 15,255 and the lowest in Mountain Brook with zero. This population represents 30% of the total black population age 25 and older with education ranging from ninth grade to graduate level.

The mean income of white families is \$48,903.85. The highest income is in Mountain Brook with \$122,528 and the lowest in Piedmont with \$31,925. Lastly, the black family mean income is \$25,020.92 with the highest income in Vestavia Hills with \$61,827 and the lowest in Cullman with \$2,500. As with the previous comparisons, there is a variation between the mean incomes of \$23,882.93.

Table 1: Descriptive Statistics for Population Variables

Variable	Mean	Median	Mode	Standard Deviation
Population of 62 Cities	22,956	12,777	2,424	36,893
White Population in 62 Cities	14,186	8,512	1,088	16,838
Black Population in 62 Cities	7,949	2,178	11	23,384
White Female Population Age 15-59	4,358	2,463	894	5,283
White Female Single Parent	273	186	104	297
Black Female Population Age 15-59	2,732	712	184	8,008
Black Female Single Parent	596	172	49	1,667
White Female Single Parent Below Poverty	96	72	85	105
Black Female Single Parent Below Poverty	343	104	0	964
White Population Age 25+ with Education From 9th Grade to Graduate Level	9,785	6,108	103	12,017
White Population Age 25+ Below 12th Grade Education	1,687	8,669	174	1,641
Black Population Age 25+ with Education From 9th Grade to Graduate Level	4,514	1,230	608	13,784
Black Population Age 25+ Below 12th Grade Education	1,358	28,468	0	3,725
White Median Family Income	\$48,904	\$46,096	\$31,925	\$14,882

Black Median Family Income	\$25,021	\$23,427	0	\$10,875
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Table 2 depicts the descriptive statistics for the school variables that will be studied. City spending per student ranged from the lowest in Tallassee of \$5,366 to the highest in Homewood of \$8,335. A low number in students per computer indicates that there are more computers per students. Thus a lower number of students per computer is better. Jasper, Linden, Opp, and Piedmont each had 2, which is the lowest number of students per computer. Leeds had the worst number of 14 indicating that there are 14 students per computer. The percentage of teachers with a Masters degree ranged from the lowest number in Midfield with 31% to the highest in Russellville with 71%. Teachers with a 6-Year through doctorate ranged from the lowest number of zero in Tallassee to 14% in Sheffield. Highly Qualified teachers ranged from a low of 40% in Linden to 94% in Oneonta. The mean black student population was 429.

The total black student population for the 3<sup>rd</sup>, 5<sup>th</sup>, and 7<sup>th</sup> grades of the 62 cities was 26,587 and represented 47% of the total white and black student population of 53,456. The highest number of black students was 7,873 in Birmingham and the lowest was zero in Arab. The cities with the highest percentage of black students were Linden and Fairfield, each having 99% and Arab had the lowest percentage of zero. The mean white student population was 443 and represented 54% of the total white and black student population. The white student population ranged from the highest number in Huntsville with 2,700 and the lowest number of white students was zero in Fairfield. The city with the highest white student percentage was Mountain Brook with 99% and the lowest percentage was zero in Fairfield. Finally the low income student mean population was

465. Since the low income student population is aggregated, it was not possible to calculate the percentage of the white and black student populations that were in the low income category. The low income student population ranged from the highest number in Birmingham of 6,046 to the lowest of zero in Mountain Brook. However, the mean percentage of the low income students is 51% of all students and the mean percentage of low income students ranged from a low number of zero in Mountain Brook to a high of 91% in Lanett.

Table 2: Descriptive Statistics for School Improvements and Student Population Variables

Variable	Mean	Median	Mode	Standard Deviation	Lowest	Highest
City Spending per Student	\$6,459.99	\$6,318	\$5,366	673.11	\$5,366	\$8,335
Students per * Computer	4.31	3.8	3	1.8	2	14
Percentage of Teachers with Masters Degree	53.65	54.5	46	7.9	31	71
Percentage of Teachers with 6-Year through Doctorate Degree	5.51	5.1	4	2.48	0	14
Percentage of Highly Qualified Teachers	77.94	83.61	85	13.54	40	94
Percentage of Black Student Population	38	34	17	29	0	99
Percentage of White Student Population	54	62	51	27	0	99
Percentage of Low Income Student Population	51	52	52	19	0	91

\* *Note.* A low number of students per computer is an indicator of a school improvement.

Three separate item scales were constructed to measure overall achievement for black students, white students, and low income students. Each scale was constructed using 3<sup>rd</sup>, 5<sup>th</sup>, and 7<sup>th</sup> grade reading and math scores for each of the three groups. Before reaching any conclusions about the merits of these overall achievement scores, Pearson correlational analysis was computed between the 6 variable scores of black, white, and low income students and the overall achievement scores of black, white, and low income students. All of the correlations for black students were significant and greater than .71 indicating a strong relationship between the overall achievement scores and the six variable scores. Coefficient alpha for the overall scale score was .85. All of the correlations for white student overall scale scores and the six variable scores were significant and greater than .82 indicating a strong relationship between the overall achievement scores and the six variable scores. Coefficient alpha for the overall achievement scale score was .94. Lastly, all of the correlations for low income student overall achievement scale scores and the six variable scores were significant and greater than .73, indicating a strong relationship between the overall achievement scale scores and the six variable scores. Coefficient alpha score was .89. Thus internal consistency of reliability for these three overall achievement scale scores was accepted for each group of students. These values indicated that the overall achievement scores could be accepted as representative of white, black and low income student SAT scores.

Table 3 depicts descriptive statistics for the overall achievement scale scores of white, black, and low income students. The difference between white and black student overall



achievement scale scores was 26 while the low income student overall achievement scores were 3 points higher than black student scale scores. The city with the highest mean overall achievement score for white students was 87 in Mountain Brook and the lowest mean overall achievement score was 37 in Bessemer. The highest black student overall achievement score was 56 in Vestavia Hills and the lowest was 20 in Fort Payne. The highest low income student overall achievement score was 58 in Winfield and the lowest was 27 in Bessemer.

Table 3: Descriptive Statistics for White, Black, and Low Income Student Overall Achievement Scores

Variable	Mean	SD	N
White Student Overall Achievement Scores	63	10.2	59
Black Student Overall Achievement Scores	37	7.3	57
Low Income Student Overall Achievement Scores	40	7.3	6.1

*Note.* The national average percentile score is 50.

Tables 4, 5, and 6 depict descriptive statistics for all 6 variable scores for white, black and low income students. The highest score for white students was 66 in 7<sup>th</sup> grade reading and the lowest was 61 in 3<sup>rd</sup> grade reading. The highest score for black students was 39 in 7<sup>th</sup> grade reading and the lowest score was 33 in 3<sup>rd</sup> grade reading. The highest score for low income students was 42 in 7<sup>th</sup> grade reading and the lowest score was 36 in 3<sup>rd</sup> grade reading.

Table 4: Descriptive Statistics for White Student SAT Scores

Variable	Mean	SD	N
3rd grade reading	61	9.3	57
5th grade reading	66	10.3	57
7th grade reading	66	9.7	55
3rd grade math	63	10.1	57
5th grade math	62	13.3	57
7th grade math	63	13.1	55

*Note.* The national average percentile score is 50.

Table 5: Descriptive Statistics for Black Student SAT Scores

Variable	Mean	SD	N
3rd grade reading	33	6.5	54
5th grade reading	37	9.1	53
7th grade reading	39	7.8	55
3rd grade math	35	9.7	54
5th grade math	37	10.3	53
7th grade math	38	10.3	55

*Note.* The national average percentile score is 50.

Table 6: Descriptive Statistics for Low Income Student SAT Scores

Variable	Mean	SD	N
3rd grade reading	36	7.9	60
5th grade reading	40	7.8	60
7th grade reading	42	8.6	60

3 <sup>rd</sup> grade math	40	10.7	60
5th grade math	40	9.5	60
7th grade math	39	9.3	60

*Note.* The national average percentile score is 50.

The following information reports the results of each hypothesis.

Hypothesis 1: There is a significant difference between the achievements of black and white students as measured by the Stanford Achievement Test.

Table 7 depicts descriptive statistics for white and black overall achievement scores.

There was a large gap of 26 points between the two mean scores.

Table 7: Descriptive Statistics for White and Black Student Overall Achievement Scale Scores

Variable	Mean	SD	N
White Student Overall Achievement Scores	63	10.2	59
Black Student Overall Achievement Scores	37	7.3	57

*Note.* The national average percentile score is 50.

A paired samples *t*- test was conducted to evaluate whether there were significant differences between black and white overall achievement scores. Results indicated that white students' overall achievement scores were significantly higher than black students' overall achievement scores ( $t(53) = 25.4, p < .01$ ) (See Table 8).

Table 8: Paired Samples T-Test for Black and White Overall Achievement

Scores					
Pairs	Mean	SD	<i>t</i>	<i>r</i>	<i>N</i>
White and Black Students Overall Achievement Scores	25.62	7.4	25.4	0.00**	54

\*\**p* <.01

Hypothesis 2: As the black student population increases, the low income student population increases

Table 9 depicts descriptive statistics for the black student population and low income student population. The mean percentage of black students is 38 and the mean percentage of low income students is 51. The difference between the two mean populations is 13.

Table 9: Descriptive Statistics for Black Student Population and Free Reduced Lunch Student Population

Variable	Mean	SD	N
Percentage of Black Students	38	29	62
Percentage of Free/Reduced Lunch Students	51	19	62

Since the low income student population was not aggregated, it was necessary to examine and determine if there is a significant relationship between the black student population and low income student population to aid in inferring the racial make up of the low income student population. Pearson Correlational analysis revealed a statistically significant strong, positive relationship between the low income student population and the black student population ( $r = .99, p < .01$ ). Thus there is a strong indicator of a

relationship between the two groups of students. The higher the low income student population, the higher the black student population (See Table 10).

Table 10: Correlation Between Black Student Population and Low Income Student Population

		Low Income Student Population
Black Student Population	Pearson Correlation	0.99
	Sig. (2 tailed)	0.00**
	N	62

\*\* $p < .01$

Further attestation that the black student population shows a strong relationship with the low income student population in the 62 school systems in Alabama can be seen from Tables 11 and 12 that show the ten cities with the highest black student populations and the cities with the ten highest low income student populations. Eight of the cities in both categories corresponded with each other: Anniston, Bessemer, Birmingham, Fairfield, Lanett, Linden, Midfield, and Selma. Furthermore, in order to rule out any other racial student population, the black and white students make up the majority of students in the 62 city school systems. The white student population makes up 50% and the black student population makes up 47% of the total student population.

Table 11: Top 10 Cities with Highest Black Student Population

	Percent
Fairfield	99

Table 12: Top 10 Cities with Highest Low Income Student Population

	Percent
Lanett	91

Linden	99	Linden	89
Birmingham	97	Anniston	85
Midfield	97	Selma	84
Bessemer	96	Bessemer	82
Selma	94	Birmingham	74
Anniston	92	Fairfield	74
Lanett	88	Gadsden	73
Tuscaloosa	75	Sheffield	70
Opelika	66	Midfield	69

Hypothesis 3: As the black population increases in schools, the achievement level of black students decreases.

Table 13 depicts descriptive statistics for the black population and black student overall achievement scores. The mean percentage of the black student population is 38 and the mean black student overall achievement score is 37.

Table 13: Descriptive Statistics for Black Student Population and Black Student Overall Achievement Scores

Variable	Mean	SD	N
Black Student Population	38	28.7	62
Black Student Overall Achievement Scores	37	7.3	57

*Note.* The national average percentile score is 50.

Pearson Correlational analysis revealed a statistically significant weak, negative relationship between the black student population and black student overall achievement scores ( $r = -.34, p < .01$ ). The higher the black student population, the lower black student achievement (See Table 14). Further analysis among the 6 variable scores of black students in reading and math with the percentage of the black student population revealed a statistically significant strong, negative relationship between 3rd grade math and black student population, ( $r = -.53, p < .01$ ). The higher the black student population, the lower the 3rd grade math scores.

Table 14: Correlation Between Black Overall Achievement Scores and Black Student Population

		Black Student Population
Black Overall Achievement Score	Pearson Correlation	-.34
	Sig. (2 tailed)	.01**
	N	62

\*\* $p < .01$

Hypothesis 4: As the black student population increases, the achievement levels of low income students decreases.

Table 15 depicts descriptive statistics for the black student population and low income student overall achievement scores. The mean percentage of the black student population is 38 and the mean overall achievement score for low income students is 40.

Table 15: Descriptive Statistics for Black Student Population and Low Income Student Overall Achievement Scores

Variable	Mean	SD	N
Percentage of Black Student Population	38	28.7	62
Low Income Student Overall Achievement Scores	40	7.3	61

*Note.* The national average percentile score is 50.

Pearson correlational analysis revealed a statistically significant strong, negative relationship between low income student overall achievement scores and the black student population ( $r = -.67, p < .01$ ). The higher the black student population, the lower the low income student achievement (See Table 16). Further analysis among the 6 variable scores of low incomes students in reading and math with the percentage of the black student population revealed a statistically significant weak, negative relationship in 5<sup>th</sup> grade math, ( $r = -.37, p < .01$ ), but in the other 5 correlations there were strong relationships with the percentage of black student populations: 3<sup>rd</sup> grade reading, ( $r = -.37, p < .01$ ); 5<sup>th</sup> grade reading, ( $r = -.48, p < .01$ ); 7<sup>th</sup> grade reading, ( $r = -.71, p < .01$ ); 3<sup>rd</sup> grade math, ( $r = -.48, p < .01$ ); and 7<sup>th</sup> grade math, ( $r = -.62, p < .01$ ). The higher the black student population, the lower low income student achievement in all areas.

Table 16: Correlation Between Low Income Overall Achievement Scores and Black Student Population

	Black Student Population
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Low Income Overall Achievement Score	Pearson Correlation	-.67
	Sig. (2 tailed)	.01**
	N	62

\*\* $p < .01$

Hypothesis 5: As the black population increases in schools, the achievement level of white students decreases.

White student overall achievement scale scores were correlated with the black student population. Table 17 depicts descriptive statistics for the black student population and white overall achievement scores. The mean percentage of the black student population is 38 and the mean white student overall achievement score is 63.

Table 17: Descriptive Statistics for Black Student Population and White Student Overall Achievement Scores

Variable	Mean	SD	N
Percentage of black Student Population	38	29	62
White Student Overall Achievement Scores	63	10.2	59

*Note.* The national average percentile score is 50.

Pearson correlational analysis revealed a statistically significant strong, negative relationship between the white student overall achievement scores and the black student population ( $r = -.40, p < .01$ ). The higher the black student population, the lower the white student achievement (See Table 18). Further analysis of all 6 variable scores of

white students in reading and math with the percentage of the black student population revealed a significant weak, negative relationship in 5 out of 6 areas: 3<sup>rd</sup> grade reading, ( $r = -.25, p < .05$ ), 7<sup>th</sup> grade reading, ( $r = -.29, p < .05$ ), 5<sup>th</sup> grade math, ( $r = -.28, p < .05$ ), and 7<sup>th</sup> grade math, ( $r = -.31, p < .05$ ). A stronger significance was shown in 3<sup>rd</sup> grade math, ( $r = -.42, p < .01$ ). The higher the black student population, the lower the white student achievement in 3<sup>rd</sup> and 5<sup>th</sup> grade reading and 3<sup>rd</sup>, 5<sup>th</sup>, and 7<sup>th</sup> grade math.

Table 18: Correlation Between White Overall Achievement Scores and Black Student Population

		Black Student Population
White Student Overall Achievement Score	Pearson Correlation	-.40
	Sig. (2 tailed)	.01**
	N	59

\*\* $p < .01$

Hypothesis 6: As the white population increases in schools, the achievement level of black students increases.

Table 19 depicts descriptive statistics for the white student population and black student overall achievement scores. The mean percentage of white students is 54 and the mean overall achievement score for black students is 37.

Table 19: Descriptive Statistics for White Student Population and Black Student Overall Achievement Scores

Variable	Mean	SD	N
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Percentage of White Student Population	54	27	62
Black Student Overall Achievement Scores	37	7.3	57

*Note.* The national average percentile score is 50.

Pearson Correlational analysis revealed a significant weak, positive relationship between black student overall achievement scores and white student population ( $r = .31, p < .01$ ). The higher the white student population, the higher the black student achievement (See Table 20). Further analysis of the 6 variable scores of black students in reading and math with the percentage of the white student population showed a significant strong, positive relationship in 7<sup>th</sup> grade reading and 7th grade math, ( $r = .44, p < .05$  and  $r = .49, p < .01$ ), respectively. The higher the white student population, the higher the black student achievement in 7th grade reading and math scores.

Table 20: Correlation Between Black Student Overall Achievement Scores and White Student Population

		White Student Population
Black Student Overall Achievement scores	Pearson Correlation	0.31
	Sig. (2 tailed)	.02*
	N	57

\* $p < .05$

Hypothesis 7: As the white population increases in schools, the achievement level of low income students increases.

Table 21 depicts descriptive statistics for the white student population and low income student overall achievement scores. The mean percentage of the white student population is 54 and the mean overall achievement score for low income students is 40.

Table 21: Descriptive Statistics for White Student Population and Low Income Student Overall Achievement Scores

Variable	Mean	SD	N
Percentage of White Student Population	54	27	62
Low Income Student Overall Achievement Scores	40	7.3	59

*Note.* The national average percentile score is 50.

Pearson correlational analysis revealed a significant strong, positive relationship between low income student overall achievement scores and the white student population ( $r = .67, p < .01$ ). The higher the white student population, the higher the low income student overall achievement (See Table 22). Further analysis of the 6 variable scores of low income students in reading and math with the percentage of the white student population revealed significant strong, positive relationships between 5 of the 6 variable and white student population: 3rd grade reading, ( $r = .59, p < .01$ ); 5th grade reading, ( $r = .57, p < .01$ ); 7th grade reading, ( $r = .7, p < .01$ ); 3rd grade math, ( $r = .51, p < .01$ ); and 7th grade math, ( $r = .58, p < .01$ ). There was a significant weak, positive relationship between 5th grade math and white student population, ( $r = .37, p < .01$ ). The higher the

white student population, the higher the low income student individual SAT scores in all areas.

Table 22: Correlation Between Low Income Student Overall Achievement Scores and White Student Population

		White Student Population
Black Student Overall Achievement Scores	Pearson Correlation	.67
	Sig. (2 tailed)	.01**
	N	57

\*\* $p < .01$

Hypothesis 8: As the low income student population increases, the achievement level of black students decreases.

Descriptive statistics for the low income student population and black student overall achievement scores are shown in Table 23. The mean percentage of the low income student population is 51 and the mean overall achievement score for black students is 37.

Table 23: Descriptive Statistics for Low Income Student Population and Black Student Overall Achievement Scores

Variable	Mean	SD	N
Percentage of Low Income Students	51	19	63
Black Student Overall Achievement	37	7.3	57

Scores

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*Note.* The national average percentile score is 50.

Pearson Correlational analysis revealed a statistically significant strong, negative relationship between black student overall achievement scores and the low income student population ( $r = -.51, p < .01$ ). The more students from low income families there were, the lower the black student overall achievement (See Table 24). Further analysis of the 6 variable scores of black students in reading and math with the percentage of the low income student population revealed statistically significant strong, negative relationships in 4 out of 6 black student SAT scores: 3rd grade reading, ( $r = -.48, p < .01$ ); 5th grade reading, ( $r = -.46, p < .01$ ); 7th grade reading, ( $r = -.59, p < .01$ ); 7th grade math, ( $r = -.6, p < .01$ ). There was a statistically significant weak, negative relationship between 5th grade math and low income student population, ( $r = -.27, p < .05$ ). The higher the low income student population, the lower the black student individual SAT scores in 5 out of 6 areas.

Table 24: Correlation Between Black Student Overall Achievement Score and Low Income Student Population

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		Low Income Student Population
Black Student Overall Achievement Score	Pearson Correlation	-0.51
	Sig. (2 tailed)	.00**
	N	57

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\*\* $p < .01$

Hypothesis 9: As the number of students from low income families increases, the achievement level of white students decreases.

Descriptive statistics for the low income population and white student overall achievement scores are shown in Table 25. The mean percentage of the low income student population is 51 and the mean white student overall achievement score is 63.

Table 25: Descriptive Statistics for Low Income Student Population and White Student Overall Achievement Scores

Variable	Mean	SD	N
Percentage of Low Income Students	51	19	63
White Student Overall Achievement Scores	63	10.2	59

*Note.* The national average percentile score is 50.

Pearson Correlational analysis revealed a statistically significant strong, negative relationship between white student overall achievement scores and the low income student population ( $r = -.74, p < .01$ ). The higher the low income student population, the lower the white student achievement scores (See Table 26). Further analysis of the 6 variable scores of white students in reading and math with the percentage of the low income student population revealed statistically significant strong, negative relationships in all areas: 3rd grade reading, ( $r = -.61, p < .01$ ); 5th grade reading, ( $r = -.68, p < .01$ ); 7th grade reading, ( $r = -.67, p < .01$ ); 3rd grade math, ( $r = -.61, p < .01$ ); 5th grade math,

( $r = -.65, p < .01$ ); and 7th grade math, ( $r = -.66, p < .01$ ). The higher the low income student population, the lower the white student individual SAT scores in all areas.

Table 26: Correlation Between White Overall Achievement Scores and Low Income Student Population

		Low Income Student Population
White Student Overall Achievement Score	Pearson Correlation	-0.74
	Sig. (2 tailed)	.00**
	N	59

\*\* $p < .01$

Hypothesis 10: As the black female single parent population increases, the achievement level of black students decreases.

Before correlations were conducted between the black female single parent population and black student overall achievement scores, the black female single parent population needed to be studied further to determine the percentage of the black female single parent population from the total female population age 15 to 59. Furthermore, it was necessary to discover if the black female single parent populations were below poverty level as the literature stated that poverty and family composition, i.e. single parents, are a contributor to low achievement. Table 27 depicts descriptive statistics for the black female population age 15 to 59, the black female single parent population, and the black female single parent population below poverty level. The mean number of black female single parents age 15 to 59 for the 62 cities is 2,732 and the mean number of black female single parents is 596. The total black female population age 15 to 59 for all 62 cities is 169,371.



The total of the black female single parent population is 36,948 and represents 22% of the total black female population age 15 to 59. Moreover, the mean number of black female single parents below poverty level is 343. The total of the black female single parent population in the 62 cities is 36,948. The total of the black female single parent population below poverty level is 20,909 representing 57% of the black female single parent population. Thus the majority of the black female single parent population is below poverty level.

Table 27: Descriptive Statistics for Black Females Age 15-59, Black Female Single Parent and Black Female Single Parent Below Poverty Level

Variable	Mean	SD	N
Black Female Population Age 15-59	2,732	8,008	62
Black Female Single Parent	596	1,667	62
Black Female Single Parent Below Poverty	343	964	61

Pearson correlations were conducted with the black female single parent population and black student overall achievement scores. No significant relationship was revealed (See Table 28). However, even though there was no significant relationship between black student overall achievement scores and the black female single parent population,

further analysis of the 6 variable scores of black students in reading and math with the black female single parent population revealed a statistically significant negative, weak relationship between 7th grade math and the black female single parent population, ( $r = -.25, p < .05$ ). The higher the black female single parent population, the lower the black 7th grade math SAT score.

Table 28: Correlation Between Black Student Overall Achievement Scores and Black Female Single Parent Population

		Black Female Single Parent
Black Student Overall Achievement Score	Pearson Correlation	-0.12
	Sig. (2 tailed)	0.36
	N	57

Hypothesis 11: As the black female single parent population increases, the achievement level of low income students decreases.

Since it has been suggested that the black student population has a strong relationship with low income students, further analysis was conducted to determine if low income students show a relationship with black female single parents. If so, this too could enhance the suggestion that the black students make up much of the low income student population. Pearson correlational revealed a statistically significant weak, negative relationship ( $r = -.28, p < .05$ ) (See Table 29). A correlation was then conducted between the white female single parent population and low income overall achievement scores.

There was no statistically significant relationship between the two. This further attests to the close relationship between black and low income students. The higher the black female single parent population, the lower the low income student achievement. Further analysis of the 6 variable scores of the low income students in reading and math with the black female single parent population revealed statistically significant weak, negative relationships between 3 of the 6 variable scores and black female single parent population: 3rd grade reading, ( $r = -.25, p < .05$ ); 7th grade reading, ( $r = -.31, p < .05$ ), and 7th grade math, ( $r = -.32, p < .05$ ). The higher the black female single parent population, the lower the low income student SAT scores in 3rd and 7th grade reading and 7th grade math.

Table 29: Correlation Between Low Income Overall Achievement Scores and Black Female Single Parent Population

		Black Female Single Parent
Low Income Student Overall Achievement Score	Pearson Correlation	-0.28
	Sig. (2 tailed)	.03*
	N	57

\* $p < .05$

Hypothesis 12: There is a significant relationship between education of the population and single parent households

The black and white, male and female population with below 12<sup>th</sup> grade education was each correlated with the black and white female single parent populations to determine if

there is a relationship between low education and female single parents. Table 30 depicts descriptive statistics for the black population with below 12<sup>th</sup> grade education, the black female single parent population, the white population with below 12<sup>th</sup> grade education and the white female single parent population. The total black population age 25 and above with education levels from 9<sup>th</sup> grade to graduate school in the 62 cities is 279,853 and the total of the black population with below twelfth grade education is 84,194 representing 30% of the total black population above 25 with an education ranging from 9<sup>th</sup> grade through graduate school. The mean black population with below a 12<sup>th</sup> grade education is 1,358 and the mean number of black female single parents is 596.

The total white population age 25 and above with education levels from 9<sup>th</sup> grade to graduate school is 606,665 and the total of the white population with below twelfth grade education is 61,069 representing 10% of the total white population above 25 with an education ranging from 9<sup>th</sup> grade through graduate school. The mean white population age 25 and above with below twelfth grade education is 1,687 and the mean number of white female single parent population is 273.

Table 30: Descriptive Statistics Black and White Population Age 25+ with Below Twelfth Grade Education and Black and White Female Single Parent Population

Variable	Mean	SD	N
Black Population Age 25+ with Below Twelfth Grade Education	1,358	3,725	62
Black Female Single Parent	596	1,667	62

White Population Age 25+ with Below Twelfth Grade Education	1,687	1,641	62
White Female Single Parent	273	297	62

Pearson correlational analysis revealed a statistically significant strong, positive relationship between those age 25 and older with less than twelfth grade education and the number of black female single parents ( $r = .99, p < .01$ ). The higher the black population age 25 and older with less than twelfth grade education, the higher the black female single parent population (See Table 31).

Table 31: Correlation Between Black Population Age 25+ with Below Twelfth Grade Education and Black Female Single Parent Population

		Black Population Age 25+ with Below Twelfth Grade Education
Black Female Single Parent	Pearson Correlation	0.99
	Sig. (2-tailed)	0.00**
	N	62

\*\* $p < .01$

Pearson correlational analysis revealed a statistically significant strong, positive relationship between those age 25 and above with below twelfth grade education and the number of white female single parents ( $r = .83, p < .01$ ). The higher the white population age 25 and above with below twelfth grade education, the higher the white female single parent population (See Table 32).

Table 32: Correlation Between White Population Age 25+ with Below Twelfth Grade Education and White Female Single Parent Population

		White Population Age 25+ with Below Twelfth Grade Education
White Female Single Parent	Pearson Correlation	0.83
	Sig. (2-tailed)	0.00**
	N	62

\*\* $p < .01$

Hypothesis 13: As the white female single parent population increases, the achievement level of white students decreases.

Before correlations were conducted between the white female single parent population and white student scale scores, the white female single parent population needed to be studied further to determine the percentage of the white female single parent population out of the total white female population age 15 to 59. Also because the literature states that poverty and family composition, i.e. single parents, are a contributor to low achievement, it was necessary to examine female single parents below poverty level. Descriptive statistics are depicted in Table 33. The mean number of the white female population age 15-59 for the 62 cities is 4,358 and the white female single parent population mean is 273. The total white female population age 15-59 of the 62 cities is 270,218. The white female single parent population is 16,952 representing 6.3% of the total white female population age 15-59. The mean number of the white female single

parent below poverty level is 96. The total of the white female single parents below poverty level is 5,977 and represents 35% of the white female single parent population.

Table 33: Descriptive Statistics White Females Age 15-59, White Female Single Parent Population and White Female Single Parent Population Below Poverty Level

Variable	Mean	SD	N
White Female Population Age 15-59	4,358	5,283	62
White Female Single Parent	273	297	62
White Female Single Parent Population Below Poverty	96	105	62

Pearson Correlational analysis revealed a statistically significant weak, positive relationship between white student overall achievement scores and white female single parents ( $r = .30, p < .01$ ). The higher the white female single parent population, the higher the white student achievement (See Table 34). Further analysis of the 6 variable scores of white students in reading and math with the white female single parent population revealed statistically significant weak, positive relationships between 3 of the 6 white SAT scores: 5th grade reading, ( $r = .32, p < .05$ ), 7th grade reading, ( $r = .32, p < .05$ ); and 5th grade math,  $r = .3, p < .05$ . The higher the increase in the white female single parent population, the higher the increase in white student achievement in 3<sup>rd</sup> and 7<sup>th</sup> grade reading and 5<sup>th</sup> grade math.

Table 34: Correlation Between White Student Overall Achievement Scores and White Female Single Parent Population

		White Female Single Parent
White Student Overall Achievement Scores	Pearson Correlation	0.3
	Sig. (2 tailed)	.05*
	N	59

\* $p < .05$

Hypothesis 14: As the improvements in the schools increases, the achievement level of white students increases.

Pearson correlations were conducted between the white student overall achievement scores and the five components of school improvements: Spending per student, students per computer, education levels for teachers with Masters and 6-Year through Doctorate, and for teachers with the Highly Qualified Teacher title and the overall achievement scores for white students.

Table 35 depicts descriptive statistics for the 5 areas of improvements and white students' overall achievement scores. The mean for spending per student is \$6,459.99, the mean number of students per computer is 4.31, the percentages of teachers with a Master's degree is 53.65, 6-Year through Doctorate is 5.51, and Highly Qualified teachers is 77.94. The mean overall achievement score of white students is 63.

Table 35: Descriptive Statistics for White Student Overall Achievement Scores and Improvements in Schools

Variable	Mean	SD	N
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White Student Overall Achievement Scores	63	10.2	59
Spending per Student	\$6,459.99	\$673.11	61
Students per Computer	4.31	1.8	62
Percentage of Teachers with Masters Degrees	53.65	7.89	61
Percentage of Teachers with 6-Year-Doctorate Degrees	5.51	2.5	61
Percentage of Highly Qualified Teachers	77.94	13.54	61

*Note.* The national average percentile score is 50.

Table 36 depicts the Pearson correlations between white student overall achievement scores and spending per student, students per computer, the percentage of teachers with Masters, the percentage of teachers with 6-Year through Doctorate, and the percentage of teachers with the Highly Qualified Teacher title.

Table 36: Correlations Between White Student Overall Achievement Scores and Improvements in Schools

	White Student Overall Achievement Scores
Spending Per Student	.46**
Students Per Computer	-0.16
Percentage of Teachers with Masters degree	.41**
Percentage of	

Teachers with 6-Year- Doctorate	.28*
Percentage of Teachers that are Highly Qualified Teachers	.41**

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\* $p < .05$   
\*\* $p < .01$

The first Pearson correlation was conducted between white student overall achievement scores and spending per student. A statistically significant strong, positive relationship was revealed ( $r = .46, p < .01$ ). The higher the spending per student, the higher the white student achievement (See Table 36). Further analysis of the 6 variable scores of white students in reading and math with spending per student revealed statistically significant strong, positive relationships between all 6 white student SAT scores and spending per student: 5<sup>th</sup> grade reading, ( $r = .43, p < .01$ ); 7<sup>th</sup> grade reading, ( $r = .47, p < .01$ ); 5<sup>th</sup> grade math, ( $r = .45, p < .01$ ); and 7<sup>th</sup> grade math, ( $r = .46, p < .01$ ). 3<sup>rd</sup> grade reading and 3<sup>rd</sup> grade math revealed statistically significant weak, positive relationships, ( $r = .36, p < .01$ ) and ( $r = .38, p < .01$ ), respectively. The higher the spending per student, the higher white student achievement in all areas.

The second correlation was conducted between white student overall achievement scores and students per computer. There was no significance with the overall achievement scores nor with the 6 individual variable scores of white students in reading and math with the number of students per computer. (See Table 36)

The third correlation conducted was between white student overall achievement scores and the percentage of teachers with a Master's degree. Pearson correlational

analysis revealed a statistically significant weak, positive relationship between the white student overall achievement scores and the percentage of teachers with a Master's degree ( $r = .31, p < .05$ ). The higher the percentage of teachers with a Master's degree, the higher the white student achievement (See Table 36). Further analysis with the 6 variable scores of white students in reading and math with the percentage of teachers with a Master's degree revealed a statistically significant strong, positive relationship between 7th grade white student math SAT scores and teachers who hold a Master's degree, ( $r = .46, p < .01$ ). Four of the correlations revealed statistically significant weak, positive relationships with the percentage of teachers who hold a Master's degree: 5th grade reading, ( $r = .27, p < .05$ ); 7th grade reading, ( $r = .28, p < .01$ ); 3rd grade math, ( $r = .34, p < .01$ ); and 5th grade math, ( $r = .34, p < .05$ ). The higher the percentage of teachers with a Master's degree, the higher the white student SAT scores in 5 out of 6 variable scores.

The fourth Pearson correlation was between white student overall achievement scores and the percentage of teachers with 6-Year through Doctorate degree. Pearson Correlational analysis revealed no statistically significant relationship (See Table 36). However, even though the overall achievement scores indicated no significance, further analysis of the 6 variable scores of white students in reading and math with the percentage of teachers with a 6-Year through Doctorate degree revealed statistically significant weak, positive relationships between 5th and 7th grade math scores ( $r = .26, p < .05$  and  $r = .32, p < .05$ ), respectively. The higher the percentage of teachers with a 6-year through Doctorate degree, the higher white SAT scores in 5th and 7th grade math.

Final correlations were conducted between white student overall achievement scores and the percentage of teachers with the Highly Qualified title. Pearson Correlational analysis revealed a statistically significant weak, positive relationship ( $r = .34, p < .01$ ). The higher the percentage of teachers with the Highly Qualified title, the higher white student achievement (See Table 36). The percentage of teachers with the Highly Qualified title revealed statistically significant weak, positive relationships between all 6 white student SAT scores: 3rd grade reading, ( $r = .4, p < .01$ ); 5th grade reading, ( $r = .3, p < .05$ ); 5th grade reading, ( $r = .34, p < .01$ ); 3rd grade math, ( $r = .3, p < .05$ ); 5th grade math, ( $r = .3, p < .05$ ); and 7th grade math, ( $r = .39, p < .01$ ). The higher the percentage of teachers who are Highly Qualified, the higher white student SAT scores in all 6 categories.

Hypothesis 15: As the improvements in the schools increase, the achievement level of black students increases.

Pearson correlations were conducted between the five components of school improvements: Spending per student, students per computer, education levels of teachers with Masters and 6-Year through Doctorate, and the teachers that hold the Highly Qualified Teacher title and the overall achievement scores for black students.

Table 37 depicts descriptive statistics for the 5 areas of improvements and black students' overall achievement scores. The mean for spending per student is \$6,459.99, the mean number of students per computer is 4.31, the percentages of teachers with a Master's degree is 53.65, 6-Year through Doctorate is 5.51, and Highly Qualified teachers

mean percentage is 77.94. The mean overall achievement score for black students is 37.

Table 37: Descriptive Statistics for Black Student Overall Achievement Scores and Improvements in Schools

Variable	Mean	SD	N
Black Student Overall Achievement Scores	37	7.3	57
Spending per Student	\$6,459.99	\$673.11	61
Students per Computer	4.31	1.8	62
Percentage of Teachers with Masters degrees	53.65	7.89	61
Percentage of Teachers with 6-Year-Doctorate Degree	5.51	2.5	61
Percentage of Highly Qualified Teachers	77.94	13.54	61

*Note.* The national average percentile score is 50.

Table 38 depicts the Pearson correlations between black student overall achievement scores and spending per student, students per computer, the percentage of teachers with Masters, the percentage of teachers with 6-Year through Doctorate, and the percentage of teachers with the Highly Qualified Teacher title.

Table 38: Correlations Between Black Student Overall Achievement Scores and Improvements in Schools

	Black Student Overall Achievement Scores
Spending	0.25

Per Student		
Students Per Computer	-0.22	
Percentage of Teacher's with Masters degree	.31*	
Percentage of Teachers with 6-Year-Doctorate		0.22
Percentage of Teachers that are Highly Qualified		.34**

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\* $p < .05$

\*\* $p < .01$

The first correlation was conducted between black student overall achievement scores and spending per student. Pearson correlational analysis revealed no statistically significant relationship. (See Table 38). However, even though the overall achievement score did not reveal a significant relationship, further analysis of the 6 variable scores of black students in reading and math with the amount of money spent per student revealed statistically significant weak, positive relationships in 3rd grade math ( $r = .32, p < .01$ ). 5th grade math revealed a stronger relationship ( $r = .41, p < .01$ ). The higher the spending per black students, the higher 3rd and 5th grade math SAT scores for black students.

Since there was no statistical significant relationship that the money spent per student was a contributor to an increase black student overall achievement, it was necessary to further research the money spent per student in cities with high black student populations to discover if the money spent per student in those cities was less than the average of

\$6,459.99. This could possibly surmise the lack of significance between spending per student and the black student overall achievement scores. Table 39 depicts the 10 cities with the highest black student population, the money spent per student in those cities, and the black student overall achievement score for the cities. A further study of the ten cities with the highest percentage of black students and the amount spent per student in those cities revealed that six of the cities were above the average of \$6,459.99 of the 62 cities: Linden spent \$8,122, Anniston spent \$7,033, Tuscaloosa spent \$6,975, Opelika spent \$6,870, Birmingham spent \$6,795, and Lanett spent \$6,680. Midfield, Bessemer, and Selma were slightly lower with \$6,362, \$6,346, and \$6,223, respectively, while Fairfield was the lowest of the 10 cities with \$5,922 (See Table 39).

A further study of the overall achievement scores for the cities with the highest black student population revealed that 8 out of the 10 cities were below the overall mean achievement score of 37 for black students in all the 62 cities (See Table 39).

Table 39: 10 Cities with Highest Black Student Population, Spending per Student, and Overall Achievement Scores

City	Black Student Percentage	Spending per Student	Overall Achievement* Scores
Lindon	99	\$8,122	31.33
Fairfield	99	\$6,318	37.83
Birmingham	97	\$6,795	33.5
Midfield	97	\$6,362	33.83
Bessemer	96	\$6,346	27.67
Selma	94	\$6,223	38.5

Anniston	92	\$7,033	31.83
Lanett	88	46,680	35.17
Tuscaloosa	75	\$6,975	32.67
Opelika	66	\$6,870	35.83

*Note.* The overall mean achievement score for black students in the 62 cities is 37

Pearson Correlational analysis between black student overall achievement scores and students per computer revealed no statistical significance in any area. Nor was there any significance when the 6 variable scores for black students in reading and math were analyzed (See Table 38)

The third Pearson Correlational analysis was between black student overall achievement scores and the percentage of teachers with a Masters degree. Test revealed a statistically significant weak, positive relationship ( $r = .32, p < .05$ ). The higher the percentage of teachers with Master's degrees, the higher black student achievement (See Table 38). Further analysis with the 6 variable scores for black students in reading and math with the percentage of teachers with a Master's degree revealed a statistically significant weak, positive relationship in 7th grade reading ( $r = .37, p < .01$ ). Yet there was a statistically significant strong, positive relationship between 7th grade math and the percentage of teacher's with a Master's degree ( $r = .59, p < .01$ ). The higher the percentage of teachers with Master's degrees, the higher black student achievement in 7th grade reading and math.

Pearson Correlational analysis between black student overall achievement scores and the percentage of teachers with a 6-Year through Doctorate revealed no statistical significance in any area (See Table 38). There was no statistical significance when the 6



variable scores in reading and math were correlated with the percentage of teachers with a 6-Year through Doctorate.

The last correlation was between black student overall achievement scores and the percentage of teachers with the Highly Qualified title. Pearson Correlational analysis revealed a statistically significant weak, positive relationship ( $r = .34, p < .01$ ). The higher the percentage of teachers with the Highly Qualified title, the higher black student achievement (See Table 38). Further analysis of the 6 variable scores of black students in reading and math with the percentage of teachers with the Highly Qualified title revealed a statistically significant weak, positive weak relationship in 7th grade reading ( $r = .38, p < .01$ ). In 3rd grade reading and 7th grade math there were stronger relationships, ( $r = .42, p < .01$  and  $r = .42, p < .01$ ), respectively. The higher the percentage of teachers with the Highly Qualified title, the higher black SAT scores in 3rd grade reading and 7th grade reading and math.

Hypothesis 16: As the improvements in the schools increase, the achievement level of low income students increases.

Pearson correlations were conducted between the five components of school improvements: Spending per student, students per computer, education levels for teachers with Masters and 6-Year through Doctorate, and teachers with the Highly Qualified Teacher title and the overall achievement scores for low income students.

Table 40 depicts descriptive statistics for the 5 areas of improvements and low income student overall achievement scores. The mean for spending per student is \$6,459.99, the mean number of students per computer is 4.31, the percentages of teachers with a

Master’s degree is 53.65, 6-Year through Doctorate is 5.51, and Highly Qualified teachers is 77.94. The mean overall achievement score for low income students is 40.

Table 40: Descriptive Statistics for Low Income Student Overall Achievement Scores and Improvements in Schools

Variable	Mean	SD	N
Low Income Student Overall Achievement Scores	40	7.3	61
Spending per Student	\$6,459.99	\$673.11	61
Students per Computer	4.31	1.8	62
Percent of Teachers with Master's degree	53.65	7.89	61
Percent of Teachers with 6-Year- Doctorate	5.51	2.5	61
Percent of Teachers that are Highly Qualified	77.94	13.54	61

*Note.* The national average percentile score is 50.

Table 41 depicts the Pearson correlations between low income student overall achievement scores and spending per student, students per computer, the percentage of teachers with Masters, the percentage of teachers with 6-Year through Doctorate, and the percentage of teachers with the Highly Qualified Teacher title.

Table 41: Correlations Between Low Income Student Overall Achievement Scores and Improvements in Schools

	Low Income Student Scale Scores
Spending Per Student	-0.01
Students Per Computer	-0.1
Percentage of Teachers with Master's Degree	.43**
Percentage of Teachers with 6-Year Through Doctorate	0.22
Percentage of Teachers with Highly Qualified Title	.51**

\* $p < .05$

\*\* $p < .01$

Pearson correlational analysis revealed no statistically significant relationship between the low income overall achievement scores and spending per student (See Table 41).

Even though there was no significance, further analysis of the 6 variable scores of the low income students in reading and math with the amount of money spent per student revealed a statistically significant weak, negative relationship in 7th grade reading ( $r = -.26, p < .05$ ). The higher the spending per low income student, the lower the SAT scores in 7th grade reading.

As with the black student population, the money spent per student was not seen as a

contributor for the increase in low income student achievement. Further study was then necessary to reveal if the cities with the highest percentages of low income students were above or below the State of Alabama average of \$6,459.99. If they were below, then the lack of significance could be better explained. Table 42 shows the 10 cities with the highest low income student populations, the money spent per student in those cities, and the overall achievement scores of the low income students in those cities. As shown, 6 of the 10 cities spend above the average of \$6,459.99: Linden- \$8,122, Sheffield,- \$7,543, Anniston- \$7,033, Birmingham -\$6,795, Lanett- \$6,680, and Gadsden- \$6,563. The other three were not far below the average: Midfield- \$6,362, Fairfield- \$6,318 and Selma- \$6,223.

Yet if the money being spent was above or slightly below the mean amount spent per student, the next step was to determine if in those cities, the low income student overall achievement scores were decreasing or increasing because as shown, there was no relationship between money spent per student and low student overall achievement scores. Thus a closer examination of the scores was necessary. The overall achievement mean score for all 62 cities is 40. As shown from Table 42, 9 out of 10 cities were below the mean overall achievement score of 42.

Table 42: 10 Cities with Highest Low Income Student Population, Spending per Student, and Overall Achievement Scores

City	Low Income Student Percentage	Spending per Student	Overall Achievement Scores
Lanett	91	\$6,680	35
Lindon	89	\$8,122	29.83

Anniston	85	\$7,033	30.83
Selma	84	\$6,223	37.33
Bessemer	82	\$6,346	26.83
Birmingham	74	\$6,795	31.5
Fairfield	74	\$6,318	34.33
Gadsden	73	\$6,563	38.83
Sheffield	70	\$7,543	44.5
Midfield	69	\$6,362	30.83

*Note.* The overall mean achievement score for low income students is 40

The second Pearson correlational analysis revealed no statistically significant relationship between students per computer and low income overall achievement scores (See Table 41). Nor was there significance with the 6 variable scores.

The third Pearson correlational analysis conducted was between the percentage of teachers with a Master's degree and low income student overall achievement scores. Pearson correlational analysis revealed a statistically significant strong, positive relationship ( $r = .43, p < .01$ ). The higher the percentage of teachers with a Master's degree, the higher the low income student overall achievement (See Table 41). Further analysis with the 6 variable scores of low income students in reading and math with the percentage of teachers with a Master's degree revealed statistically significant weak, positive relationships between 4 out of the 6 correlations: 3rd grade reading, ( $r = .28, p < .05$ ); 5th grade reading, ( $r = .27, p < .05$ ); 7th grade reading, ( $r = .32, p < .05$ ); 3rd grade

math, ( $r = .31, p < .05$ ). Yet there were stronger relationships between 5th and 7th grade math and the percentage of teachers who have a Master's degree, ( $r = .39, p < .01$  and  $r = .5, p < .01$ ), respectively. The higher the percentage of teachers with a Master's degree, the higher low income student SAT scores in all areas.

The fourth correlation was between the percentage of teachers with a 6-Year through Doctorate and low income student overall achievement scores. Pearson correlational analysis revealed no statistically significant relationship (See Table 41). However, even though there was no significance with the overall achievement scores, further tests with the 6 variable scores of low income students in reading and math with the percentage of teachers with a 6-Year through Doctorate revealed a statistically significant weak, positive relationship in 5th grade math ( $r = .28, p < .01$ ). The higher the percentage of teachers who hold a 6-Year through Doctorate, the higher low income student SAT scores in 5th grade math.

The final correlation was between the percentage of teachers with the Highly Qualified title and low income overall achievement scores. Pearson correlational analysis revealed a statistically significant strong, positive relationship, ( $r = .51, p < .01$ ). The higher the percentage of teachers with the Highly Qualified title, the higher low income student achievement (See Table 41). Further analysis of the 6 variable scale scores of low income students in reading and math with the percentage of teachers with the Highly Qualified title revealed statistically significant weak, positive relationships in 3rd and 5th grade math ( $r = .3, p < .05$  and  $r = .33, p < .05$ , respectively). Yet there were stronger relationships in the 4 other correlations: 3rd grade reading, ( $r = .5, p < .01$ ); 5th grade reading, ( $r = .4, p < .01$ ); 7th grade reading, ( $r = .51, p < .01$ ); and 7th grade math,

( $r = .5, p < .01$ ). The higher the percentage of teachers who meet the Highly Qualified requirements, the higher low income student SAT scores in all areas.

## DISCUSSION

### Hypothesis 1

It was hypothesized that there would be a significant difference in achievement between white and black students. Statistical tests revealed that white students scored significantly higher than black students. Both black and low income students were below the national average of 50 while white student scale scores were above the national average. These findings are consistent with those of reference that Alabama is in the bottom 3rd of the 50 states in its Stanford Achievement Test scores. It was also discovered that black student achievement is lowest in Arkansas, Alabama, Louisiana, Michigan, Mississippi, and New York (Department of Education, 2004). Four southern states are seen as having the lowest achievement levels for black students. Thus there is a trend in the south for low achievement. This could suggest that the racial problems that have plagued the south for the past 200 years are not being assuaged.

The hypothesis supports the literature that during the first two years of school, black students begin to lose ground on standardized test performance. This is also true even after controlling for socioeconomic status. Black students on average lose .10 standard deviations each year, so by 5th grade, it is possible that they could be .5 standard deviations behind white students (Fryer and Levitt, 2003).



In order to discuss ways that the schools in Alabama are attempting to combat low achievement, information should be given that reveals the State of Alabama's requirements and goals for its schools in order to alleviate low achievement that corresponds with the No Child Left Behind legislation. Each school will be held accountable for student achievement. This includes all students especially economically disadvantaged, all major racial and ethnic students, special education students, and those with limited English proficiency. Progress towards closing the achievement gap between the major racial and ethnic groups is a high priority for each school.

However, Alabama and the rest of our nation's schools are now being held to stringent guidelines in order to aid in the academic progress for all students. The following information was gathered from the Alabama Department of Education (2004). The accountability system for all schools nationwide used criteria from the federal No Child Left Behind act of 2001 to look at student assessment results in reading and math from the Alabama Reading and Mathematics Test and the Alabama High School Graduation Exam. All students are expected to be proficient or to exceed in reading and math by the end of the 2013-2014 school year. The score indicating a school is proficient is zero or above. Thus all schools must meet adequate yearly progress (AYP) and submit adequate yearly progress reports.

Data from Spring 2004 began the implementation of AYP and will continue this form of evaluation. Using the Alabama Reading and Mathematics Test and the Alabama High School Graduation Exam, Alabama set goals for schools so that by the 2013-2014 school year, they will reach 100% proficiency. A proficiency index score of zero or higher represents AYP. In order to determine AYP, three components are used. The first are

annual objectives set up for each grade. The second are additional academic indicators. 95% attendance rate is an indicator in elementary and middle schools or if the school has made improvements towards the 95% attendance goal. The indicator for high school is for a school to have a 10% or lower dropout rate or is making improvements toward the goal. The final component is participation rate. In this case a 95% participation rate on the Alabama Reading and Mathematics Test and the Alabama High School Graduation Exam is the requirement. In all three components, the students are disaggregated to further determine areas of adequacy.

In the Alabama Department of Education Report Card, 51.8% of Alabama schools are meeting 80 to 100% of the AYP goals, 19.7% are meeting 60 to 79% and 28.5% are meeting less than 60% of the AYP goals. So the majority of the schools are improving and as such the students will hopefully begin to show more improvement.

Further information from the Alabama Department of Education revealed that in reading, black students did not meet the participation AYP. The goal is 95% and black students scored 93.8%, yet this is close to the goal and as such should not be ignored. White students met AYP with 95.1%. However, for the proficiency goal of zero or higher for the AYP, black students' scores were -4.73 and white students were 36.8. In math, black students did not meet the participation goal and instead had 94.5%. Again that is very close and will hopefully rise. White students met the goal with 95.7%. For proficiency in math, black students did not meet AYP goals with scores of -3.78. White student's scored 47.7 and did meet the goal. These are still large gaps in reading and math proficiency and time alone will tell if these AYP goals will turn the tide of black student achievement or not.

There are also consequences in place for those schools that do not make AYP that began this year (2005). Those schools that do not make AYP for the first time must analyze the school and/or students' needs and the school's programs and staff, develop a plan to address the areas that progress was not made, receive approval for the plan from the local board of education, and then put the plan into action. A school that does not make AYP for two consecutive years in the same component area, will be identified for School Improvement; for three consecutive years, the school will be identified for Corrective Action; for four consecutive years, the school will be required to develop a restructuring plan; and for five consecutive years, the school will be required to put the restructuring plan into implementation. Strict adherence to progress is the goal for Alabama and to hold those who lack this progress responsible.

Schools identified for School Improvement after two consecutive years of failure to meet AYP in the same component will be subject to the following: revise the improvement plan made after the first year, identify outside experts i.e. State Department of Education representatives, in service centers, colleges, and any other deemed appropriate, and implement one of the following actions: offer professional development devoted to directly addressing the component not met, develop a program from the professional development, and begin implementing supplemental educational services.

Title I schools are those schools with a high number of low income students that receive federal funding to aid in improving low income student achievement. Title I schools identified for School Improvement must, in addition to the previously listed plan, give notification to parents of all students, define the designation of School Improvement, the reasons for the designation, the plan to address the issue, an academic comparison of

the school to others in the area, and the option to transfer to an alternate public school and the school must provide transportation to the other schools. Priority is given to the lowest achieving students from low income families for the transfer. However, a school can offer supplemental educational resources in its second year of improvement to its students such as after school programs and additional curriculum support. But the student still has a choice to transfer first. Moreover, a student cannot be denied admission to another school of choice in the school district. The plan, however, is for parents to have three or more choices to allow for schools to accommodate all transfers. Thus if the school district has no choices, the district must, to a practical extent, establish a transfer agreement with other districts in the area. A limited number of districts may not be able to offer choice if, for example, another school is 100 miles away. Thus the term “extent practical” can limit transfer if deemed impractical.

Moreover, the Title I school must spend no less than 10% of its budget to provide professional development in the component that did not meet progress. A school is removed from School Improvement after the school makes AYP in all three categories for two consecutive years. Non Title I schools may offer this but are not required to do so.

Schools identified for Corrective Action are those that have not met the same component for three consecutive years and must continue to meet the requirements from being identified as School Improvement, but are subject to more stringent sanctions. Staff responsible for the continued lack of progress will be replaced, the school day and/or the school year could be extended, and an outside expert may be appointed to be involved in the day to day management of the school.

After four years of failure to meet AYP in the same component, the school is identified as Plan for Restructuring. In addition to the actions taken during year two and three, the state may intervene at the district level and begin restructuring or replacing staff and restructure the governing structure of the school.

Finally after five years of failure to meet AYP in the same component, the consequences for year two, three, and four continue and the plan developed during restructuring must be put into action.

Rewards are also allotted to those schools that meet AYP. Those that make the greatest progress in closing the achievement gap will be recognized as Distinguished Schools and recognized as a Distinguished School on school report cards; the school name will be published in State Department newsletters and area local newspapers; the Distinguished School will serve as a model for other schools; principals and teachers who have played the most role in this honor will serve as peer consultants and financial rewards may be offered according to available resources such as: funds for a tutoring service, highly skilled teachers to work with students after school, additional personnel, travel opportunities for professional development, increased instructional supplies, technical improvements i.e. copiers, computers, etc, and bonuses to personnel.

Thus school districts and school personnel are held accountable and suffer stringent consequences if failure occurs. Yet those who meet AYP will receive various rewards for their hard work. Moreover, with highly qualified teachers in place, better and more intensive professional development for personnel, and strategies implemented that focus on improving student achievement, the students are given more of a chance to succeed.

With all of these enactments, the goal is to bridge that gap, especially between white

and black students and increase achievement for low income students.

Thus the hypothesis that there is a significant difference between white and black student achievement was accepted.

## Hypothesis 2

It was hypothesized that an increase in black student population caused an increase in low income student population. Statistical tests revealed a significant relationship between the black student population and the low income student population. Since the low income population was aggregated, statistical tests showed that there was a strong correlation between low income and black students while there was no correlation between white students and low income students. The 62 cities in the sample consist of more white and black students than any other racial groups. Thirty seven percent are black and 52% are white. This can further lend credence to the suggestion that the black students encompass more of the low income student population since there are no other major racial populations in the 62 cities. A look at all of Alabama schools for the 2003-2004 school year revealed that there were 731,820 total students. Black students made up 265,444 of the total student population, representing 36% of the total student population. White students made up 438,808 of the total student population, representing 60% of the total student population.

There are low income white students in these 62 cities, but there was a significant relationship between the black and low income students. Thus an inference was made that many of the black students are in the low income population. It was further demonstrated that the low income student population is growing in Alabama. The ten

cities with the highest black student population and highest low income student population coincided in eight out of ten cities. Birmingham was the largest city and had the highest total student population of 242,820 and was made up of 97% black students and 74% low income students. Three of the cities are midsized: Bessemer, with a total population of 29,672, had 96% black students and 82% low income students; Anniston, with a total population of 24,276, had 92% black students and 85% low income students; and Selma, with a total population of 20,512, had 94% black students and 84% low income students. While the other four are smaller cities: Fairfield, with a total population of 12,381, had 99% black students and 74% low income students; Lanett, with a total population of 7,897, had 88% black students and 91% low income students; Midfield, with a total population of 5,626, had 97% black students and 69% low income students; and Linden, with a total population of 2,424, had 99% black students and 89% low income students.

Moreover, there was a higher concentration of black and low income students around the Birmingham area in central Alabama where Bessemer, Fairfield, and Midfield are located. Anniston is slightly farther from Birmingham located 64 miles north east. Linden and Selma are near each other in west central Alabama, and Lanett is near the Georgia border in the east central part of the state away from the other cities.

When looking at the increase in low income students, the National Center for Educational Statistics, showed the number of low income students in the 2003-2004 school year for the state of Alabama was 369,289 while the average for all states was 365,598. This shows that Alabama is above average in low income students. A nationwide comparison placed Alabama number thirteen. Thus there is a higher than

average number of low income students in Alabama. The low income student population represented 51% of the student population in Alabama in 2003-2004, 50% in 2002-2003 and 49% in 2001-2002. Since it can be inferred that the much of the low income students are black, it can further be deduced that the black low income student population is rising in Alabama.

Thus the hypothesis that an increase in the black student population caused an increase in the low income student population was accepted.

### Hypothesis 3

It was hypothesized that an increase in the black student population caused black student achievement to decrease. Statistical tests with black student overall achievement scores revealed significance, but further statistical tests revealed a significant relationship between the black student population and black student achievement in 3rd grade math only. It was a strong indicator, but there was no significance in the other 5 areas of achievement. Thus the reason that a weak significant relationship was revealed with black overall achievement scores was due to the strong significance in 3<sup>rd</sup> grade math.

As the black student population increases, it can be inferred that black achievement decreases only in 3rd grade math. Moreover, this refutes the literature that states that black students score lower in schools that are majority black (NCES, 2004). However, black students' mean SAT scores ( $M = 37$ ) are still significantly lower than white student scores ( $M = 63$ ). These scores place black student SAT scores well below the national average of 50. In the 62 cities, the mean score for black students in all 6 variable scores



was lowest in 3rd grade reading and math, ( $M = 33$  and  $M = 35$ , respectively). This also refutes the literature that black students perform lower academically as they proceed through school, but in the beginning years of school, they perform better (Alvarez and Bali, 2004). Instead, black students mean scores of the 6 variable scores were highest in 7th grade reading and math, ( $M = 39$  and  $M = 38$ , respectively). Thus the fact that black students were only decreasing in 3rd grade math is important because the racial population is not shown to be a major factor in black students decreasing in their achievement scores.

Thus the hypothesis that an increase in the black population caused a decrease in black student overall achievement scores was accepted.

#### Hypothesis 4

It was hypothesized that an increase in the black student population caused a decrease in the achievement level of low income students. As suggested in hypothesis 2, the low income student population was strongly associated with black students. It was further demonstrated in hypothesis 3 that black students only decrease in achievement due to an increase in black student population in 3rd grade math. Statistical tests revealed a stronger significant relationship between low income student overall achievement scores and black student population than with the correlation between black student overall achievement scores and black student population. Moreover, all six areas of achievement of the low income students revealed significant and strong relationships while there was only one statistically significant relationship between the black student population and black student individual SAT scores.

Thus it must then be suggested that it is the low income black students who are more affected by an increase in black student population. These findings are consistent with those of Taylor (1998), who showed that as the black population increases, the education level decreases due to the combining of poverty and minority status.

However, it should be noted that the low income mean overall achievement score ( $M = 40$ ) was higher than the black student mean overall achievement score ( $M = 37$ ). In this case, the low income students were performing better than those that are not in the low income category. This is heartening to see that poverty is not the main factor for lower achievement in Alabama. Previous research by Taylor (1998), has shown that poor students perform worse academically. The mean scores in this case are below the national average of 50, but they are not lower than the rest of the black student population. However, when there was a majority black student population, low income student achievement appeared to be decreasing.

As with the black student individual SAT scores and white student individual SAT scores, the low income student individual SAT scores were low in 3rd grade reading and math, ( $M = 36.4$  and  $M = 39.8$ , respectively). Again, 3rd grade is shown to be a problem area of achievement for black, white and low income student achievement. Third grade is the first time to take the Stanford Achievement Tests, so the newness of testing could be why each student population is performing poorly, but it was not possible to determine the cause of lower scores in 3<sup>rd</sup> grade for this study.

As previously indicated, the No Child Left Behind legislation is attempting to combat low achievement, but also is holding Title I schools accountable also. If a Title I school does not meet AYP, students can choose to transfer from the school. Alabama has 655

Title I schools and 40.6% of all students in Alabama attend these schools (Alabama Department of Education, 2004). Thus more is being done to aid student achievement but especially for low income students who have consistently fallen behind. But with the mean scores available, there is cause to be hopeful that the regulations are helping and that low income students are not falling through the cracks of our schools.

Thus the hypothesis that an increase in black student population caused a decrease in low income student overall achievement scores was accepted.

#### Hypothesis 5

It was hypothesized that an increase in the black student population caused white student achievement to decrease. Statistical tests revealed a strong relationship between the white student overall achievement scores and black student population. Moreover, further statistical tests with the 6 variable scores in reading and math revealed significant relationships in 5 of the 6 variables. However, 3rd and 7th grade reading and 5th grade math were weak indicators. Thus to a lesser extent did an increase in the black student population demonstrate a decrease in white student achievement in those three areas. It was in 3rd and 7th grade math that there was a stronger indicator that the black student population appeared to cause a decrease in white student achievement. This supports the literature that held that an increase in black population causes a decrease in white student achievement (Ainsworth-Darnell and Roscigno, 1999).

It has been shown that a decrease in the achievement of black students cannot be significantly attributed to the black student population, but a decrease in low income and white student achievement can be attributed to the black student population.

Thus the hypothesis that an increase in the black student population caused white student overall achievement scores to decrease was accepted.

### Hypothesis 6

It was hypothesized that an increase in white student population caused black student achievement to increase. Statistical tests revealed a significant relationship with the black student overall achievement scores. Further, statistical tests of the 6 variable scores revealed significant relationships between the white student population and black student achievement in 7th grade reading and math. This supports the literature that black students perform better academically in schools with an increase in white population (NCES, 2004). Moreover, this is a positive result and refutes the literature of Alvarez and Bali (2001), who reported that black students' achievement decreases as they progress through school.

When black student achievement was correlated with black student population, a decrease in black student individual scores was only seen in 3rd grade math. In this hypothesis, black student achievement increased in two areas when correlated with the white student population. Thus the racial population does not significantly increase or decrease black student achievement. It was only when low income student achievement was correlated with the black student population in hypothesis 3 that all areas of study revealed significance of a decrease in low income student achievement. Since it has been suggested that there are a significant number of black students that are low income, it is they who are more affected by racial composition.

Thus this hypothesis was accepted that an increase in the white student population caused black student overall achievement scores to decrease.

#### Hypothesis 7

It was hypothesized that an increase in white student population caused an increase in low income student achievement. Analysis of low income students revealed a significant relationship between low income overall achievement scores and the white student population. Further statistical tests revealed significant relationships between the white student population and low income student achievement in all 6 areas of achievement. As was shown in hypothesis 4, low income students appeared to decrease in achievement with an increase in black student population in all 6 areas of study. In this hypothesis, an increase in white student population seems to increase achievement of low income students.

Thus it can be suggested that if a low income student attends a school with a majority of white students, the achievement levels will increase. The racial population appears to impact low income student achievement in all areas for the students in this sample. Third grade math was the only area that showed a relationship between black student scores and the black student population and only 7th grade reading and math revealed a significant relationship of a possible increase in black student achievement when correlated with the white student population. Instead low income student achievement appeared to decrease in all areas when correlated with the black student population and appeared to increase in all areas when correlated with the white student population. This supports the report, *The Condition of Education (2004)*, that found poor and minority

students perform better in schools with a majority white population. Thus it can be inferred that it is the low income black students who are more vulnerable to their racial population in determining achievement.

Thus the hypothesis that an increase in white student population increased low income student overall achievement scores was accepted.

### Hypothesis 8

It was hypothesized that an increase in the low income student population caused a decrease in black student achievement. Statistical tests revealed a strong relationship between black student overall achievement scores and the low income student population. Further statistical tests of the 6 variable scores revealed significant relationships between the low income population and black student achievement in 5 out of 6 areas of achievement.

Hypothesis 3 demonstrated that an increase in the black student population caused a decrease in black student achievement only in 3rd grade math. As shown from hypothesis 3, it was not the increase in black student population that was a strong indicator of a decrease in black student achievement, but instead it was further shown that a decrease in achievement was more significant for low income students.

Thus it has been demonstrated in this study that it was not the increase in black student population that caused black students' achievement to decrease in a strong manner, but instead it was the increase in low income student population that tended to cause a decrease in achievement for black students. It can further be inferred that the low

income black student population is more of a contributor to a decrease in black student achievement. This too supports the literature of Taylor (1998) and NCES (2004) that showed that as the black population increases, the education level of black students decreases due to the combining of poverty and minority status.

Thus the hypothesis that an increase in the low income student population caused a decrease in black student overall achievement was accepted.

### Hypothesis 9

It was hypothesized that as the low income student population increases, white student achievement decreases. Statistical tests revealed a strong relationship between the low income student population and white student overall achievement scores. Further statistical tests of the 6 variable scores revealed significant relationships in all 6 areas of achievement. Moreover, the tests revealed that all 6 were strong indicators of a relationship. As was suggested by the correlation in hypothesis 2, the black student population is significantly associated with the low income student population. Yet when white student achievement was correlated with the black student population in hypothesis 5, there were 5 out of 6 significant correlations of a decrease in white student achievement. It was suggested that an increase in the black student population caused white student achievement to decrease.

Since the correlation between white student overall achievement scores and the black student population was not a strong relationship, it can be deduced that it was not the black student population alone that could cause white student achievement to decrease. Instead, it was the low income student population that could better explain lower

achievement of white students since the correlation between white student overall achievement scores and the low income student population did indicate a stronger relationship. Thus a school with a high percentage of low income students could cause white student achievement to decrease. This supports the research that as the black population increases, the education level decreases due to the combining of poverty and minority status (Taylor, 1998; NCES, 2004).

Thus the hypothesis that the low income student population caused a decrease in white student overall achievement was accepted.

#### Hypothesis 10

It was hypothesized that as the black female single parent population increased, black student achievement decreased. As has been shown, the black female single parent population made up 22% of the black female population age 15 to 59. It is not known if the women are single because of divorce, widowhood, or if they have never been married. But a large percentage of the black female population is single, and as such are raising children alone.

A further study of the national trend of black female single parents revealed that Alabama was not significantly higher than the rest of the nation. Percentages of black female single parents ranged from a low of 9% in Hawaii to a high of 30% in Wisconsin. There were 14 states above Alabama, but Alabama was also equal to six other states. Thus Alabama is in the higher bracket when compared to the nation as a whole. All of



this data from the 2000 Census supports the findings from The National Center for Educational Statistics, (2004) that showed that black families have more single mothers.

Furthermore, the black female single parent population below the poverty level represented 57% of the black female single parent population. Sixty two cities were studied for this percentage, but upon study of all of Alabama, the percentage of black female single parent families below poverty rose to 64%. Upon further study of the nation, Alabama was the 5th highest state for black female single parent population below poverty level. The national range was from a low of 21% in Alaska and Hawaii to a high of 73% in Louisiana. Alabama was ranked high among other states with the black female single parent population of 22%, but this proved that Alabama has over half of its black female single parents below poverty and has one of the highest percentages in all of the United States. This too supported the literature that the majority of black female single parents are below poverty level and have an affect on student achievement (NCES, 2004).

However, statistical tests revealed no significant relationship between black student overall achievement scores and the black female single parent population. Further statistical tests of the 6 variable scores revealed a significant relationship in 7th grade math only.

Hypothesis 3 suggested that an increase in the black student population caused a decrease in black student achievement in 3rd grade math only and was not significantly decreasing achievement in any other areas. In this hypothesis, black students were decreasing in 7<sup>th</sup> grade math. Thus due to an increase in black female single parents, black students tended to progressively decrease in achievement as they moved up in

grade level. Having one parent has an effect on student achievement. In this case the effect occurred as black students progressed in school. So it can further be deduced that, for this sample, it is not until a black student moves up in grade level that the affect of living in a single parent household causes problems with achievement. Orland (2000) found that the longer a family is in poverty, the more they will be “low achievers.” Students who live in poverty have less access to outside activities that could further enhance their achievement and begin to bridge the black and white test score gap (Jenks and Phillips, 1998). This further supports the literature that the achievement level of black students actually decreases as they progress through school (Tyson, 2003; Drury, 1980).

Thus the hypothesis that an increase in the black female single parent population caused a decrease in black student overall achievement was rejected.

#### Hypothesis 11

It was hypothesized that an increase in the black female single parent population causes a decrease in low income student achievement. Statistical tests of low income student overall achievement scores did reveal a significant relationship of a decrease in low income student achievement. Further statistical tests of the 6 variable scores revealed significant relationships between the black female single parent population and low income student achievement in 3rd and 7th grade reading and 7th grade math. Thus low income black students seem to be more affected by single parent status. Since it has been suggested that the black students make up much of the low income student population, further tests of the low income students’ overall achievement and white female single

parent population revealed no significant relationship. This further suggests that the black students make up much of the low income students.

In hypothesis 10, black student achievement was only affected by black female single parents in 7th grade math, yet in this hypothesis, tests revealed a decrease in 7th grade reading and in 3<sup>rd</sup> and 7<sup>th</sup> grade math. Since over half of the black female single parent population is below poverty level, it can be inferred that the black female single parent population is affecting low income black students more.

Since it was demonstrated that 57% of the black female single parent population was below poverty level, it should be no surprise to see that the low income students are decreasing in achievement due significantly to poverty and single parenthood. Again, 7th grade was a weak area for black students and low income students. It was in the higher grade of 7<sup>th</sup> grade that family composition tended to have more of an effect on black student academic success. This supports the literature that the majority of black female single parents are below poverty level (NCES, 2004) and that the rise in single parent homes can attribute to the achievement gap as a result of less income. This could also support the literature that the achievement level of black students actually decreases as they progress through school (Tyson, 2003; Drury, 1980).

Thus the hypothesis that an increase in black female single parents caused a decrease in low income student achievement was accepted.

#### Hypothesis 12

It was hypothesized that there was a significant relationship between low education of the population and single parent households. The total of all black males and females

above age 25 with an education from 9<sup>th</sup> grade to graduate school in the 62 cities was 279,853 and those that had below twelfth grade education numbered 84,194, representing 30% of the total population of all black males and female above 25 with an education ranging from 9<sup>th</sup> grade through graduate school. Upon study of the State of Alabama, the percentage of the black population below twelfth grade education rose to 33%. A further study of the nation, revealed Alabama ranked the 4th highest in black population with below twelfth grade education. The lowest was 7% in Hawaii and the highest was 40% in Mississippi.

Further demographic analysis of the education levels of the white population revealed the white population age 25 and above with below twelfth grade education in the 62 cities under study represented 10% of the total white population age 25 and above with education levels from 9<sup>th</sup> grade to graduate level. Upon study of Alabama, the percentage rose to 22%. Furthermore, upon a comparison of all of the states, Alabama was ranked the 5th highest state in white population age 25 and above with below twelfth grade education. The lowest, 6%, was in Washington, D.C. and the highest was 26% in Kentucky. Thus 22% of the white population and 30% of the black population of Alabama were high percentages of the population with low education compared to the nation and as such were significant in demonstrating that Alabama was high in the area of low education for its white and black populations.

Statistical tests revealed a significant and strong relationship between the black population over age 25 with less than 12<sup>th</sup> grade education and black female single parent households and between the white population over age 25 with less than 12<sup>th</sup> grade education and white female single parent households. The census did not break up the

number of actual female single parents who had less than a 12<sup>th</sup> grade education.

Moreover, while both correlations showed a strong relationship, there was a stronger indicator that the black female single parent population had less education than white female single parents.

Since it was demonstrated that the black female single parent population had a majority of low income mothers, this further supports the literature that those who do not have high school degrees, are more likely to be single parents and poor (NCES, 2004). Poverty and lack of education are the main contributors to the decrease in student achievement (Orland, 1999). As such, the high percentage can only hinder students in Alabama more. As was suggested in hypothesis 10, the black female single parent population caused a decrease in 7<sup>th</sup> grade math and a decrease in 3<sup>rd</sup> grade math and 7<sup>th</sup> grade math and reading for low income students. This can further suggest that black female single parents and the black population with low education levels go hand in hand. Again, the problem was seen that the black students who were being raised by single mothers who have below a twelfth grade education were losing ground academically.

According to the literature, students with parents having less than high school education score lower in math and reading and the education level of black heads of household is lower than white family education levels (NCES, 2004). Moreover children of more educated parents perform better academically in reading and math (Brooks-Gunn et al., 1998). This also supports the literature that black students score progressively lower as they move up in grade level (Alvarez and Bali, 2004).

Again 7th grade is an issue for black and low income students. If they are performing less well academically in 7th grade, it can only get worse as they keep moving up. This can affect the drop out rate in high school. If students are not getting the help they need due to a less educated parent who might be single and below poverty level, it looks doubtful that this will change. However, the low income students are being targeted for attention with the No Child Left Behind legislation. Thus the scores could begin to rise.

The hypothesis that there was a significant relationship between low education of the population and single parent households was accepted.

### Hypothesis 13

It was hypothesized that an increase in the white female single parent population caused a decrease in white student achievement. The percentage of the white female single parent population for the 62 cities under study was 6.2% of the total white female population age 15 to 59. When further study was done for the entire state, the number rose to 7% of the white female population age 15 to 59. Upon even further study of the nation, Alabama was similar to the rest of the nation which had the average percentage of 7%. Thus the number of white female single parents was not alarming when compared to all of Alabama and the nation as a whole. Each city and state was similar to each other.

Further demographic study revealed that the white female single parent population below poverty level represented 35% of the total white female single parent population. Upon study of all cities in Alabama, the percentage rose to 36%. Also, this was a high percentage when looking at a state by state comparison. Alabama was the 8th highest state with white female single parents who were below poverty level. Alabama was on par with the rest of the nation when just the female single parent population was

computed, but this showed that there was a problem in Alabama with its growing white female single parent population who were below poverty level.

Hypothesis 10 revealed that the black female single parent population represented 22% of the total black female population age 15 to 59. This was over three times as large as the white female single parent population. This can further support the literature that parental composition can have a negative effect on student achievement (Orland, 1999).

Furthermore, the black female single parent population below poverty level represented 57% of the total black female single parent population. Moreover, the black female single parent population below poverty level represented 64% of the black female single parent population for the entire state of Alabama and was the fifth highest state of the black female single parent population below poverty level in the nation. Female single parents below poverty level can further hinder student achievement as was seen in hypothesis 10 (Orland, 1999). However, it was the black female single parent population that was made up of a majority of low income single parents. This is alarming that over half of the black female single parents in Alabama are below poverty level and is a further variable that must be addressed with the decrease in low income student achievement.

Statistical tests revealed a significant relationship between the white female single parent population and white student overall achievement scores. Moreover, there were significant relationships among the 6 variable scores in 5<sup>th</sup> and 7<sup>th</sup> grade reading and 5<sup>th</sup> grade math. However, the significance was positive thus refuting the hypothesis and instead, suggested that an increase in the white female single parent population was positively affecting white student achievement in those areas. This is important to note

that in this case, having a single parent was not harming white students academically. This refutes the literature that female single parents cause a decrease in achievement (NCES, 2004).

Thus the hypothesis that an increase in the white female single parent population caused a decrease in white student overall achievement was rejected.

#### Hypothesis 14

It was hypothesized that as the improvements in the schools increased, white student achievement increased. The first area of improvement that was correlated was spending per student. Statistical tests with white student overall achievement scores revealed a strong relationship. Further statistical tests with the 6 variable scores of white students' SAT scores revealed significant relationships in all 6 correlations between spending per student and white student achievement. This shows the amount that the 62 city school systems spent per student could aid in increasing the achievement levels for white students in all areas. Again, spending per student is a direct factor in improving achievement and in this case, it tends to aid white student achievement in all areas of study.

According to the National Education Association, 2005, the average for the entire State of Alabama is \$7,163, ranking Alabama 37<sup>th</sup> out of all states. Alabama increased its spending 3.9% from 2003. The average of the United States and Washington D.C. was \$8,208 thus placing Alabama below average. The highest amount spent was \$13,317 in Washington D.C and the lowest was \$5,091 in Utah. Thus in this hypothesis, the fact that



Alabama was ranked low in spending per student nationally did not appear to affect white student achievement.

Thus the hypothesis that spending per student increased white student overall achievement increased was accepted.

The next area of improvement was students per computer. Statistical tests revealed no significant relationship between students per computer and white student achievement. More computers could help with achievement, but again, this may be attributed to funding issues.

Thus the hypothesis that an increase in students per computer increased white student overall achievement was rejected.

The third area of improvement was with the percentage of teachers with a Master's degree. Statistical tests with white student overall achievement scores revealed a significant relationship. Further statistical tests with the 6 variable scores revealed significant relationships between the percentage of teachers with Masters and white student achievement in 5 out of 6 areas. Only 7th grade math indicated a strong relationship while 5th and 7<sup>th</sup> grade reading and 3rd and 5th grade math were weaker indicators. However, improvements in teachers' education demonstrated an affect with white student achievement. This supports the literature that more experienced and educated teachers are found in schools with predominately white students (Clotfelder et al., 2003).

Thus the hypothesis that an increase in the percentage of teachers with a Master's degree caused white student overall achievement to increase was accepted.

The fourth area of improvement was with the percentage of teachers with a 6-Year through Doctorate. Statistical tests with white student overall achievement scores revealed a weak but significant relationship. Further statistical tests with the 6 variable scores revealed significant relationships between the percentage of teachers with a 6-Year through Doctorate degree and white student achievement in 5th and 7th grade math. These were not strong indicators, but there was significance. The low number could be attributed to the low number of teachers with a 6-Year through doctorate degree. Yet the significance could also support the literature that more experienced and educated teachers are found in schools with predominately white students (Clotfelder et al., 2003). Moreover Alabama may not be attracting the higher educated teachers due to ranking 49<sup>th</sup> in average public school teacher salaries.

Thus the hypothesis that an increase in teachers with a 6-Year through Doctorate degree caused white student overall achievement to increase was accepted.

The final area of improvement was with the percentage of teachers with the Highly Qualified title. Statistical tests with the white student overall achievement scores revealed a strong relationship. Further statistical tests with the 6 variable scores revealed significant relationships between the percentage of teachers with the Highly Qualified title and white student achievement in all 6 areas. Each correlation was weak, but there was significance none the less that possibly the No Child Left Behind legislation was aiding in white student achievement in all areas. Moreover, the percentage of Highly Qualified Teachers has risen in Alabama from the 2002-2004 school year to the 2003-2004 school year. In elementary classes, the percentage rose from 36.8% to 79.9% and in secondary classes, the percentage rose from 32.7% to 70.7% (Alabama Department of

Education, 2004). The significance in all areas could also support that literature that more experienced and educated teachers are found in schools with predominately white students (Clotfelder et al., 2003).

Thus the hypothesis that an increase in the percentage of Highly Qualified teachers caused an increase in white student achievement was accepted.

#### Hypothesis 15

It was hypothesized that an increase in the improvements in schools caused black student achievement to increase. The first improvement studied was spending per student. Statistical tests revealed no significant relationship between black student overall achievement scores and spending per student. However, further tests of the 6 variable scores revealed significant relationships between spending per student and black student achievement in 3rd and 5th grade math. The amount a city allots per student is a necessary component in students' academic success. In this case, it appeared to only aiding black students in 3rd and 5th grade math. While that was good that the spending per student was helping those areas to increase in achievement scores, there were 4 other areas that needed the increase also. In this case, the fact that Alabama was ranked 37<sup>th</sup> in spending per student can possibly explain why there were only two areas of significance.

As shown in hypothesis 14, according to the National Education Association, 2005, the average for the entire State of Alabama was \$7,163, ranking Alabama 37<sup>th</sup> out of all states. Alabama increased its spending 3.9% from 2003. The average of the United States and Washington D.C. was \$8,208 thus placing Alabama below average. The highest amount spent was \$13,317 in Washington D.C and the lowest was \$5,091 in Utah.

However, Jencks and Phillips (1998) discovered that besides a few influential rich areas, the average school district spends the same per pupil. This too was seen in the 62 cities. In fact, the 10 cities with the highest percentage of black students showed that six of the cities were above the average of \$6,459.99 of the 62 cities: Linden spent \$8,122, Anniston spent \$7,033, Tuscaloosa spent \$6,975, Opelika spent \$6,870, Birmingham spent \$6,795, and Lanett spent \$6,680. Midfield, Bessemer, and Selma were slightly lower with \$6,362, \$6,346, and \$6,223, respectively, while Fairfield was the lowest of the 10 cities with \$5,922. Moreover, in those 10 cities, 8 of them had overall achievement scores that were below the average. So not only are six of the cities spending above the average, but the students overall achievement scores are not on par with the rest of the 62 city school systems. Thus it could not be proven that increasing the amount of money spent per student would solve the decrease in black student achievement except in 3rd and 5th grade math.

Thus the hypothesis that an increase in spending per student caused black student overall achievement to increase was rejected.

The second area of improvement was students per computer which showed no significant relationship. Thus the hypothesis that an increase in computers per students caused an increase in black student overall achievement was rejected.

The next area of improvement was the percentage of teachers with a Master's degree. Statistical tests with black student overall achievement scores revealed a significant relationship. Further statistical tests with the 6 variable scores revealed significant relationships between the percentage of teachers with Master's and black student achievement in 7th grade reading and math. Thus having two areas of significance only

partially suggested that an increase in teachers' education caused black student achievement to increase. However, when teachers pursue a higher education, achievement was enhanced in these areas.

Research showed that black students declined academically as they progress when correlated with female single parents. Yet in this case, a more educated teacher would help with that problem in 7th grade. The low number of significant relationships could be supported by Jenks and Phillips (1998), who found that black and white teachers in predominantly black schools have less education and experience than the teachers in predominately white schools. Students need teachers who are qualified in their teaching field. Thus the answer could be that the low level of significance could be due to a lesser number of teachers with Masters in schools that have a large number of black students. Another factor to consider was that Alabama teacher salaries were ranked 49<sup>th</sup> with \$35,168 in 2003-2004. In 2002-2003, Alabama was 47<sup>th</sup>. The average salary for the United States and D.C. was \$46,726. The highest was \$58,287 in California and the lowest was \$33,236 in South Dakota. Factors for salaries are population, standard of living, etc. Yet even when Alabama was compared to its neighboring states there was a difference. Georgia spent the highest of \$45,938, Florida spent \$40,604, Tennessee spent \$40,318, and Mississippi spent \$35,694. So it could be that Alabama is not attracting experienced teachers due to the low average salary and teachers are instead choosing to teach in other states.

Moreover the results could support the research of Clotfelder et al.(2003) who found that most black students are in remedial courses and a low number was found in advanced courses. Furthermore, they found that there were more inexperienced teachers

in remedial courses and less in advanced courses. In standard math course, black students are 57%

more likely to have an inexperienced teacher than white students and they are 37% more likely to have an inexperienced teacher in English.

Thus the hypothesis that an increase in the percentage of teachers with a Master's degree caused black student overall achievement to increase was accepted.

The fourth area of improvement was with the percentage of teachers with a 6-Year through Doctorate degree. Statistical tests revealed no significant relationship between the percentage of teachers with a 6-Year through Doctorate degree and black student overall achievement nor with the 6 variable scores. This lack of significance could be due to the low number of teachers with a 6-Year through doctorate. The mean number was 5.51 in the 62 cities. But it could also be supported by the literature that more inexperienced and less educated teachers teach black students (Clotfelder et al., 2003).

The percentage of teachers with a 6-Year through doctorate degree were not helping black student achievement. Thus teachers who have reached the highest level of their education do not show a significant contribution to student achievement.

Thus the hypothesis that an increase in the percentage of teachers with a 6-Year through Doctorate caused an increase in black student overall achievement was rejected.

The final area of improvement was with the percentage of teachers with the Highly Qualified title. Statistical tests with the black student overall achievement scores revealed a significant relationship. Further statistical tests of the 6 variable scores revealed significant relationships between the percentage of teachers with the Highly Qualified title and black student achievement in 3 areas: 3rd and 7th grade reading and 7th grade

math. Thus half of the areas under study resulted in teachers with the Highly Qualified Teacher title tending to increase the achievement levels for black students. Again, it was significant that an increase in achievement was shown in 7th grade. This can combat the research that shows that black students decrease in achievement as they progress in school (Jenks, 1998). Moreover, it can help reduce the fact that black female single parents are contributing to a decrease in black student achievement in 7th grade as shown in hypothesis 10.

However, only 3 areas showed an increase. Again, this could support that literature that more inexperienced and less educated teachers teach black students (Clotfelder et al., 2003). On the other hand, the three areas of increased achievement could be attributed to the No Child Left Behind legislation.

Moreover, the percentage of Highly Qualified Teachers has risen in Alabama from the 2002-2004 school year to the 2003-2004 school year. In elementary classes, the percentage rose from 36.8% to 79.9% and in secondary classes, the percentage rose from 32.7% to 70.7% (Alabama Department of Education, 2004).

Thus the hypothesis that teachers with the title of Highly Qualified Teacher increased black student overall achievement was accepted.

#### Hypothesis 16

It was hypothesized that an increase in the five areas of improvement caused an increase in low income student achievement. Statistical tests between low income overall achievement scores and spending per student showed no significance. However, further statistical tests of the 6 variable scores revealed a significant relationship between

spending per student and low income student achievement in 7th grade reading only. Yet this correlation revealed a negative relationship. In this case, spending per student was actually contributing to a decrease in low income students' achievement scores. Thus in those cities with a high percentage of low income students, the spending per student was not doing an adequate job in helping achievement. As shown prior, the average amount spent per student was \$6,459.99, yet 6 of the 10 schools with the highest low income student population had above the average. Moreover, all ten cities had low income students who were scoring below the average of 40 for the 62 city school systems

Thus if there was more than the average amount of money being spent in those cities, how was the education of the low income students decreasing when compared to the mean score of all 62 cities?

All told, the cities with the highest black and low income students were not raising the scores of their students. Instead in all eight cities that corresponded with each other in having the highest black and low income student populations, each were below the average. Yet more money was being spent on the students in those cities that were above the mean amount spent per student.

These cities could account for the negative significant relationship between low income student achievement in 7<sup>th</sup> grade reading and spending per student. In the correlations with black students, the spending per student appeared to increase their achievement, but it was instead a contributor to the decrease in low income student achievement in 7<sup>th</sup> grade reading. Furthermore, since it was suggested that the many of the low income students were black, then it could be the black low income students who were decreasing more.



Thus if the spending per student was not helping low income student achievement, there must be another problem. This dilemma was suggested by Jencks and Phillips, (1998) who discovered that besides a few influential rich areas, the average school district spends the same per pupil. However, in schools with predominately black populations, the enrollment is higher for those with academic and behavioral problems. So while the teacher per pupil ratio is on par with other schools, the teacher is forced to devote more time and energy to the disruptive child and more resources are spent on those children such as reading specialists. The result is less money for regular teachers. So even though the average amount of money spent per child is similar, the average black child receives less attention, possibly is placed in larger classes, and the skill level of the teacher may be less than in white schools (Jencks and Phillips, 1998).

Lower spending per student could be an argument that was attributed to the lower achievement levels for the low income students. Funding is a major issue for education among all Alabamians. Through the years, Alabama has had critical problems when it comes to the funding of its schools. Education in Alabama is largely funded by sales taxes which are put into the Educational Trust Fund. K-12 schools depend on these funds for appropriations. So a reduction in the revenue generated from sales and income taxes are lower when the economy is down. In most states, a large portion of the funds for public education comes from property taxes but not in Alabama. The money Alabama receives from property taxes for education is about 1/3 the national average. Alabama's property tax per capita, as well as property tax as a percent of income, ranks last out of all 50 states. The national average was \$744 and Alabama was \$216 while the national

average of the property tax as a percent of income was 3.6% and Alabama was 1.2% (AEA, 2004).

Property taxes vary in each school district causing some cities to generate more funding and some less, yet it is property taxes that can provide the most stable source of funding for education. It is in the cities with lower property values that are affected more. Also, those cities tend to have more low income students. Raising property taxes would give all cities a fairer share of income. This however is a very unpopular suggestion for many Alabamians as seen by the overwhelming lack of support for Governor Riley's proposed plan to increase educational dollars through the increase of property taxes.

Cigarette, gasoline and alcohol taxes are other sources to be investigated as funding sources for education. The national average for cigarette taxes is .66 cents per pack and Alabama only charges 16.5 cents currently (AEA, 2004).

The lottery has been another suggestion that could help with funding. Lotteries are not new inventions as they have been utilized for various reasons historically. Three of the states that border Alabama: Georgia, Florida, and Tennessee each are reaping the benefits of increased education funding as a result of the lottery. Of course there are the myths that the lottery takes advantage of lower income people or that the lottery is a tax. But if a lottery is used correctly, then students are the one to benefit.

Re-writing Alabama's constitution to include a more stable tax base could be a start in promoting educational funding. Our constitution has 743 amendments while the national average is 116 and it is the longest constitution in the nation. The Alabama constitution also is unfair to its low income citizens. In its current state, the low income citizens with an income less than \$13,000 pay 7.3% in sales and excise taxes, while those making

\$229,000 or more pay 1.1%. Moreover, the total taxes paid by the lower income citizens (Sales and excise, property, and income taxes) are 10.6% while the wealthier pay 4.9%. To further show the unfairness, when an Alabama family earns just \$4,600, they pay income taxes. This is the lowest amount of all states (Alabama Citizens for Constitutional Reform, 2006).

Changing the constitution therefore could help alleviate funding for education by concentrating on changing the tax structure to make Alabama more consistent with the rest of the nation. Thus re-writing the state's constitution and moving more toward funding the state's educational systems with property taxes rather than sales taxes is the only way we'll be able to fairly and better fund education in the future. With support from a lottery and a change in the overall tax structure, Alabama's schools could flourish and further combat the achievement gap.

Thus the hypothesis that an increase in spending per student caused low income student overall achievement to increase was rejected.

The second correlation revealed no significant relationship between students per computer and low income student achievement. More computers could help with achievement, but again, this may be attributed to funding issues.

Thus the hypothesis that an increase in computers per student caused low income student overall achievement to increase was rejected.

Statistical tests of low income overall achievement scores and the percentage of teachers with a Master's degree revealed a significant relationship. Further statistical tests with the 6 variable scores revealed significant relationships between the percentage of teachers with a Master's degree and low income student achievement in all 6

correlations. This was significant not only due to the increase in all 6 areas, but also, significance was only seen in 7th grade reading and math for black students when correlated with the percentage of teachers with a Master's degree, yet for low income students, there was significance in all. So the low income student was increasing in all areas more than black students. Also, if it is true that much of the low income student population is black, then low income black students are affected more by teachers with Master's degree. Yet this could counter the literature that black students are taught by more inexperienced and less educated teachers than white students (Clotfelder et al., 2003). But these areas of improvement could be a result of the more stringent standards placed on Title I schools due to the No Child Left Behind legislation. Title I schools could lose funding and students could have the choice to transfer from their schools if they do not meet the AYP standards.

Thus the hypothesis that an increase in the percentage of teachers with a Master's degree caused an increase in low income student overall achievement was accepted.

Statistical tests with low income student overall achievement scores and the percentage of teachers with a 6-Year through Doctorate revealed no significant relationship. However, further statistical tests with the 6 variable scores revealed a significant relationship between the percentage of teachers with a 6-Year through Doctorate and low income student achievement in 5th grade math only. This low number of significance could be attributed to the low number of teachers in Alabama with a 6-Year through Doctorate. There was only a mean number of 5.51 in all 62 cities. It could also support the literature that there are less educated teachers in schools that are predominately black (Clotfelder et al., 2003). Moreover Alabama may not be attracting

the higher educated teachers due to ranking 49<sup>th</sup> in average public school teacher salaries. This would answer the problem of low significance in this hypothesis since it was already been suggested that most of the low income student population was black.

Thus the hypothesis that an increase in the percentage of teachers with a 6-Year through doctorate caused an increase in low income student overall achievement was rejected.

Statistical tests with low income student overall achievement scores and the percentage of teachers with the Highly Qualified title revealed a strong relationship. Further statistical tests with the 6 variable scores revealed significant relationships between the percentage of teachers with the Highly Qualified title and low income student achievement in all 6 areas. Again this was also significant because black student achievement only showed significance in three areas when correlated with teachers who were Highly Qualified. Again this could be attributed to the more stringent standards placed on Title I schools due to the No Child Left Behind legislation. Title I schools could lose funding and students could have the choice to transfer from their schools if they do not meet the AYP standards. Moreover, it could also show that the increase in the percentage of teacher with the Highly Qualified title from the 2002-2004 to the 2003-2004 school year was helping increase low income student achievement.

Thus the hypothesis that an increase in the percentage of Highly Qualified teachers caused low income student overall achievement to increase was accepted.

These findings for black and low income students' achievement were important support for the No Child Left Behind legislation that teachers must meet the requirements for the title that in turn will help all students to increase their achievement, but especially

low income students. Moreover, since it has been inferred that the low income population was made up of a majority of black students, it can further be assumed that Highly Qualified Teachers will help with the achievement of low income black students.

### Further Study

Close observation in and out of the classroom could better determine some of the causes of the lower scores of black and low income students. A study of the SAT scores for white, black, and low income students for the 2002-2003 school year could determine if the achievement scores are lessening or increasing.

Further study would also better determine the factors that contribute to the lower scores. A study of the same set of students and their performance on the SAT beginning with 3rd grade and continuing through eighth could better determine if the scores increase as students progress through school. Further study could also be done by an on-site visit to the schools to discover what the schools are doing about the low scores.

Moreover, an on-site visit of the schools and a survey for the students could determine if elementary age black children are engaged, excited, and motivated for academic success (Tyson, 2003; Drury, 1980). Furthermore, a survey could discover black students' approach to school and if black youth seem to lose identification with school. Furthermore an on-site visit with a survey could better determine if students are more challenged by living in a single parent home as they get older instead of in the beginnings of their school years.

Further study of the growing trend of low income students in Alabama would be useful. The economy of Alabama and the employment rate for each city would be important to explain the trend of poverty also. There would need to be a more in-depth look at each of the eight cities with the highest black and low income population to figure out where the money is going and for what purpose. The spending for education is on par with the other sixty two cities in Alabama, and in 4 cases, it is above the average.

As noted, a majority of the black female single parents are below poverty level and low education levels of the black population is high. This means that low income black students might not be getting the help they need at home for school work. Thus a before and after school program and a pre-kindergarten program for each elementary school would greatly enhance their education. Thus a study of each of the school systems could determine if there are such programs or anything else that is geared to helping poor students become better students. Thus, an on-site visit to the boards of education of the cities and a visit to the schools themselves could better answer the questions of spending per student.

A closer examination of teachers' education and experience in all of the cities could better determine the issue that more experienced teachers are in schools that are predominately white and that black students are often taught by less experienced teachers. This could especially be important for those cities that have large black and low income student populations.

Further study of the success or failure of the No Child Left Behind legislation would better determine student academic performance. It is still new legislation, so a study of each year would better determine if the schools were making progress in reading and

math. Also Adequate Yearly Progress reports are still new and thus to better determine if they help with students' academic success or not they would need to be studied year after year for comparison.

### Limitations

For the purpose of this thesis, direct observation was not possible. The sample size in this study was 62 city school systems. A larger sample of more school systems would provide more data and allow for further analysis. Separating the low income student population by race was also not possible and it would have been useful to prove conclusively the racial make up of the low income student population. The U.S. Census did not separate the education levels of the black and white populations beyond sex. In order to better analyze the female single parent population, it would have been advantageous to identify how many female single parents have low education levels.



## CONCLUSION

By gathering data from the United States Census, the National Center for Educational Statistics, and the Alabama Department of Education website, a close look at the achievement levels of black and low income students and possible causes of increases and decreases in their SAT scores were assessed. The purpose of this study was multifaceted. One goal was to gather as much information as possible to determine why there was such a discrepancy between scores and to determine if in fact it may be lessening. Some of the theories discussed were black population increases, the rise in female headed households, education levels of parents, negative stereotypes that whites have towards blacks as minority populations increase, the causes of the underachievement of black youth, the inaccessibility to outside educational resources that low income children lack, and the poor quality of schools and its faculty that could cause a decrease in achievement. Alabama has consistently fallen behind the rest of the south and nation in its education. It was important to see specifically how its black, white, and low income students were performing academically. The white students are performing above the average, but it is Alabama's black and low income students who need more help in their schools.

This study determined that there were significant differences in overall achievement scores between white and black students with black students performing significantly less well. However, it was also concluded that it was not the black student population that was a major contributor to lower achievement for all students. Instead, it appears to be an

increase in low income students that is significantly associated with the decrease. It was suggested that the black student population made up most of the low income student population and as such, it was further suggested that it is the black low income students who are performing less and causing a decrease in white and black student achievement. It was also demonstrated that there was an increase in black female single parents below poverty level and an increase in the black population with less than twelfth grade education. Thus if the number of black female single parents were increasing, then that indicated there was a growing number of poor children in Alabama's schools. Alabama ranked 13 out of our 50 states in numbers of students who were free/reduced lunch eligible. This is a frightening number. The poor student may be in serious trouble academically if something is not done soon.

The No Child Left Behind legislation hopefully will better aid in black and low income student academic success. Furthermore it has been shown that teachers with Masters and Highly Qualified Teacher titles are helping with low income students' achievement scores. The projected date for all schools to meet the standards is 2013-2014. This legislation is still in its infancy, but raising student performance in math and reading is the mandate issued to all. Moreover, with this legislation school districts can have more flexibility in their use of educational funds. Most can transfer up to 50% of non-title I funds to various programs such as Improving Teacher Quality and Educational Technology without the need for separate approval. Moreover with the funds, they can hire more teachers, provide more professional development or increase teacher pay. This will cut down on the red tape that seems to bog down most districts. Of course the question is, Will all of this truly work to enhance our children's learning? From this

study, there is much to be done to increase Alabama black and low income students' achievement. A longitudinal study of these students as they progress through the school system would better prove or disprove the legislation.

Holding schools and teachers more accountable will aid in furthering student academic success. But more needs to be done than focusing on test scores. There should be more male minority teachers in the elementary schools. As was revealed, Alabama has a high number of female single parents. If there is no father in the students' lives, then a male teacher could aid in building the self esteem of low income and minority students. This could help also with any perceived stereotype threat of black students being less intelligent. Having a role model could only help with that stereotype. Moreover, from this study it was hypothesized that one possible reason that the percentage of teachers with Masters, 6-Year through Doctorate, and Highly Qualified titles were not showing significant relationships in all areas of study with black and low income students was because better qualified teachers were not as visible in high minority schools. Thus more extensive mentoring for new teachers would help improve their abilities and also financial incentives to recruit teachers in low income or hard to staff schools would further help. Professional development aimed at student achievement would further strengthen teacher skills. Bringing Alabama salaries up would insure that Alabama was getting the qualified teachers it desperately needs. Alabama has wonderful colleges, yet they are training the nation's future teachers who are in turn seeking work where the pay is more beneficial.

Alabama is at a critical juncture in its educational development. There are wonderful school systems in Alabama that can offer a quality education to its citizens, but there are

also those schools whose cities are plagued with poverty, less resources, and possibly less experienced teachers. Families are not going to choose to live in cities with a deplorable public education system. They will either choose a private school, to home-school or to move to another city with a quality public school system. A quality public school education in every city school system in Alabama is the right of all, but as has been demonstrated, many Alabama cities are falling behind in that right. As an Alabamian, I went to public school and my children go to public school. I want that to continue. Alabama must dust off the cobwebs and surge forward. Otherwise we will not encourage new growth and instead people may, again, turn to private schools or home-schooling options.

The achievement gap is clear, but the question is what should be done? Two big improvements would be to lessen class size and screen teachers better. In terms of the screening of teachers, this is occurring now with the Highly Qualified title given to those who meet certain criteria. Also stress should be imposed on teachers to increase their expectations of the poor learner (Jencks and Phillips, 1998). Moreover, the No Child Left Behind policy will soon be shown to be a success or a failure as schools are held to higher standards.

However, race is a large factor in many areas, especially in the South. The Civil Rights movement was over fifty years ago according to civil rights laws but the echo of it still can be heard. Overcoming racism will take a long time. The feelings passed down from one generation to the next are not something that can be wiped clean in a month or even year. The generational feelings of mistrust that many blacks feel toward whites and in turn to government entities must be addressed. This is not a new problem for

Alabama, the South, or even in the United States. Many programs have been established to help educate the poor, such as Head Start, pre-kindergarten and after school programs. Many blacks utilize them. If the achievement gap could be reduced more, it would mean more changes economically, educationally, and socially for all students and for Alabama.

The history of past abuses and negative stereotypes is deeply ingrained in both black and white people. It is possible to change, but it will take time. Alabama is addressing the problem in its schools with qualified teachers, improved computer access, and the building of new schools. Time alone will tell if changes can be made in the achievement of poor black students. It will not happen overnight, but with improved schools, dedicated teachers, and family support, it can be achieved.

## REFERENCES

- Alabama Citizens for Constitutional Reform. (2006). Why we need reform. Retrieved February 2, 2006, from <http://www.constitutionalreform.org>.
- Alvarez, M. and Valentina, B. (2004). The race gap in student achievement scores. *Policy Studies Journal*, 32, 393-415.
- Aronson, J. and Steele, C. (1998). Stereotype threat and the test performance of academically successful African Americans. In C. Jencks and M. Phillips (Eds.), *The black-white test score gap* (pp. 401-429). Washington, D.C.: Brookings Institution Press.
- Brooks-Gunn, J., Duncan, G., Klebanov, P., and Phillips, M. (1998). Family background, parenting practices, and the black white test score gap. In C. Jencks and M. Phillips (Eds.), *The black-white test score gap* (pp. 103-145). Washington, D.C.: Brookings Institution Press.
- Carmines, E., Levine, J., and Sniderman, P. (1999). The empirical dimensionality of racial stereotypes. *Public Opinion Quarterly*, 63, 371-384.
- Carter, W., and Feld, S. (1998). When desegregation reduces interracial contact: A class size paradox for weak ties. *The Academic Journal of Sociology*, 103, 1165- 1186.

- Clotfelter, C., Ladd, H., and Vigdor, J. (2003). Who teaches whom? Race and the distribution of novice teachers. Stanford Institute of Public Policy. Durham, NC: Duke University, Stanford Institute of Public Policy.
- Cobb, M., Gilens, M., and Kuklinski, J.. (1997). Racial attitudes and the “New South.” *The Journal of Politics*, 59, 323-349.
- Crouse, J., Phillips, M., and Ralph, J. (1998). Does the black-white gap widen after children enter school? In C. Jencks and M. Phillips (Eds.), *The black- white test score gap* (pp. 229-271). Washington, D.C.: Brookings Institution Press.
- Drury, D. (1980). Black self esteem and desegregated schools. *Sociology of Education*, 53, 88-103.
- Fordham, S. (1988). Racelessness as a factor in black students’ school success: Pragmatic strategy or pyrrhic victory? *Harvard Educational Review*, 58, 54-84.
- Fossett, M., and Kiecolt J. (1989). The relative size of minority populations and white racial attitudes. *Social Science Quarterly*, 70, 820-35.
- Frankenberg, E., Lee, C., and Orfield, G. (2003). A multiracial society with segregated schools: Are we losing the dream? The Civil Rights Project: Harvard University.
- Fryer, R., and Levitt, S. (2003). Understanding the black-white test score gap in the first two years of school. American Bar Foundation and University of Chicago, 1- 65.
- Glaser, J. (1994). Back to the black belt: Racial environment and white racial

- attitudes in the south. *The Journal of Politics*, 56, 21-41.
- Gordon, M. (1976). A different view of the IQ-achievement gap. *Sociology of Education*, 49, 4-11.
- Gordon, R.A. (1987). SES versus IQ in the race-IQ-delinquency model. *International Journal of Sociology and Social Policy*, 7, 30-96.
- Hallinan, M. (2001). Sociological perspectives on black-white inequalities in american schooling. *Sociology of Education*, 74, 50-70.
- Hedges, L., and Nowell, A. (1999). Changes in the black-white gap in achievement test scores. *Sociology of Education*, 72, 111-135.
- Jencks, C., and Phillips, M. (1998). America's next achievement test: Closing the black-white test score gap. *American Prospect*, 40, 44-53.
- Jensen, A.R. (1969). How much can we boost IQ and scholastic achievement. *Harvard Educational Review*, 39, 1-123.
- Lareau, A. (1987). Social class differences in family-school relationships: The importance of cultural capital. *Sociology of Education*, 60, 73-85.
- Lee, J. (2002). The gap continues. *Educational Researcher*, 31, 3-12.
- Luhman, R. (2002). Race and ethnicity in the United States: Our differences and our roots. Fort Worth, TX: Harcourt College Publishers.
- National Center for Educational Statistics. (2004). The condition of education. Washington, DC: U.S. Department of Education.
- National Education Association. (August, 2004). Rankings and estimates: A report of school statistics update.



- Ogbu, J. (1986). Black students' school success: Coping with the "burden of 'acting white.'" *The Urban Review*, 18, 256-276.
- Ogbu, J. (1992). Understanding cultural diversity and learning. *Educational Researcher*, 21, 5-24.
- Osborne, J. (1999). Unraveling underachievement among African American boys: From an identification with academics perspective. *The Journal of Negro Education*, 68, 555-565.
- Orland, M. (1999). Financing more integrated children and family services: Current practice and opportunities. *Journal of Educational and Psychological Consultation*, 10, 251-269.
- Post, S., Rindon, A., and Stein, R. (2000). Reconciling context and contact effects on racial attitudes. *Political Research Quarterly*, 53, 285-303.
- Roscigno, V., and Ainsworth-Darnell, J. (1999). Race, cultural capital, and educational resources: Persistent inequalities and achievement returns. *Sociology of Education*, 72, 158-178.
- Schwebel, M. (2000). Is sex too good for the working Class? Education and oppression. Rutgers University, Graduate School of Applied and Professional Psychology.
- Steele, C. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist*, 52, 613-629.
- Taylor, M. (1998.) How white attitudes vary with the racial composition of local populations. *American Sociological Review*, 63, 512-535.
- Tyson, K. (2003). Notes from the back of the room: Problems and paradoxes

in the schooling of young black students. *Sociology of Education*, 76, 326-343.

U.S. Department of Education. (2004). The condition of education. Retrieved

March 3, 2005, from <http://www.nces.ed.gov>.

2000. U.S. Census. Retrieved Feb. 20, 2005. Available at: <http://www.census.gov>.

2000. U.S. Census. Available at: <http://www.census.gov>. Retrieved Feb. 20, 2005.

2004. Alabama Department of Education. Retrieved Jan.16, 2005. Available at:

<http://www.alde.edu>.

2004. Alabama Education Association. Retrieved March 12, 2005. Available at:

<http://www.aea.edu>.

2004. National Center for Educational Statistics. Retrieved October 20, 2005.

Available at: <http://www.nces.ed.gov>.