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What's "Black" Got to Do With It: An Analysis of Low-Income Black Students and Educational Outcomes

Derrick E. Griffith
Graduate Center, City University of New York

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WHAT’S “BLACK” GOT TO DO WITH IT?

AN ANALYSIS OF LOW-INCOME BLACK STUDENTS AND EDUCATIONAL OUTCOMES

by

DERRICK EUGENE GRIFFITH

A dissertation submitted to the Graduate Faculty in Urban Education in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

(2015)
This manuscript has been read and accepted by the graduate Faculty in Urban Education in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

Juan Battle

________________________  _________________________
Date                    Chair of Examining Committee

Anthony Picciano

________________________  _________________________
Date                    Executive Officer

Anthony Picciano

Nicholas Michelli

Supervisory Committee

THE CITY UNIVERSITY OF NEW YORK
ABSTRACT
WHAT’S “BLACK” GOT TO DO WITH IT?
AN ANALYSIS OF LOW-INCOME BLACK STUDENTS AND EDUCATIONAL OUTCOMES
by
Derrick Eugene Griffith
Adviser: Professor Juan Battle

Well-known social scientist William Wilson notes the Black underclass is particularly at risk of developing behaviors and attitudes that promote educational and social isolation. This situation has become characteristic of America’s inner cities (Wilson 1996). Education as the great arbiter of social mobility seems to be less true for America’s most vulnerable Black students. Low-income Black students graduate high school at a much lower rate than their middle- to upper-income counterparts. This statistic prompts the examination of low-income (vulnerable) students and their high school educational outcomes.

The educational (under)achievement of Black students has been well documented and researched. Far too much scholarship, however, treats these students’ experiences monolithically, with little consideration of the unique experiences of economically disadvantaged Black students. By analyzing two waves (cohorts) from the National Educational Longitudinal Study (NELS) (1988 and 1992), this study seeks to add to the discourse on educational achievement by examining the impact of individual student characteristics (locus of control), students’ educational outlook (educational aspirations), school environment
(urbanicity), and students’ premature adult life events (pregnant or parenting) on the educational outcomes of vulnerable Black students.

The theoretical framework will include sociocultural theory (Rogoff), oppositional theory (Ogbu), and possible selves theory (Oyserman).

The findings from this study will help inform efforts to improve the educational outcomes of low-income Black students.
ACKNOWLEDGEMENTS

Eugene, you are a blessed child and you have an anointing on your life”
-Aunt Dee

“There is no testimony without a test”
-Bishop O.C. Allen

This dissertation became increasingly hard to complete as I began to analyze the data and draw some initial conclusions. Not to date myself, but I could have been a part of the sample that is the basis of this current study. My story is that of the socioeconomic composite group, I grew up in a single-parent household in a housing development in New York City. I attended and graduated from the public schools of New York City, and I am a first generation college graduate. My story and the story of this study reveal that in spite of one’s low-income socioeconomic condition in life it is possible to attain the highest degree in the land. I humbly submit to all that have come before me to make this a possibility and a reality. I recognize, as this study shows, that something happened along the way to motivate me to see beyond the present, to imagine possibilities that I could not see, and not to be afraid to be different from the crowd.

While I am less clear on the specifics and the “hows,” I acknowledge Ms. Fish, my second grade teacher, who encouraged me to read, dream, and escape to faraway places, Ms. Bercovicci, my fourth and fifth grade teacher, who just loved me to death and nourished me though my elementary school years. To Father Frew, who was stern and forgiving at the same time. The staff at the Hudson Guild that provided much needed after school programs and summers away from the projects. To Ms. Blair, who could not have been a better nursing instructor for me while I was still in high school, and to Ralph Wilson, my high school English teacher, who encouraged me to pursue college over money. In college, the student affairs staff
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students, faculty and staff who allowed me to ask, explore, enact, and revisit many of the assumptions that are embedded in this study.

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CHAPTER ONE: INTRODUCTION

Introduction

The quest for educational attainment for Black youth in America has a storied past. From the colonial period to the mid-twentieth century, Black youth have had to overcome laws of exclusion and forced segregation that yielded separate and unequal schools. Cultural deficits paradigms have had an enduring effect on the educational outcomes of Black youth (Anderson, 2007). Gloria Ladson Billings, in her 2006 Presidential Address to the American Educational Research Association, challenged educational researchers to reconceptualize the achievement gap among Blacks in America. She argued that the focus on the current achievement gap as currently defined leads us to research, policies, and practices that “move us toward short-term solutions that are unlikely to address the underlying long-term problem” (Ladson-Billings, 2006, p. 4). According to Ladson-Billings, the historical, economic, sociopolitical, and moral decisions and policies in America have created an education “deficit” that has produced the current achievement gap between black and white students (Ladson-Billings, 2006, p. 5). Historically, access to education for Blacks has been restricted. Economically, suburban school districts spend more on per pupil expenditures than do urban school districts. Socio-politically, Blacks have been excluded from full participation in the civic process, a hallmark of American life. Finally, in American society Blacks, particularly males, conjure up age-old fears among Whites that continue today in many cities across the country and that have led to disproportionate levels of Black, particularly male, incarceration (Ladson-Billings 2006).

Statement of the Problem

Educational researchers have produced many studies that document the achievement gap in educational outcomes between Blacks and Whites (Holzman, 2010; Mickelson, 2001;
Noguera, 2003). Many of these studies have documented similar gaps in race, socioeconomic status, and educational outcomes. There has, however, been a dearth of research that examines the educational outcomes of Black students who come from a particular socioeconomic status group. Given the aforementioned disparities, this study fills that void in the educational research space by examining the individual, school, and adult life events that affect educational outcomes of Black students who were in the lower two-thirds of the National Educational Longitudinal Study (NELS) sample in 1988 and 1992. This study consists of six chapters. Chapter Two reviews the vast literature surrounding the social, attitudinal, and behavioral forces that influence vulnerable Black students’ educational outlook, school environment, and premature adult life events. In particular, Chapter Two will examine the research surrounding race and education, specifically the social forces that affect school achievement as posited by sociocultural theorists such as Lee, Rogoff, and Gutiérrez. Ogbu’s theories of oppositional identity will also inform this study. Finally, the possible selves theory of Markus and Nurius and Oyserman will be used to unpack the many issues that affect vulnerable Black students’ achievement and/or delinquency in school. Chapter Three explains in detail the quantitative methodologies used to investigate the problem. Chapter Four reveals, in detail, the statistical findings germane to this quantitative study. This chapter will also discuss the gender differences in school achievement among Black students. Chapter Five asks: What does it all mean? The first task of this chapter is to present a comprehensive assessment of the results presented in Chapter Four. The second task will be to discuss the results as they relate and interconnect with the various theoretical and ideological perspectives discussed in the literature review. Finally, Chapter Six revisits the need to contrast the conduits and barriers to academic achievement among low-income Black males and females.
The remaining sections of Chapter One contextualize the study by drawing on key developments in the history of American education for Blacks and discussing the development of the Black lower (under) class in American cities and the intersection of race and class in American society. The chapter concludes with the relevant theoretical and methodological framework that has informed this study.

**Rationale**

The blueprint for the American school of today came in the form of the early common schools promulgated by Horace Mann in the mid-19th century. In the United States, public schools were created to assimilate immigrant groups into the fabric of American society by creating a common place to gain the knowledge and skills that would socialize America’s new ethnic immigrants to participate in the melting pot experiment of Americanization (Anyon, 2012; Spring, 2006). Besides being socialized to become “American,” the common school movement was based on human capital theory, which relies on the idea that a more educated workforce will produce better workers and in turn better communities (Anyon, 2012; Spring, 2006). As America began to see the gains produced by industrialization, industries began to preach the virtues of a pool of obedient, well-read, and educated citizenry (Spring, 2010). Similarly, as the fruits of industrialization produced wide disparities in income among new and old ethnics, common school reformers proselytized the idea of equality of opportunity through schooling and the new system of common schools (Spring, 2010). These schools were decidedly class-based as families of higher socioeconomic status attended private school or academies. Not only were these schools class-based, they excluded girls and Black students (Kaestle, 1983). These first public schools, which excluded Blacks, would have an enduring legacy on how Black students would have access to public education, become Americans, productive workers, or even active
participants in America’s democracy. It is crucial to understand that America’s public schools are social institutions that reflect America’s racialized history and society.

In the late 19th century, particularly in the North, philanthropic leaders began to support the development of colored schools aimed at civilizing Negroes and their attendant cultures. Up to this point Black students had been educated, at least to read and write, only through the kindness of slave-owners, their wives, religious leaders, other slaves and those who were newly emancipated or freed under the threat of severe punishment (Woodson, 1915). In spite of the lack of access and opportunity, scores of Blacks became educated and soon began to raise questions about the type of education that Negro citizens should receive.

In the early 20th century, Booker T. Washington and W.E.B. Du Bois wrote a series of books and pamphlets that called for different types of schooling for Blacks in America. First, Booker T. Washington, a former slave himself, grew up thinking that education would free him from the labors of slavery in America. His work is often viewed as one-sided, but he actually came to change his mind during his time as a student at Hampton Institute. He writes:

> Before Hampton to secure an education meant to have a good, easy time, free from all necessity for manual labor [but] at Hampton I not only learned that it was not a disgrace to labor, but learned to love labor, not alone for its financial value, but for labor’s own sake and for the independence and self-reliance which the ability to do something which the world wants done brings. At that institution I got my first taste of what it meant to live a life of unselfishness, my first knowledge of the fact that the happiest individuals are those who do the most to make others useful and happy (Washington, 1901/1986).

While many educational researchers have labeled Mr. Washington as a vocationalist in the traditional sense of the word, I suggest that he was calling for education in the biblical sense of
finding your calling or vocation as the vehicle for full participation in American society. Schooling should lead Blacks to discovering their passions to do well and live a just life by bringing out the joy and best work in our fellow citizens. I believe it is a mistake to limit his contributions to the development of Black educational as purely advocating industrial education.

W.E.B. Du Bois established himself as an advocate of education for Blacks that would liberate them from the permanent underclass, forever stuck with the stigma of slavery. Specifically, Du Bois believed that education should prepare Blacks for political power and participation in American society. By preparing Blacks to serve in town and state legislatures they could begin to enact laws that would protect the civil rights of Blacks in American society (Du Bois, 1903). Finally, Du Bois believed that Black students should aspire to higher education thus promoting the development of and support for historically Black colleges and universities (Du Bois, 1903). These two early Black scholars paved the way for renewed advocacy, legislation, and policies that would open the door wider for the educational pursuits of Blacks in America. Black students, for the most part, would attend segregated schools that would combine the educational philosophies of Du Bois and Washington (Anderson, 2007).

In 20th century America the desegregation of public schools would change the landscape of educational opportunity for Blacks in American Society. In 1954, the United States via the Supreme Court would decide the landmark case Brown v. Topeka, Kansas Board of Education 347 U.S. 483 (1954). This decision gave Blacks the right to an equal education under the law. Prior to this decision, Blacks who were college educated, attended traditionally Black schools and colleges (Duster, 2009, p.105). The full implementation of Brown v. the Board of Education would take years to enforce across the nation. Even with the Supreme Court’s ruling on Brown, there were no plans or process dictating how to implement the desegregation of schools, nor did
it include any enforcement mechanisms or penalties for school districts and colleges that failed to comply (Willie, & Willie, 2005). As Black students entered the nation’s schools they became the new disadvantaged, and this time it was White establishment scholars who had the answers to the Negro educational problem.

Barbara Beatty, in a special issue of the Teachers College Record, reminds us of the ongoing debate that emerged in the 1960s between cognitive and social science researchers on the academic outcomes of poor Black children. Cognitivists like Arthur Jensen rejected the idea that special educational programs could help Black, poor children compensate for their deficits, instead arguing that differences between Blacks and Whites were due solely to differing IQs (Beatty, 2012). Meanwhile advocates of compensatory education argued that compensatory programs had great value and that the problem was the slow roll-out of the compensatory educational programs. Brazziel of Virginia State College noted the success of compensatory education programs with former sharecroppers and challenged the IQ theorists by noting that these theories were loaded with “deprivation axioms… that stereotyped Black children, their families, and communities as deficient” (as cited in Beatty, 2012). In sum the Coleman Report of 1966 institutionalized the idea that schools could not make a difference in the lives of low-income Black students thus fueling the growth of compensatory education programs.

Coleman (1966) first posited that the number one predictor of academic achievement is socioeconomic status and family background. In Equality of Educational Opportunity, Coleman found that socioeconomic status not only predicted academic achievement, but also influenced attitudes, behaviors, values, and beliefs about educational attainment.

Educational researchers have ignored crucial elements of the 1966 Coleman Report that are essential to compensatory educational programs for low-income Black students (Beatty,
First, he concluded that minority students do better at some schools rather than others. Second, the relationship between teachers and students was significant in minority students’ engagement in school. Third, personal aspirations were also key indicators of school success among low-income Black students. Finally, the success of minority students in school was also impacted by peer groups and their socioeconomic status (Beatty, 2012). Therefore, this study examines the achievement gap among Black students considering the variables described above.

More recently Jean Anyon, in a special edition of Teachers College Record, warned of a return to the cultural deficit thinking that is implicit in the No Child Left Behind Act and its attendant compensatory approaches to educating Black males and females (Anyon, 2012). Under the brand of cultural deficit thinking the low academic achievement of Black students is attributed to the cultural deprivation of Black children and families (Spencer, 2012). Finally, Rivers and Span argue that the Black achievement gap is not as pronounced when looking at an intergenerational analysis of Black student achievement before and after compensatory education and the Elementary and Secondary Education Act of 1965. Their model provides a “counterassessment to the traditional modes of analysis” that compare Black student achievement with Whites (Span, & Rivers, 2012). Despite decades of urban school reform initiatives, Black students continue to underperform and underachieve (Darling-Hammond, 2007; Holtzman, 2010; Kozol, 2005; Rumberger & Palardy, 2005).

The U.S. Department of Education, National Center for Education Statistics noted that students of color comprise the majority of students in 63 of the nation’s largest school districts, while Black and Brown students made up at least 75% of the student population in a third of these schools (National Center for Education Statistics, 2012b). Black students who attend majority-minority high schools are five times more likely to drop out of school than students
who attend majority White schools (Balfanz & Letgers, 2004). More recently, in a report produced by the Council of Great City Schools, it is reported that approximately “one-third of the nation’s Black male students attend urban schools…and that while many students have gone on to do well but for the vast majority urban schools have simply failed Black male students” (Council of Great City Schools, 2012, p. 5). The study found that Black female students tend to be less affected by the composition and location of schools; however, we will explore this phenomenon in the literature review of this dissertation (Council of Great City Schools, 2012, p. 5).

Black students who are socioeconomically disadvantaged are even more at risk of underachieving or dropping out (Anyon, 1980, 2005; Rothstein, 2004; Wilson, 2010). Students who are economically vulnerable often work during high school, a factor that research links to decreased educational outcomes (Marsh & Kleitman, 2005).

Compared to Black males, Black females experience greater success in school, have higher grades, are suspended less often, experience fewer grade retentions, maintain a more positive view of themselves and their schools, and plan more often to continue their education beyond high school (Hefner, 2004; Mickelson & Velasco, 2006). Black males, on the other hand, are retained, suspended, expelled, placed in special education, and dropout at higher rates than Black females (Jimerson, 1999; O’Connor & Fernandez, 2006; Orfield, Losen, Wald & Swanson, 2004).

The achievement gap between Blacks and Whites in educational attainment and standardized assessments has been well researched, theorized, and documented (Howard, 2010). In 2005, 88% of Black eighth grade students scored below basic, or at basic, proficiency in reading achievement. Meanwhile, 87% of Black eighth grade students scored below basic, or at
basic, proficiency in mathematics achievement (Howard, 2010, pp. 18-19). While there is a plethora of research that documents the differences in educational outcomes between Black students and students of other races, little of this research examines the school experiences of vulnerable Black students. This study seeks to contribute to the field by examining the key variables influencing educational outcomes among Black males and females.

The achievement gap in the middle and high school grades has had a disproportionate effect on low-income Black communities, which are becoming increasingly more concentrated in large urban areas. In these large urban centers, it is well documented that Black youth and families have higher unemployment rates, higher incidents of teen pregnancy, more exposure to high risk behaviors, greater incidents of involvement in criminal activities, and higher rates of incarceration (Nichols, Kotchick, Barry, & Haskins, 2010). Schools in high poverty urban neighborhoods are not immune from the side effects of poor academic achievement. Such that the high school graduation rates for Black students nationwide are approximately 60% compared to 80% for their White counterparts (Aud, Fox, & KewalRamani, 2010). In high poverty urban communities like New York City, the four year graduation rate hovers slightly above 50% (Holzman, 2010). For students who do not complete a high school diploma or GED credential, they will have an estimated net earning loss of over $600,000 dollars and cost the economy over $250,000 over the course of his or her lifetime (Chapman, Laird, Ifill, & KewalRamani, 2011). The U.S. Census detailed the average lifetime earnings of individuals in 2006-2008 with a high school diploma as compared to those with a Baccalaureate degree. “The typical bachelor’s degree recipient can expect to earn about 66% more during a 40-year working life than the typical high school graduate earns over the same period” (Baum, Ma, & Payea, 2010). Since this study focuses on African American (AA) males, I will provide figures for that population. The
average lifetime earnings for an AA male with a high school diploma are $1,340,407.00. The average lifetime earnings for an AA male with a college diploma are $2,107,728.00. That is an increase of $767,321.00 over his lifetime (Julian & Kominski, 2011). For low-income communities that are becoming majority minority these statistics call for attention and action.

**Contribution to the Field**

This study intends to contribute to the current educational research paradigms by recognizing that the current dialogue that defines the achievement gap as how well Black students do when compared to their White counterparts is not educationally imaginative. That is, there is a growing movement to move beyond test score analysis to more deep and interconnected studies that incorporate new theoretical paradigms to explain the educational outcomes of low-income Black students. It is within this frame that this study seeks to understand the educational achievement of Black students by examining the impact of individual student characteristics (locus of control), students’ educational outlook (educational aspirations), school environment (urbanicity), and students’ premature adult life events (pregnant or parenting) on the educational outcomes of more vulnerable Black students, those who are in the lower two thirds of the socioeconomic status composite.

**Background**

**Theoretical Framework**

Socioculturalists have argued that cognitive theories by themselves do not explain the variance in student performance, particularly among students of color, language minorities, and those from low socioeconomic backgrounds (Gutiérrez & Rogoff, 2003; Lee, Spencer & Harpalani, 2003; Vygotsky, 1978). Instead, they examined the influence of culture and identity
on student learning and development. Sociocultural paradigms and research methods form clear points of departure from cognitive, deficit-based theories and approaches to development and learning. Socioculturalists posited that cultural contexts influence how young people develop, learn, and experience school (Gutiérrez & Rogoff, 2003). Lee noted that Black students in America have grown up in a racialized society with a history of institutionalized inequities that is reflected in schools and social communities. These inequities have a significant impact on the development and learning of Black students (Lee, 2007). Gutiérrez and Rogoff explained the socioculturalist perspective, that within racial and ethnic groups differences between individuals must be examined and integrated into pedagogical approaches and perspectives (Gutiérrez & Rogoff, 2003; Lee, 2003; Lee et al., 2003). Sociocultural approaches to understanding cognition and educational outcomes allow educational researchers to provide “thick description[s]” (Geertz, 1973) of complex cultural and structural processes that yield different educational outcomes for different groups (Delpit, 1995; Lareau, 2007; Noguera, 2003; O’Connor, 2001; Schultz, 2008).

Ogbu’s theory of oppositional identity suggests that Black students may take a stance against the White establishment by deliberately adopting behaviors and attitudes not conducive to academic success (Ogbu, 2003a). By assuming an appearance of being less intelligent and less academically capable than they actually are, these students avoid being accused of “acting White” by their Black peers. Oppositional identity theory also suggests that the higher a Black person’s level of education, the more likely he or she will be ostracized and disenfranchised within his or her own community (Bonilla-Silva, 1999; Duncan, 2002; Ferguson, 2003; Howard, 2008; Johnson 2002; Ogbu, 2003a, 2003b, 2008; Tatum, 2007). Ogbu further asserted that societal discrimination motivates Black students to participate in a “collective identity” (or
fictive kinship) by adopting cultural symbols and emblems expressing opposition to the dominant culture as it exists in schools. According to this cultural frame of reference, Black students who are academically successful may be perceived as trying to distance themselves from Black cultural identity (Ogbu, 2003a, p. 49).

Markus and Nurius (1986), American social psychologists, proposed the concept of “possible selves,” describing how individuals envision the various selves they might become throughout their lives. These selves can be expected, hoped for, and feared. Future selves are derived from experiences and representations of the self in the past. Markus and Nurius drew on an extensive array of 20th century psychological literature to support and define possible selves theory and to explain its consequences for educational outcome research. In a quantitative study of undergraduate students, they explored the relationship between and among possible selves, self-concept components, and self-esteem. They also considered possible selves in relation to motivation, proposing that the concept allows for a more direct connection between incentives and actions.

In four related studies, Oyserman, Gant, and Ager (1995) analyzed possible selves within a socially contextualized model of Black identity. They examined possible selves and gendered Black identity as potential predictors of school persistence. These studies focused on Black middle school students and found that these younger students conceptualized themselves within a Black identity schema that was often gendered. They also found that balance among possible selves predicted school persistence and that female students were more likely than male students to have balanced pairs of possible selves. On the other hand, the presence of a balance between and among selves had more of an effect on males. Their findings suggest that it is advantageous for Black students to be able to construct a positive sense of themselves—and positive “possible
selves”—that lend to academic success, especially in social contexts in which school persistence is considered “acting White” (Oyserman, Brickman, & Rhodes, 2007; Oyserman, Bybee, & Terry, 2006; Oyserman, Gant, & Ager, 1995; Oyserman, Terry, & Bybee, 2002; ).

These theoretical frames, together, will support the findings in a way that will reveal the complexities undergirding the success of Black students in school.

**Methodology**

**Procedures**

The data employed for this study come from the National Education Longitudinal Study of 1988 (NELS:88), conducted by the National Center for Education Statistics (NCES). NELS:88 is a clustered, two-stage, stratified national sample with a total of 24,599 eighth graders surveyed in the base year, 1988.

The NELS:88 consists of four follow-ups to the original study. The first follow-up was conducted in 1990 when students, if having progressed normally, would have been in the tenth grade. Dropouts were replaced with students of similar backgrounds. The second follow-up came in 1992 when the students, if having progressed normally, would have been graduating from high school. The third follow-up, conducted in 1994, allowed the study to assess who graduated from high school, dropped out of high school, continued to post-secondary institutions, or entered the workforce. The year 2000 marked the fourth and final follow-up and was designed to analyze the impact of post-secondary education and/or progress in the workforce. The 2000 survey also determined if respondents had become parents. Data were also collected from parents (1998 and 1992) and teachers (1988, 1990, and 1992).
The NELS:88 dataset continues to be a valuable resource for educational researchers today. In 2013, Rose (2013) used the dataset to examine the school context, pre-college educational opportunities, and college degree attainment among high achieving Black males. Brondage (2013) used the data set to examine middle and high school predictors of off-track status in early warning systems for her dissertation. Further, Sanders and Jordan used panel data from the NELS:88 dataset to explore the extent to which teacher-student relations, as measured by teacher expectations and supportiveness, influence student educational investments and academic achievements. Finally, Riddle used NELS:88 data to examine the relationship between school-wide student demographics and graduation rates. The study examined the patterns of school segregation and the extent to which these patterns influenced graduation rates among low-income Black students (Riddle, 2013).

The NELS:88 dataset is particularly important for this study. First, it is the first longitudinal study employed after the publication of the landmark educational report, *A Nation at Risk* (National Commission on Excellence in Education, 1983). The report which rippled throughout the United States was the first call for the implementation of standards-based instruction. The report warned against social promotion and grade inflation in the nation’s schools thus calling for standardized assessments at major transition points from one school level to the next (National Commission on Excellence in Education, 1983). The Commission also recommended a longer school day for students and a standardized curriculum for high school students thus extending the Carnegie units of study. Finally, the report introduced for the first time, market-based approaches to evaluating teacher performance (National Commission on Excellence in Education, 1983). For this study, the introduction of standards-based instruction is
important as *A Nation at Risk* was the precursor for national educational initiatives for years to come (Ravitch, 2007).

The Clinton administration began the practice of using test scores to label schools as “low performing” in an attempt to target Title I funds to these schools (Civic Impulse, 2014). President Clinton’s Goals 2000, expanded the call for standards based-instruction and test scores as measurements of educational progress. The emphasis on standards and test scores continued with the administration of George W. Bush and his introduction of the No Child Left Behind Act. This act, passed in 2002, introduced federal requirements for states to report annual performance on test scores and annual progress towards graduation; and states that were new to reporting requirements were required to report achievement gaps between Black and White students (Civic Impulse, 2014). According to the President George W. Bush’s papers the legislation sought to implement accountability measures to identify and highlight states that were not making progress in educating all students for 21st century success (Civic Impulse, 2014). The notion that performance on standardized test would translate into college and career readiness success in the 21st century would continue in the Obama administration with the introduction of the Race to the Top initiative. Introduced by President Obama in 2009, the U.S. Department of Education set aside approximately $4.35 billion to encourage states to develop innovative strategies to raise standards for all students and encourage school systems to use data to inform educational reform efforts and decisions regarding teacher tenure, promotion and student promotion. The Race to the Top initiative continued the long march towards using test scores to measure and evaluate student learning including the adoption of the new Common Core standards (White House & U. S. Department of Education, 2014).
I chose to use the NELS:88 dataset because this study is interested in documenting the long reliance on test scores to measure educational outcomes among low-income Black students. I call for a paradigm shift towards socio-cultural explorations into the continued and widening achievement gap among low-income Black students. This study focuses on vulnerable Black students in two of the five waves: the Base Year (1988), and the Second Follow-up Study (1992). This study focuses on disadvantaged, Non-Hispanic, Black students, and this specific subsample will be identified in a two-step process. First, I selected students of all ethnicities who are in the lower two thirds on the Socioeconomic Status Composite (BYSES); then, from this subgroup I selected all the Non-Hispanic Black students. All the selected respondents included in the present study will have responded to the questionnaires in the two chosen waves. This analysis shows that approximately 842 low-income students met the criteria. While the small sample size from the NELS:88 presents a potential area of concern for this study, the lack of research on large samples of Black students is a problem that has been raised by other researchers (Jeynes, 2005).

Despite these concerns, researchers have utilized the NELS:88 to disaggregate Black male and female students. Among them, Carpenter and Ramirez (2007) used data from NELS:88 to disaggregate racial groups for their examination of academic achievement gaps among Black, White, and Latino students. Hawkins and Mulkey (2005) utilized the NELS:88 to disaggregate Black males and Black females for their study on the impact of gender on the association between sports participation and students’ educational opportunities and outcomes. Jeynes (2005) utilized the NELS:88 to disaggregate Black students whom he parceled out into four socioeconomic subgroups in order to study the effects of parental involvement on academic achievement of Black youth. Finally, Stewart (2008) utilized the NELS:88 to disaggregate Black
students in order to examine the extent to which individual-level and structural variables predict academic achievement among a sample of tenth grade Black students.

**Analytical Plan**

The focus of the present work is to investigate the educational outcomes of disadvantaged Non-Hispanic Black students by the 12th grade and the differential influences that selected factors have on the educational growth of male and female students from eighth to twelfth grade. For such purposes, I conducted two separate analyses employing multistage ordinary least squares regression modeling. In the first analysis, I assessed whether a gender gap exists in educational outcomes among vulnerable Non-Hispanic Black students and the factors that might explain such a gap. In the second analysis, I divided the sample of students by gender and ran separate regression models for Non-Hispanic, Black males and females.

**Dependent variable.** *Standardized Test (Composite Reading, Math) in 1992* is a variable that exists in the NELS Dataset (F22XCOMP ‘Standardized Test Composite, Reading, Math’) measuring the score the students had on the combined standardized test of reading and mathematics in the spring of 1992 (Second Follow-up).

**Regression models.** The regression models follows temporal logic for the analysis of the overall sample (both male and female students) in the following order: The first model controls for ceiling and floor effect by introducing the eighth grade standardized test score to determine if there is a gender gap on the twelfth grade standardized test score before controlling for any other predictor. The second model adds variables pertaining to the area of the individual characteristics (family structure, locus of control). The third model evaluates the role that students’ educational outlook plays in student educational outcomes (i.e., educational aspirations,.
plan to continue school after graduating from high school). In the fourth model, variables regarding the school environment (e.g., level of urbanicity, school enrollment, and minority concentration) are entered. Finally, in the last model, predictors related to the premature adult life events (e.g., having or expecting a child and employment status) are added.

Model One enables me to isolate gender to determine if there is a gender gap in educational outcomes among vulnerable Black students. It is widely documented that Black males lag behind Black females in four and six-year graduation rates (Greene & Winters, 2005). Research on 12th grade outcomes of vulnerable Black students reveals that Black students experience feelings of cultural mismatch and fears of being stereotyped, which ultimately affect their effort and persistence in high school (Howard, 2010). Feelings of cultural mismatch, stereotype threat, and subsequent attitudes and behaviors toward school can manifest differently in Black males and females (Holzman, 2010; Mickelson & Velasco, 2006). This study contributes to the literature by first determining if there is gap in educational outcomes between vulnerable Black female and male students.

Model Two examines the impact of individual characteristics of vulnerable Black male and female students to determine whether family structure and locus of control affect educational outcomes in 12th grade. The NELS:88 data include the categorical variable “Family Composition Composite.” The data set also includes a composite variable, “Locus 1 Locus of Control.” Studies of the impact of family structure on the educational outcomes of all high school age students indicate that students from single-parent homes are more likely to dropout, become pregnant, or get married than students who are from two-parent homes (Sandefur, McLanahan, & Wojtkiewicz, 1992).
Locus of control has also been shown to affect educational outcomes among high school students. Students who are intrinsically motivated are less likely to be influenced by their peers and other social forces (Nasir, Jones, & McLaughlin, 2007; Rogoff, 2003). This study will contribute to the field by documenting how family composition and locus of control contribute to the educational outcomes of vulnerable Black students.

Model Three examines the impact of variables related to a student’s educational outlook. The NELS:88 data includes variables such as, “how far do you plan to go in school?” and “do you plan to attend college immediately after high school.” These questions are important, as research has shown that students who aspire to higher education are more likely to persist in high school and earn good grades, which qualify them for post-secondary study (Howard 2008; Lareau, 2007). Moreover, students who pursue uninterrupted post high school studies are more likely to earn college degrees (Loury, 2000; Nasir et al., 2007; National Center for Educational Statistics, 2006).

Model Four examines the impact of the school environment on vulnerable Black students. Studies have shown that schools with high levels of absenteeism, suspensions, and violence against peers and school staff have lower graduation rates than schools with fewer such incidents (Carter, 2005; Dalton, Sable, & Hoffman, 2006; Lareau, 2007). The NELS:88 data included variables such as “urbanicity,” “minority school composition,” “percent of students eligible for free and reduced lunch,” and “percentage of school disruptions.” As Balfanz and Letgers noted, school size and composition are key factors in determining whether schools in urban centers become dropout factories (Balfanz & Letgers, 2004). As the nation’s demography changes and more students attend majority-minority schools, how does school composition affect the educational outcomes of vulnerable Black students?
Model Five examines the impact of students who engage in premature adult events.

Nationwide, students who are working to support themselves and their lifestyles are more likely to leave school than their non-working peers (Pillow, 2004). The NELS:88 dataset included the variables revealing whether respondents are in a “marriage type relationship,” “are expecting or have children,” and whether respondents are “working.” Research indicates that pregnancy has a greater impact on female educational outcomes, whereas males who father children are less affected (Fletcher and Wolfe, 2012). As premature adult activities are likely to hamper efforts of vulnerable Black students to continue with their education, this study will document the most significant premature adult life events that impact educational outcomes.
CHAPTER TWO: LITERATURE REVIEW

Introduction

This chapter will focus on the current educational outcomes of low-income, vulnerable Black students. This review includes an examination of macro and micro level variables that have a direct and strong impact on educational outcomes of low-income vulnerable Black students.

Historical Overview

Education for Blacks in American Society

In American society the purpose of schools is to acquire the knowledge, skills, attitudes, and values to participate fully in a democratic society (Malamud & Schanzenbach, 2007). Americans of African descent, however, having endured forced enslavement, exclusion, and acculturation, occupy a peculiar place in the democracy of American society (Spring, 2006). Until 1954, Black students were forced to attend segregated neighborhood schools (Spring, 2006). According to the proponents of segregation at the time, these schools were supposed to offer Black students an education that was “separate, but equal” to that of White students. This assertion was upheld at the national governmental level in the ruling of Plessy v. Ferguson 163 U.S. 537 (1896), in which the Supreme Court maintained that separate facilities for Blacks and Whites were constitutional as long as they were equal; however, that was rarely the case. Compared to the schools White children attended, segregated Black schools suffered from

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1 Throughout this study, the term Black will be used to refer to people of the African Diaspora, and to such populations that reside within the United States. To some, Blacks are a subgroup within the larger Black community. Since this study purposely includes those who may be first-generation immigrants or who, for whatever reason, do not identify as Black, the term “Black” is employed. Furthermore, the term is capitalized to distinguish the racial category and related identity from color. Similarly, the word White is capitalized when referring to race.
overcrowding, lack of funding and resources, and poor facilities; therefore, they were sub-par in preparing Black students for participation in American society (Frederickson, 2002).

In the landmark Supreme Court case *Brown v. Topeka, Kansas Board of Education* (1954), the Supreme Court justices declared that segregated schools were inherently unequal and called for the desegregation of the nation’s schools with “all deliberate speed” (Spring, 2006). The full implementation of *Brown v. Board of Education*’s desegregation mandate, however, would take years to enforce across the nation. Although the Supreme Court had ruled in favor of desegregation, no plans or processes were developed to integrate schools throughout the country (Willie, & Willie, 2005). As a result, America’s schools were not considered fully desegregated until, a full 15 years after the original Supreme Court ruling on *Brown*, schools in the South were required in *Alexander v. Holmes County Board of Education* 396 U.S. 19 (1969) to desegregate immediately (Pettigrew, 2004). During the same time period, one study into the effects of desegregation was published that would long influence the nature of schooling for low-income Black students.

Sociologist James Samuel Coleman (1966) first posited that the number one predictor of academic achievement is socioeconomic status and family background. In *Equality of Educational Opportunity*, Coleman found that socioeconomic status not only predicted academic achievement but also influenced attitudes, behaviors, values, and beliefs about educational attainment. Therefore, in addition to the role that race can play in impeding Black students’ educational attainment, class is also a significant factor and may mitigate or compound the effects of race. More recently, education historian Barbara Beatty has noted that education researchers have ignored several crucial elements of the Coleman Report that are essential to the educational programs for low-income Black students (Beatty, 2012). The first element was
Coleman’s conclusion that minority students do better at some schools rather than others. Second, the relationship between teachers and students was found to be significant in minority students’ engagement in school. Third, personal aspirations were also key indicators of school success among low-income Black students. The final element was Coleman’s conclusion that the success of minority students in schools was also affected by peer groups and their socioeconomic status (Beatty, 2012).

As Beatty noted, the Coleman Report instead galvanized the educational community to enact a compensatory approach to schooling low-income Black students. This approach, which is rooted in theories of cultural deficit, aimed to enculturate low-income Black students with the knowledge, values, and skills of the dominant culture (i.e., that of White Americans) as the primary vehicles to promote full participation in American society (Anyon, 2012). This compensatory approach typifies the cultural deficit thinking that describes low-income Black students and their families as lacking the cultural capital, norms, values, and mores of their White public school counterparts. Therefore, as a result of this deficit, Black students generally lack the social resources needed to achieve academically at the same level as White students. Compensatory legislation aims to address and minimize this deficit and its impact on Black students’ educational achievement. Despite this approach, however, which is predominant in schools today and reified by the No Child Left Behind Act, disparities in educational achievement among Black low-income students continue to persist (Anyon, 2005; Rothstein, 2004; Wilson, 2010).

One important example of cultural deficit-based compensatory legislation is the No Child Left Behind Act. On January 8, 2002, President George W. Bush signed the bill into law. It reauthorized the Elementary and Secondary Education Act and greatly expanded the role of the
The federal government in education by requiring states to develop and administer testing programs to measure academic achievement (Dee & Jacobs, 2011; Reese, 2011). The Act also required states to collect and publish data on the educational outcomes of American students as measured by standardized test scores primarily in reading and math (Dee & Jacob, 2011; Reese, 2011). These mandatory assessments have revealed a persistent (and in some cases, widening) educational disparity between Black and White students, the Black-White achievement gap. For instance, the National Center for Education Statistics publishes a report card that documents this persistent gap in achievement between Blacks and Whites in reading and mathematics (Aud et al., 2012). Moreover, research has shown that the achievement gap among low-income vulnerable Black students is more pronounced than ever (Cokley, McClain, Jones, & Johnson, 2012). This gap in achievement has various social causes and socioeconomic implications for Black Americans, which will be explored in-depth in subsequent sections.

**Theoretical Framework**

**Gary Orfield and School Resegregation**

Despite *Brown v. Board of Education*’s declaration that segregated schools are inherently unequal, today, schools in urban communities are now called *majority-minority* schools (Orfield & Lee, 2004). Majority-minority schools are classified as those that have a racial/ethnic minority population that is greater than half of the student population. Orfield has conducted numerous studies that document the disparities in the educational outcomes of low-income Black students and has recently documented that in spite of the nation’s increasing diversity schools are becoming “resegregated,” which has contributed to the persistent achievement gap between Black and White students. Drawing on data from the National Center of Education Statistics in
1998 and 1999, he found that 70% of Black students attend predominately minority schools compared to 80% of White students who attend predominately white schools (Orfield, Losen, Wald & Swanson, 2004). Based on the findings of his study, Orfield concludes that the new “resegregation” is strongly correlated with socioeconomic status. Specifically, “data from 1998-1999 shows that in schools attended by Black and Latino students, 39.3% and 44% of the students are poor, respectively, [whereas] in schools attended by the average white student, 19.6% of the students are poor” (Orfield, Losen, Wald & Swanson, 2004 p.56). That is, given the level of segregation Orfield found, it is evident that most Black students are now attending high poverty schools that are poorly resourced, staffed, and supported. These findings are particularly significant given that these factors have been shown to affect the educational outcomes of low-income, vulnerable Black students particularly as measured by standardized tests (Orfield, Losen, Wald & Swanson, 2004 p.56).

**Black Students in the United States**

The United States Census Bureau projects that by the year 2050 more than 50% of the population will be Black, Hispanic, or Asian. According to their projections, Black students alone will make up more than 20% of the public school population (United States Census Bureau, 2009). Given that Black students and their families are concentrated in high poverty, low-performing school areas it is clear that the educational outcomes for these students require in-depth exploration.

According to research by the Schott Foundation for Public Education, in the United States, Black students have lower graduation rates and higher dropout rates than their White counterparts (Holzman, 2010). Additionally, the Schott Foundation reported that eighth grade reading and math scores, suspensions, expulsions, and school characteristics have a strong
impact on the likelihood of Black students graduating from high school and pursuing higher education (Holzman, 2010).

The achievement gap, which is calculated and assessed by standardized tests, is more complex than the story revealed by standardized test scores (Winters & Winters, 2012). However, the presence of the gap at this level has important implications for Black achievement at the secondary (and, by extension, post-secondary) level.

The achievement gap between Black and White students continues to be well documented in the research literature (Anyon, 2005; Howard, 2010; Landsman & Lewis, 2006). Black students continue to perform lower on achievement measures than any other ethnic group, in spite of early intervention programs that are designed to increase their chances of school success (Howard, 2010). According to the U.S. Department of Education, in 2005, 48% of Black students in the eighth grade scored at or below the basic level in reading while 40% scored below basic level in mathematics (Howard 2010). Reading and mathematics levels are key indicators of a student’s readiness for high school. Furthermore, the content area courses in high school demand proficiency and fluency with concepts that were introduced in middle school. As such, Black students who enter high school with below basic levels are therefore immediately “at risk” of not graduating (Lewis & Moore, 2008).
Figure 2.1 Average Reading Scale Scores on the National Assessment of Educational Progress (NAEP) Long-term Trend Assessment for 13-year-olds, by Race/Ethnicity: Selected Years, 1971 through 2012

Figure 2.2 Average Mathematics Scale Scores on the National Assessment of Educational Progress (NAEP) Long-term Trend Assessment for 17-year-olds, by Race/Ethnicity: Selected Years, 1973 through 2012


Additionally, a key indicator of academic progress is grade progression. Students who repeat courses or grades are more likely to leave school or engage in behaviors that lead to suspensions or expulsions (Orfield, Losen, Wald & Swanson, 2004). According to the National Center for Education Statistics, Black students had the highest suspension rates of all ethnic groups (Howard, 2010, p. 22), which suggests that this group may have underlying academic issues fueling these suspension rates.
The achievement gap has serious consequences for Black students. In 2005-2006, more than half of the national, Black, male student population failed to graduate with their peers (Howard, 2010). High school leavers experience altered life outcomes that result in lower life income attainment, increased health risks, higher rates of incarceration, and ultimately diminished life expectancies. A study by Balfanz documented that there are approximately 200 high schools across the country that account for about half of all dropouts (Balfanz & Letgers, 2004). Gary Orfield also documented the plight of high school leavers in his classic 2004 text that essentially argues that “dropping-out is a problem, and it is disproportionately affecting males of color” (Orfield, Losen, Wald & Swanson, 2004 p.56).

The achievement gap at the middle school and high school levels has also had a disproportionate effect on low-income Black communities, which are becoming increasingly more concentrated in large urban areas. In these large urban centers, Black youth and families have higher unemployment rates, higher incidents of teen pregnancy, more exposure to high risk behaviors, greater incidents of involvement in criminal activities, and higher rates of incarceration (Nichols et al., 2010). As a result, low-income Black students are more vulnerable to having their education interrupted or experiencing school detachment. Furthermore, schools in high poverty urban neighborhoods are not immune from the side effects of poor academic achievement. In fact, studies indicate that the high school graduation rates for Black students nationwide is approximately 60% compared to 80% for that of their White counterparts (Aud et al., 2010). Moreover, in high poverty urban communities, the four year graduation rate hovers slightly above 50% (Holzman, 2010). For low-income communities that are becoming majority minority these statistics call for attention and action.
In 2010, the Schott Foundation for Public Education published regular reports on the educational outcomes of students in American schools. These reports summarized national graduation rates for Black males as compared to White, non-Latino males. The foundation researchers found that graduation rates and reading levels for Black male students are alarmingly low, indicating a crisis in American education (Holzman, 2010).

**Macro-level Interpretations of Black Student Educational Outcomes**

Macro-level explanations of Black students’ educational attainment take into account the interaction of factors at the societal level, such as economic, social, and cultural causes that influence achievement for Black students.

In 2014, the Annie E. Casey Foundation in collaboration with the Congressional Black Caucus used a variety of datasets to examine the factors that influence the educational outcomes of Black low-income students. The study found that only 18% of U.S.-born, Black fourth graders read at grade level in the fourth grade, followed by 14% at grade level in the eighth grade. The report also documented serious disparities between students attending schools in urban school districts and those who attend schools with more majority students. Neighborhood context matters. Black families are more likely to live in poor neighborhoods, which affects the total quality of life. For example, Black families who live in high poverty areas are less likely to have access to fresh vegetables. Neighborhood toxins are higher, as are unemployment and criminal activity rates, and schools are poorly resourced and thus affect the educational outcomes of low-income Black Youth (Annie E. Casey Foundation, 2014). Figure 2.3 below illustrates the racial and ethnic composition of public schools by school status between 1999-200 and 2011-2012. Figure 2.4 illustrates the percentage distribution of free or reduced lunch of public schools by school status for the school year 2011-12.
Figure 2.3 Percentage of Public School Racial/Ethnic Concentration

According to the Council of Great City Schools (CGCS), urban school districts educate “approximately one third of the nation’s African American male students” (Council of Great City Schools, 2012). In 2012, CGCS released a report based on the work of key scholars, practitioners, and community activists that concludes that while public schools have served some Black male students well; the vast majority of Black male students have been un-served or underserved by the nation’s public schools (Council of Great City Schools, 2012).

In Philadelphia, the school district’s school reform commission formed the Black and Latino Male Dropout Taskforce to address high dropout rates among Black and Latino students,
which are the two largest cultural student groups in the Philadelphia district. The report noted that high school dropouts will earn considerably less than high school graduates, one of the many negative effects of educational disengagement on the greater community. This study built upon previous reports, such as Unfulfilled Promise, which was released collaboratively in 2006 by researchers at Johns Hopkins University, the University of Pennsylvania, and other institutions. The report highlighted a crisis-like state of educational disengagement among Black and Latino students (Gold, & Evans, 2008).

The taskforce also noted that several studies have found that it is important to take social and cultural contexts into account when implementing support and intervention strategies. One important finding was that teachers with a low level of training often teach students with the highest level of need. Teacher training is therefore highlighted as a crucial area for improvement. It goes on to conclude that there is no “one size fits all” solution to educational disengagement in the district, and that to successfully and continuously accommodate the needs of students, partnerships with various stakeholder groups need to be formed. Specific action recommendations included, but were not limited to: the facilitation of greater involvement of family members/mentors in the education process, providing greater opportunities for youth to seek support, corporate involvement in establishing educational programs, and the use of philanthropic expertise to guide and fund action strategies (School Reform Commission, the Philadelphia Commission on Human Relations, 2010). The educational outcomes of low-income Black students have also become an area of increasing concern for schools and school districts. In 2012, Toldson and Lewis asserted that since 1940 Black males have lagged behind white males in high school achievement and college graduation, while being held back at higher rates of in grades 1-4, 5-8, 9, 10 and 11 (Toldson & Lewis, 2012). His findings regarding the
relationships with teachers and peers, perceptions of school and well-being, and self-esteem among low-income Black males are particularly relevant to this dissertation (Toldson & Lewis, 2012). Figure 2.5 illustrates the percentage of children living under poverty by race/ethnicity in 2012.

Figure 2.5 Percentages of Children Under Age 18 Living in Poverty in 2012

![Percentage of Children Under Age 18 Living in Poverty in 2012](chart.png)


In 2008, a study by the Congressional Black Caucus asserted that the educational outcome of Black male students is “veiled in a literacy of pathology” (Toldson & Lewis, 2012, p. 6). This “literacy of pathology,” according to Toldson and Lewis, has led educational policy
makers and practitioners to accept that under-planning and marginalized Black males are the norm and that excellence and success are non-existent in this population. Using data from four national surveys, the study sought to establish linear relationships between achievement and a variety of external factors (Toldson & Lewis, 2012). This study examined personal and emotional factors, family factors, social and environmental factors, and school factors. The study examined the survey responses of over 5,000 school age Black males and employed step-wise multiple regression analysis to determine the educational achievement among Black males (Toldson & Lewis, 2012).

Researchers at the Schott Foundation, however, cited recent successes in New Jersey, the only state with high Black enrollment and almost 70% of Black males graduating, which is well above the national average. They point out that in New Jersey increased funding and support to schools since 2003 helped propel a growth in the graduation rate in the Newark school district from 47% in 2001-2002 to 75% in 2007-2008. Also key to the report is the fact that Black male students in states with small Black populations, like Maine, are performing as well or better than their White counterpoints (98% graduation in Maine), proving that when Black students are integrated into schools that have ample resources, they can and will succeed (Holzman, 2010). Figure 2.6 illustrates the average freshman graduation rate for public high school students by race. Conversely, figure 2.7 illustrates the status drop-out rates of 16-24 year olds by race and ethnicity from 1990-2012.
Figure 2.6  Average Freshman Graduation Rate for Public High School Students

Research on the achievement gap has cited structural and cultural deficit, or individual factors to explain the educational outcomes of Black students (Cross 2007; Lewis & Moore, 2008). Proponents of structural arguments asserted that schools are institutions of society and thus reflect the racist tendencies of American society. These tendencies therefore result in fewer resources for schools with majority Black students and less access to schools with more resources (Anyon, 2005; Kozol, 2005).

The cultural deficit and mismatch argument is based on the assumption that White behaviors, norms, and attitudes are the traits that promote school success. Students who fail to master these traits are subsequently viewed as inferior and incapable (Howard 2010; Skrla &
Scheurich, 2001). This leads to lower teacher expectations and can ultimately cause students to underperform, avoid school, or act out.

Finally, there are a number of researchers, including anthropologist John Ogbu, who assert that Black students themselves are responsible for the achievement gap. Ogbu put forth the oppositional identity theory as a powerful explanation of the lack of achievement in Black students. His theory holds that Black students tend to be more disengaged from the learning process in response to the perception that educational institutions are “White” (Ogbu, 2003a). As a result, academic underachievement becomes linked with asserting a cultural identity and a rejection of conformity to White norms and values. In contrast, sociologist Roslyn Mickelson described an attitude-achievement paradox in which Black students’ attitudes toward achievement and their actual academic achievement are incongruous (Mickelson, 1990). In fact, Mickelson found that Black students have abstract attitudes toward education that are similar to White students and that these attitudes are similarly positive in general. In other words, they aspire to do as well as White students in school. She also found, however, that Black students do not demonstrate the concrete attitudes that inform behaviors that promote academic success (Mickelson, 1990).

Taken together with the findings of prior research, this study explores the interactions of race, class, and gender further to understand the ways that historical, cultural, economic, and political factors influence Black students’ success in school.

Sociocultural Explanations

Sociocultural theory builds on the work of psychologist Lev Vygotsky. His research in cognitive development prioritized the role of social interaction in learning and cognitive development. Vygotsky posited two key elements that inform the work of socioculturalists: the more knowledgeable other (MKO) and the zone of proximal development (ZPD) (McLeod,
2007; Vygotsky, 1978). The MKO refers to a person or tool that knows more about a topic, concept, or skill than a learner. Through learning activities the less knowledgeable learner is able to gain new skills or knowledge with the MKO as a guide. Similarly, the ZPD is the “space” that learners occupy when moving from what they know to what it is to be learned. In other words, the ZPD includes the skills or knowledge that can be learned with the guidance of someone who has already mastered the knowledge or skill (i.e., a more knowledgeable other).

Building on Vygotsky’s work, sociocultural theorists offered powerful alternative explanations of student achievement and the influence of culture and identity on student learning and development.

Socioculturalists argued that the variance in student performance particularly among students of color, language minorities, and those from low socioeconomic backgrounds is understudied (Gutiérrez & Rogoff, 2003; Lee, et al. 2003). Gutiérrez and Rogoff argued that within racial and ethnic groups there are differences between individuals and these differences must not be used to describe racial or ethnic groups as a whole when assessing and reporting educational outcomes. Instead, educational research should “situate the social practices and histories of participants in particular communities” (Gutiérrez, & Rogoff, 2003 p. 16). However, they also noted that within racial and ethnic groups, differences between individuals must be examined and formed into pedagogical and policy approaches to improve student learning (Gutiérrez & Rogoff, 2003).

Lee furthers the sociocultural paradigm established by Gutiérrez and Rogoff by asserting that Black students in America have grown up in a racialized society with a history of institutionalized inequities that is reflected in their schools and social communities. These inequities, she argued, have a significant impact on the development and learning of Black
students as measured by standardized assessments. Drawing upon a mixed method study of urban youth in English classrooms she asserted that “cultural modeling” pedagogies that integrate and draw upon the cultural practices of local communities will decrease the achievement gap among communities of color. She encouraged educational researchers and pedagogues to examine the influence of individual and community practices that effect student engagement and learning (Lee, 2007; Lee, Spencer & Harpalani, 2003).

Similarly, Lisa Delpit asked educators to consider the complex cultural and structural processes that yield different educational outcomes for different groups. In Other Peoples Children: Cultural Conflict in the Classroom, she described the “silenced dialogue” that hangs over the educational experiences of Black students because of the cultural mismatch that undergirds and is always present when Black students interact with teachers, staff, and administrators. The cultural mismatch, according to Delpit, is most often a result of cultural “codes” that are different than the more powerful, White middle-class standard operating procedures (Delpit, 1995).

Pedro Noguera similarly argued that the Black male achievement gap reflects the Eurocentric structure of schools and is reflected in the structures, policies, pedagogies and practices that are often in conflict with the “cultural ways” that Black male students present themselves in schools. Black students are more likely to be suspended, expelled, or transferred than any other group in urban and suburban schools (Noguera, 2003).

Other researchers have explored the effect of socioeconomic status on educational attainment. In her book, Unequal Childhoods, Annette Lareau discussed the relevance of socioeconomic status on educational outcomes. Revisiting an earlier study conducted in the early 1990s, she found that of all the participants in the original study, middle-class students
graduated from high school and entered college at a rate of almost twice that of the low-income and poor students. She attributed the differences to middle-class parents’ ability to foresee and intervene with school personnel, provide additional supports in the form of extracurricular and academic preparation, and an overall cultural alignment with the culture of the schools and institutions of higher education (Lareau, 2003).

In an age of educational reform that values “skills” over “process,” or cultural ways of knowing and being, there is sure to be an achievement gap. This study is strengthened by the sociocultural paradigm as it allows an interpretation that yields “thick description[s]” of the educational outcomes of low-income Black students (Geertz, 1973).

John Ogbu’s cultural-ecological model also informs this study. The model asserts that there are two types of immigrants groups in America, involuntary and voluntary. Involuntary (immigrant) minorities were brought to America against their will and occupy a caste-like status. In contrast, voluntary (immigrant) minorities came to America because of push or pull factors and therefore do not occupy a caste-like status in society. As a result, voluntary minorities are allowed to be integrated into the fabric of society (Ogbu, 2008). Involuntary minorities share common cultural frameworks and often display attitudes and behaviors that are consistent with the larger group. This concept, known as fictive kinship, asserts that societal discrimination motivates Black students to participate in a “collective identity” or fictive kinship by adopting cultural symbols and emblems expressing opposition to the dominant culture as it exists in schools. Fictive kinship imbues a sense of belonging that insulates Black students from the perceived discrimination in school structures, policies, curricula, and practices (Ogbu, 2008). By assuming an appearance of being less intelligent and less academically capable than they actually
are, these students avoid being accused of “acting White” by their Black peers, which fortifies their membership in the group.

In a study of urban high school students, Ogbug found that Black students often took a stance against the White (school) establishment by deliberately adopting behaviors and attitudes not conducive to academic success. He coined this as the theory of oppositional identity. Re-reading Ogbug’s work and subsequent criticisms, many researchers have labeled this phenomena as opposition to “acting White” instead of an active act of resistance on the part of some Black students (Howard 2010). Howard goes on to argue that students who adopt oppositional identities, as described by Ogbug, are the students that are suspended more, are less engaged, and ultimately do not do as well on standardized test (Howard, 2010).

However, in a study of students in affluent suburbs Ogbug found that oppositional identities were more closely tied to socioeconomic status than he reported in his original research. As a result, he suggested that in low-income neighborhoods, the higher a Black person’s level of education, the more likely he or she will become ostracized and disenfranchised within his or her own community. This was not the case, however, in the affluent suburbs (Ogbug, 2003a). According to this cultural frame of reference, Black students who are academically successful may be perceived as trying not to adopt a Black cultural identity because they do not see the benefits of such an identity in American society (Ogbug, 2003a, p. 49).

This study examines the educational outcomes of low-income Black students and their twelfth grade educational outcomes. In the intervening years from middle to high school these students will be moving through adolescence, when identity development and peer associations are at their highest points. Ogbug’s cultural-ecological model is an important lens to undergird the analysis of the findings.
Continuing in the sociocultural paradigm, Markus and Nurius (1986), American social psychologists, proposed the concept of “possible selves.” This concept describes how individuals envision the various selves they might become throughout their lives, which can be expected, hoped for, and feared. According to Markus and Nurius, the visions of future selves are derived from experiences and representations of the self in the past. They drew on an extensive array of 20th century psychological literature to support and define possible selves theory and to explain their consequences for educational outcomes research. In a quantitative study of undergraduate students, they explored the relationship between and among possible selves, self-concept components, and self-esteem. They also considered possible selves in relation to motivation, proposing that the concept allows for a more direct connection between incentives and actions.

In four related studies, Oyserman et al. (1995) analyzed possible selves within a socially contextualized model of Black identity. They examined possible selves and gendered Black identity as potential predictors of school persistence. These studies focused on Black middle school students and found that these younger students conceptualized themselves within a Black identity schema and that this schema was often gendered. They also found that balance among possible selves predicted school persistence and that female students were more likely than male students to have balanced pairs of possible selves, while the presence of a balance between and among selves had more of an effect for males. Their findings suggest that it is advantageous for Black students to be able to construct a positive sense of themselves—and positive “possible selves”—that lend to academic success, especially in social contexts in which school persistence is considered “acting White” (Oyserman et al., 1995; Oyserman et al., 2002; Oyserman et al., 2006; Oyserman et al., 2007).
Coleman, Putnam, and Social Capital

Drawing and building upon the work of Pierre Bourdieu, James Coleman argued that people living in marginalized, poor, and working-class communities do not possess the social capital that is valued and rewarded in American society (Coleman, 1996). Schools as social institutions have mores and codes of conduct based on the majority and dominant culture. As such, the appropriate social capital is needed to navigate educational institutions successfully. It stands to reason, then, that groups without social capital (i.e., poor and/or minority communities) will be less successful in getting through these institutions. Therefore, Coleman argued that a greater degree of social capital coherence in social institutions promotes trust and individual actions among members of social groups (Coleman, 1996). Furthermore, he went on to note the role of family and kinship networks as the primary transmitters of social capital (Coleman, 1996, p.302).

Robert Putnam extended the social capital debate on educational outcomes. He argued that social capital refers to the connections among individuals in society and the norms and sense of reciprocity that arise from those relationships (Putnam, 1995). Putnam identified five factors that comprise social capital. The first, informal sociability, refers to the extent that individuals socialize with peers and friends in informal contexts. Second, social trust reflects an individual’s perception of and buy-in to the idea that society’s norms and mores reflects a sense of care and well-being for individuals in American society. Furthermore, engagement in community volunteerism, public affairs, and community organizational life all contribute to the development of social capital that supports successful educational outcomes (Putnam, 1995). Families at the higher levels of socioeconomic status have more physical and economic capital, thereby promoting the development and transmission of social capital that is more likely to produce
success in schools (Putnam, 1995). His data drew on civic engagement as a strong predictor of successful educational outcomes, arguing the relationship between civic engagement and educational outcomes is a “curvilinear one of increasing return” (Putnam, 1995, p. 667). Perhaps most significant for this study is his assertion that the last year of middle school and the first three years of high school are ten times more likely to affect trust and civic engagement than the first four years of initial schooling among students of all races and socioeconomic levels (Putnam, 1995 p. 667). Given that Black students experience poorer academic outcomes at this level of schooling, Putnam’s argument has important implications for developing civic engagement in Black students in order to foster academic achievement.

**Micro-level Interpretations**

In addition to macro-level explanations of Black students and their educational outcomes, researchers have also proffered explanations for the variance of educational attainment by examining micro-level variables such as school size, composition, and location as well as teacher quality, teacher expectations, and funding for high poverty schools (Howard, 2010).

In her article, “Stuck Schools Revisited: Beneath the Averages,” Natasha Ushomirsky argued that schools that are majority-minority serving receive less funding than their majority serving counterparts. She documented that school districts serving the greatest number of minority students receive less state and local money than districts serving the fewest number of minority students (Ushomirsky, 2011). Additionally, she documented that low-performing schools are more likely to have less qualified and less experienced teachers in the classroom. This practice is most abundant in middle and high school content area classes that require content and skill related mastery to succeed in higher level courses (Ushomirsky, 2011). These findings reveal the structural underpinnings of the achievement gap that continue to contribute to sub-par learning environments for Black students across the country.
In comparison, Sarah Almay and Christina Theokas have examined high-performing schools and have concluded that beneath the standardized test scores, outcome data reveal a more complex pattern for low-income, vulnerable Black students. Their subgroup data reveal that, even in high performing schools, students who enter behind in local and state standards never catch up and are often the first students to leave school or are eventually pushed out of schools (Almay & Theokas, 2010). Their findings indicate that sending low-performing students to better institutions does not correct the issue of underachievement once it has already begun. Instead, the report highlights the need to address the achievement gap from an economic standpoint by promoting from the beginning better learning environments for low-income Black students.

Finally, in a position paper and case study of Roxbury Charter School, researchers have concluded that high poverty schools offer less rigorous courses and that there are great disparities in the quality of advanced courses. Consider that in 2006, only 25% of Black and 22% of Latino high school graduates enrolled in the college preparatory track at their high schools (Education Trust, 2006). These findings and figures support the economic component of the achievement gap demonstrated by Ushomirsky (2011) and Almay and Theokas (2010).

**The Current Study and Factors Affecting the Educational Outcomes of Low-Income Black Students**

Research has shown that Black students, on average, perform worse than White students on measures of educational attainment and standardized testing. For instance, according to the most recent data available from the National Center for Education Statistics, Black students score an average of 31 points lower than White students on national standardized tests in math at the eighth grade level and score an average of 25 points lower on reading assessments at the same grade level (National Center for Education Statistics, 2006, 2012). Studies also indicate that
Black students drop out of high school in much larger numbers than their White counterparts. In fact, Black high school students leave school at a rate that is more than 1.5 times greater than White students and among 18-24 year olds have a high school graduation rate that is roughly 7% lower than Whites (NCES, 2012). The disparity represented by these numbers illustrates the need for continued action and attention to combat Black underachievement before it results in academic disengagement or school-leaving.

However alarming they are, these data do not reflect large social and economic variations within the Black population. Recent data suggest that most Black Americans are not poor; only one in five Black families now live in poverty (Bowman, 2011). As such, while the educational attainment of the poorest fifth of the Black population may be in crisis, Black students who are more affluent likely have more opportunities and resources for academic success. Furthermore, the data do not illustrate how the children of foreign-born Black Americans (who are over-represented in the Black middle class) tend to fare much better academically than their U.S.-born counterparts (Attewell, Domina, Lavin, & Levey, 2004).

The focus of this study is to explore the challenges to educational attainment of low-income Black students. These students are particularly vulnerable to education interruption or school-leaving because of their low socioeconomic position. Of particular interest are the differing levels of academic achievement between Black male and female students and how specific factors differently impact these groups’ educational attainment.

**Individual Student Characteristics and Educational Outcomes**

The 2011 NCES data indicated that the four year graduation rate for Black females was 59% compared to 48% for Black males (Aud et al., 2012). Further, Black females had higher test scores in reading and mathematics, earned better grades, and had higher rates of high school
graduation than Black males (Anderson, 2007; Goldin, Katz, & Kuziemko, 2006; Holzman, 2010; Malamud & Schanzenbach, 2007; Mickelson & Velasco, 2006). Some researchers utilized socialization and cultural reproduction theory to account for these differences. They suggested that girls are socialized to behave and be conscientious in schools and therefore teachers favor them more than boys, which allows female students to earn higher grades and ultimately achieve better educational outcomes (Kreig, 2011). Educational researchers have also found that a student’s individual characteristics and orientation towards school affects not only their educational outcomes but also their level of engagement and persistence in school (Oyserman et al., 2011).

**Family Structure and Educational Outcomes**

Family structure refers to the way in which family units are organized to provide care and support for their members. In the United States, the traditional family structure consists of two married individuals caring for their biological children, or what is called the “nuclear family.” In more recent decades, however, this nuclear family structure has become less prevalent (Edwards, 1987; Hacker, 2003). Since families play such a large role in development during childhood and adolescence, studies have been conducted to examine the link between family structures and academic achievement. Some researchers have suggested that family structure (and the resultant familial involvement) is crucial to the academic achievement of children and adolescents (Eagle, 1989; Jeynes, 2005). In fact, one study of the effect of parental involvement and family structure on adolescent academic achievement found that family structure was “the single greatest predictor of academic achievement” for a nationally representative sample of twelfth graders (Jeynes, 2005, p. 106). This study concluded that it is important for educators and parents to
become aware of the role that family structure and parental involvement play in boosting the academic achievement of adolescent educational outcomes (Jeynes, 2005, p. 114).

Furthermore, numerous studies have shown that students raised in single-parent homes (and particularly those headed by women) suffer adverse effects to their academic achievement, including higher dropout rates (Pong, 1997; Sigle-Rushton & McLanahan, 2004) and lower standardized test scores (Bain, Boersma, & Chapman, 1983). Additionally, studies on the impact of family structure on the educational outcomes of students indicate that students from single-parent homes are also more likely to dropout, become pregnant, or get married than students from two-parent homes (DeGarmo, Forgatch, & Martinez, 1999; Nichols et al., 2010).

In his book *Two Nations: Separate, Hostile, Unequal*, political scientist Andrew Hacker documents the trend of the changing American family structure toward single (female) parent households (2003, p. 89). This means that an increasing number of American children are being raised in single-parent family structures. Hacker, however, also demonstrates that while this trend is occurring on a nation-wide scale, it is magnified in the Black American population, such that the rate of Black single mother families is over twice the White (single) female-headed families rate (2003, p. 95). This information generates concerns about how the prevailing family structure in the Black population influences academic achievement for Black students.

Prior research has provided several views on the extent to which family structures have an impact on Black academic achievement, if at all. For instance, research has shown that there are differences in educational outcomes for Black males and females who are raised by single mothers (Bankston & Caldas, 1998; Barajas, 2011; Jeynes, 2003; Mandara, 2006). In particular, the single (female) parent family structure was found to have a greater negative impact on the educational attainment of Black males, who completed 1.26 fewer years of school compared to
their counterparts who lived in two-parent family household. Black females from single (female) parent families completed 0.73 fewer years compared to their counterparts in two-parent households (Barajas, 2011, p. 15). Similarly, studies have also shown a link between family structure and early involvement with gangs and the use of marijuana, which negatively impact students’ educational outcomes (Mandara, 2006).

Specifically regarding parental involvement, a 2003 meta-analysis of 21 studies by researcher William Jeynes found that Black academic achievement was influenced by a greater variety of factors than the achievement of Hispanic or Asian students (p. 210). Overall, Jeynes found that educational attainment for Black students was most greatly influenced by general parental involvement and parental style, followed by other factors such as the extent to which a parent reads to a child (p. 212). Jeynes concluded that because Black students are the most likely to come from single-parent homes, compared to other minority groups they benefit the most from parental involvement (p. 215).

Researchers have also studied the potential mediating link between family structures and socioeconomic status. A 1998 study into the effect of the single (female) parent family structure on the standardized test scores of 18,000 Black students found that there is a strong, negative correlation between the female-headed household and academic achievement (Bankston & Caldas, 1998, p. 718). The most important finding of this study, however, is that the concentration of Black students from single-parent homes in a school is the most important school-level predictor of academic achievement (p. 722). The authors noted that this factor has a stronger association with academic achievement than either race or socioeconomic status, which suggests that “the negative association between the percentage of students from one-parent families and academic achievement should not be attributed simply to the fact that schools with
high proportions of children from one-parent families have high proportions of students from poor families” (p. 722). This assertion, however, was contested by later research findings that illustrated that among low-income households, both single and married parents were less involved in their children’s schooling than their more affluent counterparts (Masten, Juvonen, & Spaitzer, 2009), which suggests that socioeconomic status plays an important role in student academic achievement.

Research on how family structures differentially influence the academic achievement of Black male and female students is limited. A 2006 literature review on family structures and academic achievement concluded, however, that educational outcomes for Black male students were improved when an authoritative parenting style was utilized, parents were actively involved in monitoring homework and limiting counterproductive time, and children were taught about their cultural heritage (Mandara, 2006). Taken with the findings of the 2011 Barajas study, the conclusions of this literature review support the idea that Black male students are differently impeded by single-parent family structures than Black female students.

**Students’ Educational Outlook and Educational Outcomes**

Student attitudes about themselves, learning, and achievement have been shown to be important factors for successful educational outcomes (Akey, 2006; Wang, Kick, Fraser, & Burns, 1999). This study will examine the effects of three attitudes in particular—locus of control, self-concept, and racial identity—on the academic outcomes of low-income Black students. Locus of control is a psychological concept that refers to the extent to which an individual believes that he or she controls the outcome of life events through his/her actions (which is termed intrinsic or internal locus of control) or that events are controlled by external factors such as luck (which is termed extrinsic or external locus of control) (Rotter, 1966). When
applied to the field of education, it is evident that students with an internal locus of control are more likely to feel that their actions (e.g., choosing to study or not to study for an exam) are responsible for their educational outcomes, and therefore, they are in control of their academic achievement. Conversely, students with an external locus of control are less likely to feel that they are in control of their educational outcomes.

For Black students, locus of control has also been found to be a significant influence on academic achievement. For instance, one study has shown that Black students with “higher levels of locus of control” are more likely to have higher academic standards and aspirations than those with “lower levels of locus of control” (Milner & Moore, 2003, p. 44). The study concluded that to increase academic achievement in Black students, teachers and counselors should foster academic environments that help students feel comfortable, capable, and confident (p. 47). Such an environment allows Black students to feel more in control of their educational outcomes, and they may therefore take the right steps to succeed academically.

Studies have also investigated the role locus of control plays in the educational outcomes of Black males in particular. One study into the relationship between locus of control, self-esteem, and parental verbal interaction for “at-risk” (underachieving) Black male students in the sixth through eighth grades found that locus of control and self-esteem had a moderate negative relationship (Enger, Howerton, & Cobbs, 1994, p. 272). In other words, the results suggest that Black male students with an internal locus of control also have higher levels of self-esteem. Given that high self-esteem has also been correlated with greater self-efficacy and higher academic achievement (Purkey, 1970; Smith, Sapp, Farrell, & Johnson, 1998), Enger and associates’ (1994) link between locus of control and achievement (i.e., self-esteem) for low-achieving Black males highlights a potential avenue for improvement for these students.
Self-concept is a construct that describes the ways in which individuals view themselves in relation to other characteristics such as education. Academic self-concepts describe students’ general affect toward school and education and whether or not they generally feel competent enough to complete schoolwork and succeed academically. As such, students’ self-concepts can have a great impact on how poorly or well they perform in school (Bong & Clark, 1999). Prior research on Black students’ self-concepts as they relate to academic achievement is limited. Two recent studies, however, have demonstrated that academic self-concepts are also important for the educational outcomes of Black American students.

In a study of the relationships between academic self-concepts, educational outcomes (as measured by grade point average), and academic disengagement for a sample of 96 Black students from an urban high school, three important results emerge. First, the researchers find that despite a lack of significant differences in academic self-concept between Black male and female students, Black female students achieve significantly higher grade point averages (Cokley et al., 2012, p. 61). This finding is consistent with the data illustrating that Black males underperform in school compared to their female counterparts. Secondly, the results of the study’s analysis indicate that academic self-concept is a significant positive predictor of grade point average for both Black male and female students (p. 62). Finally, the study finds that, over time, the relationship between academic self-concepts and GPA significantly decrease for Black male students but significantly increase for Black female students (p. 62). The researchers conclude that this result indicates that Black males eventually experience academic dis-identification, which then has a negative impact on their educational outcomes, while their female peers do not. It appears that while academic self-concepts are important for Black students in general, they have a greater impact on the educational outcomes of Black male students.
Another recent study by Terrell Strayhorn (2009) expands on the connection between academic self-concepts and educational outcomes for Black students. His study of the educational aspirations of Black males in suburban, urban, and rural high schools produced two findings that are relevant for the present study. In his analysis, students’ educational aspirations emerge as having a significant relationship with academic achievement, and he finds that high-achieving Black male students of high socioeconomic status who attend suburban schools report the highest aspirations, while lower academic aspirations are associated with low-achieving, low socioeconomic status Black male students in urban and rural school (Strayhorn, 2009, p. 721). These findings are relevant because they indicate that a student’s background may have a significant impact on how he forms his academic self-concepts, and, therefore, how successful he is in school. Furthermore, as Strayhorn concludes, if neighborhood setting plays an important role in the development of educational aspirations (which then influences academic achievement), it may be possible to offset the effect of urbanicity or rurality on aspirations and educational outcomes by establishing neighborhood environments that highlight and celebrate academic achievement in order to “incite, if not instigate” Black men’s aspirations in rural and urban settings (p. 724).

For Black students, academic self-concepts can also be closely linked to their racial identity, and therefore, researchers have explored how the racial identity of Black students is linked to their educational outcomes. One study found that students who have a well-developed sense of their racial identity are more likely to be intrinsically motivated, which seems to be a strong predictor of school success (Destin & Oyserman, 2009). These results supported the findings of the 2006 Mandara study, which recommended teaching cultural identity as a way to improve academic performance for Black male students.
Other authors have also highlighted the role of racial identification (and thus, culture) for the educational outcomes of Black students (Chavous, Bernat, Schmeelk-Cone, Caldwell, Kohn-Wood, & Zimmerman, 2003; Harper & Tuckman, 2006; Lee, 2007; Nasir et al., 2007; Neblett, Phillip, Cogburn, & Sellers, 2006; Strayhorn, 2009;). In her book, *Culture, Literacy, and Learning: Taking Bloom in the Midst of the Whirlwind*, author Carol Lee documented her experiences teaching literature in Chicago public schools using a cultural modeling framework for her lessons. Through the cultural modeling framework, Lee used her students’ existing cultural knowledge to bolster their learning in the classroom. For instance, Lee taught her students about perceiving satire in different mediums by starting with cultural forms that they knew (e.g., rap music, Black films, and television shows) and then moving toward the knowledge she wanted them to gain (i.e., detecting satire in non-Black literature). In other words, instead of resisting or trying to change the cultural norms and knowledge that her students possessed, Lee used their racial identities to facilitate learning.

Lee’s experience successfully teaching Black students supports the findings of earlier studies about the impact of racial identification on the academic achievement of this population. In a 2003 study of 606 Black adolescent students, researchers identified four different kinds of racial identities within their sample: the buffering/defensive type, the low connectedness/high affinity type, the idealized type, and the alienated type. Students in the study considered race in three dimensions: 1) as central to their self-definitions; 2) as having an aspect of private regard; and 3) and as having a public perception (Chavous et al., 2003, p. 1083). Of the four different kinds of race identity, the researchers found that only the alienated type (low centrality of race to self, strong negative private regard, and negative perception of public regard for race) was not predictive of high school completion (p. 1084). Based on these findings, they concluded that
Black students’ racial identity systems differ across groups and may therefore contribute to different pathways to academic success (p. 1086).

Building upon the work of Chavous and associates, Harper and Tuckman utilized the Multi-dimensional Model of Black Identity (MMBI) used in the Chavous study to further investigate the relationship between Black students’ racial identities and their academic achievement. Using a sample of 289 Black students from a large urban school district, Harper and Tuckman replicated three of the four racial identity types from the Chavous study. Their analysis indicated that students with the alienated racial identity type achieve significantly higher grade point averages than the students with the idealized racial identity type (high race centrality, positive private regard, and strongly positive public regard) (Harper & Tuckman, 2006, pp. 394-395). In contrast to what Chavous and associates found, Harper and Tuckman’s analysis showed that having an alienated racial attitude is conducive to academic success as it perhaps protects students from negative attitudes in society that they perceived Black Americans face (p. 397). Although their study produced significantly different results than the earlier Chavous study, the important finding to take away from both studies is that the attitudes that Black students have about their racial identities have a significant impact on their educational attainment.

School Characteristics and Educational Outlook

School composition is a way to describe demographically a school’s student population. For instance, a school can be described in terms of its racial composition, the socioeconomic status of its students, or its gender breakdown. Based on Gary Orfield’s research, it is clear that American schools are becoming re-segregated, and therefore, most Black children are attending schools that are majority minority (or Black) in terms of racial composition. Given the changing trends in American family structures, it is also fair to say that many, if not most, Black students
are attending schools composed mainly of students from single-parent homes. Just as Bankston and Caldas highlighted a link between the school makeup of children from single-parent families and academic achievement, other factors of school composition may have an effect on the educational outcomes of Black students.

The link between school composition and educational outcomes for Black students has been well researched. Building on the work of Balfanz and Letgers, which identified approximately 200 high schools in the United States that account for almost half of the country’s dropouts (Balfanz & Letgers, 2004), the Center for Social Organization at Johns Hopkins University continues to document the large number of schools in urban communities that produce a disproportionate number of school dropouts (Holzman, 2010). These schools are characterized as large, almost all majority minority, have high rates of free and reduced fee lunches, and report high numbers of school incidences involving fights or other types of behavioral disturbances (Diamond, 2006; Fantuzzo, LeBoeuf, Rouse, & Chen, 2012; Howard, 2008; Lareau, 2007; Lewis, 2006; Orfield, Losen, Wald, & Swanson, 2004).

These findings also support the results of an earlier study into the effect of school composition on academic achievement. Examining whether or not segregation still has an impact on educational outcomes, Rumberger and Palardy found that the socioeconomic composition of schools has a significant impact on their academic growth for both Black and White students (Rumberger & Palardy, 2005). The authors identify four factors that hamper academic growth in schools composed of low socioeconomic students: (1) teacher expectations, (2) the amount of homework that students do, (3) the number of rigorous courses that students take, and (4) students’ feelings about safety (ibid.). The authors conclude from this study that schools serving predominantly low-income student populations tend to be organized differently
(especially in terms of these four factors) than those serving students with higher incomes and that this difference tends to remain regardless of other school-level characteristics (ibid). Taken together with the findings of Balfanz and other researchers, these findings have important implications for low-income Black students. Since both racial and socioeconomic segregation have been found to be barriers to academic achievement and growth, low-income Black students occupy a particularly vulnerable space where their educational outcomes may be doubly affected by the negative effects of race and class.

A 2009 study of poverty, racial composition, and academic achievement in Michigan middle schools that used trust as a mediating variable offered a potential solution to the negative relationship between the racial and socioeconomic composition of a school and the academic achievement of Black students. Trust was defined in the study as a construct that included “respect, competence, personal regard for others, and integrity,” as well as the ability to accept risk based on judgments that a trusted party embodied these characteristics (Goddard, Salloum, & Berebitsky, 2009, p. 296). The researchers found that racial and economic disadvantages (e.g., that of low-income Black students) are indirectly associated with lower levels of achievement through their negative relationship with school trust (p. 303). Furthermore, their analysis illustrated that, controlling for school-level variables, greater trust is directly associated with higher levels of achievement in schools (p. 304). As such, the authors concluded that one way to mediate the effects of racial and economic disadvantage is to increase the levels of trust in schools in order to improve academic performance for racially and economically disadvantaged groups (p. 307).

Other policies have also tried to mitigate the effects of school composition on the educational outcomes of students. For instance, in New York City, all but one of the larger
comprehensive high schools have been broken into small schools that serve between 200 and 500 students, which seems to have had some effect on the graduation rate of Black students, particularly Black males (Fantuzzo et al., 2012).

**Premature Adult Activities and Educational Outcomes**

Finally, early adult activities also influence the educational outcomes of high school aged youth. For students in this age group, premature adult activities can be situations such as early pregnancy and parenthood or working schedules that interfere with schoolwork. Researchers have examined the link between student work schedules and their academic achievement and found that intensive student employment schedules negatively impact educational attainment for adolescents (Bachman, Staff, O'Malley, Schulenberg, & Freedman-Doan, 2011; Patton & Smith, 2009; Staff, Schulenberg, & Bachman, 2010). Specifically, Staff and associates have shown that students who work 20 or more hours per week perform less well academically than students who work fewer or no hours: they spend less time on homework and extracurricular activities, have higher rates of absenteeism, attain lower grade point averages and standardized test scores, and graduate from high school at lower rates (Staff et al., 2010, p. 183).

The literature on the effect of employment schedules on Black students’ academic achievement is limited; none of the studies reviewed for this study included a sample of Black students only. Given that the focus of this analysis, however, is the educational attainment of low-income Black students, connections can be made between what prior research has found and what is likely for low-income Black students. Partially because of their low socioeconomic status, low-income Black students may be more likely to take part-time employment to contribute to household expenses. As such, low-income Black students may be particularly susceptible to the negative effects that an intensive work schedule has on educational attainment.
Furthermore, research has shown that pregnant or parenting teens are more likely than their non-pregnant or non-parenting peers to exhibit diminished educational outcomes (Freudenberg & Ruglis, 2007; Nichols et al., 2010; Ryabob, 2011). Given that research has shown that Black females have an earlier age at first coitus, first pregnancy, and higher birthrates than White females (Basch, 2011; Murry, 1992), it appears that for low-income Black students, teenage pregnancy is an issue that may have serious consequences for educational attainment. In fact, studies into the impact of early pregnancy or parenthood on the academic achievement of Black students have demonstrated that this premature adult life activity is disruptive to the schooling of both Black males and females (Corcoran, 1998). In contrast, a more recent study suggests that teenage pregnancy has a differential impact on Black males and females. In a 2012 study of the effects of teenage fatherhood on young adult outcomes, researchers Fletcher and Wolfe found that pregnancy/parenthood had a greater impact on female educational outcomes, whereas males who fathered children were apparently less affected by premature parenthood (Fletcher & Wolfe, 2012).

Most studies about the effect of teenage pregnancy on educational outcomes in the Black American population, however, focus on the negative consequences for Black females. For instance, a 1990 study about the impact of adolescent childbearing on educational attainment and income found that, on average, Black women who had their first child as an adolescent completed two fewer years of education than did Black women who had their first child as an adult (Scott-Jones & Turner, 1990, p. 41). The analysis demonstrated that Black women who delayed pregnancy gained an additional 1.5 years of education (p. 41). Similarly, in a recent study into the effect of teen pregnancy on the achievement gap for urban minority youth, researchers found that minority teen mothers have a 10-12% lower chance of completing high
school and a 14-29% lower chance of attending college (Basch, 2011, p. 615). These findings, along with those of the Fletcher and Wolfe study, suggest that although pregnancy and early parenthood have negative consequences for the educational attainment of Black students, the biological and social consequences of becoming a mother have a greater impact than does becoming a father.

The literature review and the previous studies mentioned in this chapter have identified the various factors that affect the educational outcomes of low-income Black students. The research studies in this review of the literature have also analyzed the variables that have the most significant impact on the educational outcomes of low-income vulnerable Black students.
CHAPTER THREE: DATA AND METHODS

Introduction

The two previous chapters explored the factors that facilitate and hinder Black academic success, particularly for low-income Black students. Furthermore, these chapters examined the varying causes and consequences of Black (under) achievement as typified by the Black-White achievement gap. They analyzed the sociological theories that frame their discussion, as well. Finally, the prior chapters documented that certain factors (e.g., “dropout factories”) have a greater impact on Black males’ educational attainment, and other factors influence Black females’ academic achievement more.

The following study explores how various individual and social factors shape Black students’ academic aspirations, their motivation to succeed, and their actual educational achievement. Specifically, this study will determine the effect of specific factors on low-income Black academic outcomes and how these factors and outcomes may vary by gender. To explore these ideas, this study utilizes data pulled from the National Education Longitudinal Study of 1988 (NELS), which tracked a cohort of 8th grade students from 1988 to the year 2000, or 8 years after their expected high school graduation.

Using the NELS data, this study employs ordinary least squares (OLS) regression modeling to determine the impact of each social or individual variable on low-income Black educational attainment (and to detect any variance between genders). OLS regression modeling uses an analysis to demonstrate which variables best predict educational attainment for the
chosen sample. In other words, OLS modeling will illustrate which of the selected factors have the greatest impact on academic achievement for low-income Black students.

The methodology used to analyze and answer this guided study is divided into four sections. The first section will primarily provide details about the NELS dataset and how it was developed, including information about how the NELS sample was collected and what information was obtained from participants in the NELS. The second section will specify how and why the sample used for this study was obtained from the NELS and the characteristics of this sample. The third section describes the variables chosen for inclusion in this analysis. Finally, the last section details the method of statistical analysis employed in this study.

**Dataset**

The data utilized for this study’s analysis comes from the National Education Longitudinal Study (NELS:88). The U.S. Department of Education’s National Center for Education Statistics conducted the study over a period of twelve years. In that time period, the NELS researchers tracked a cohort of eighth grade students as they graduated into high school and continued their education or joined the work force. The study consists of the base year of 1988 and the four follow-up years of 1990, 1992, 1994, and 2000. Participants in the study were obtained through a clustered stratified national probability sampling design involving 1,052 public and private eighth grade schools. Eighth grade students were interviewed in the base year and in the rounds of data collection in subsequent four year periods.

In the first year of the study (1988), the NELS national probability sampling design produced a student sample of 24,599 eighth graders from selected schools. The questionnaire administered to the first cohort of students in 1988 solicited information about the students’ education, vocational, and personal development. According to the National Center for
Education Statistics website, this survey contained questions about: “school, work, and home experiences; educational resources and support; the role of education for their parents and peers; neighborhood characteristics; educational and occupational aspirations; and other student perceptions” (NCES, 2006). Students also answered questions about school-related activities, extra-curricular activities, and potential drug and alcohol use. In addition to the surveys, students completed achievement tests in reading, social studies, mathematics, and science. To supplement the information obtained from the student participants, NELS researchers also surveyed the students’ teachers, parents, and school administrators (NCES, 2006).

NELS conducted follow-up interviews of the 1988 cohort when those students entered high school as well as several years after their expected high school graduation date. The surveys and achievement tests administered to the first cohort in 1988 were utilized in the first two follow-up waves of data collection in 1990 and 1992. The first follow-up in 1990 took place when survey participants were expected to be in tenth-grade. The second follow-up interviews occurred in 1992 when students were expected to be seniors in high school. The third follow-up interviews took place in 1994, two years after cohorts were believed to have completed high school. Finally, the last follow-up interviews, referred to as the final wave, occurred in 2000, eight years after the students were projected to have graduated from high school.

The NELS samples in the first two follow-up years (1990 and 1992) also include students who were added to the study subsequent to the base year. As such, the sample in the first follow-up year (1990) contains students who were not in the original cohort of eighth graders in 1988, but were in tenth-grade in 1990. Similarly, the sample for the second follow-up year (1992) contains students who were neither in the original eighth grade cohort of 1988 nor in the tenth-grade cohort of 1990, but were high school seniors in 1992. This aspect illustrates how in the
first two follow-up years NELS maintains a nationally representative sample even though there are changes in the American population. It also demonstrates that students may not progress through school in sequential grade order (NCES, 2006).

In 1992 the National Center for Education Statistics published a study to identify the characteristics of high school dropouts in 1980 and 1990. The comparative study is particularly relevant to this current study because it provides insight into why there was a significant drop in the sample size between the base year 1988 and third follow-up in 1992. While the study draws from the high school and beyond dataset, for the purposes of this dissertation, I have drawn from the 1990 follow-up study (NCES, 1992).

The report examined demographic and family risk factors and academic background variables. Demographic and family risk variables include race/ethnicity, poverty, family composition, parental education, and parental expectations. NCES found that in 1990 the dropout rate for Black students was 8% and 13% for students who were from families below the poverty line. Students living in homes with step parents and single parents were twice as likely to drop out as students living with two parents. Female students who had children of their own dropped out at a higher rate than females without children. Students who had parents without college experience were three to five times more likely to graduate than parents with a college education. Students whose mothers expected their child to complete only high school were five to ten times more likely to dropout than mothers who expected their children to finish college. It is important to note, as have other researchers, that multiple risk factors are often in play with at-risk students. Finally, the study found that 10th grade students with three or more family risk factors were five times more likely to dropout than those with less (NCES, 1992).
Academic variables included test scores in 10th grade, low grades in high school, credits accumulated, work outside of school, and whether students were ever held back. Students who performed in the lowest decile on standardized mathematics tests had a drop-out rate of 19% versus 4% for students who scored in higher deciles (NCES, 1992). Students who earned grades of C or D had a combined dropout rate of 33% versus .9% for students who earned As and Bs. As to credits earned, students who earned below five Carnegie units had a dropout rate of 46%. Students’ who were placed in remedial English or math had a combined dropout rate of 25.6%. Students who repeated a grade had a dropout rate of 15%. Again, as with the family risk factors students who had multiple academic factors were more likely to drop out. Those with no negative academic factors dropped out at a rate of 1.7%, but those with five or more factors dropped out at a rate of 32.7% (NCES, 1992).

**Analytic Samples**

This study utilizes two out of the five waves of data collection in NELS: the base year study (NELS:88) and the second follow-up study (NELS:88/1992). The base year sample is the base comparison group because it was the initial basis for the study. The second follow-up sample from 1992 was chosen for inclusion in the analytical sample because the students in the 1992 sample were expected to be in their senior year of high school. As such, this particular sample provides a good comparison to the base year sample for determining which personal, academic, and social factors in the students’ high school experiences had the largest impact on their academic achievement and future aspirations.

To obtain a sample of low-income Black students from the NELS dataset, a subsample was drawn in a two-step process. First, students of all ethnicities belonging to the lower two-thirds of the Socioeconomic Status Composite (BYSES) were isolated. Then, from this
subgroup, all the Non-Hispanic Black students\(^2\) were identified. All the selected respondents included in the present study were those who responded to the questionnaires in the two chosen waves, and for this purpose the (most appropriate) selector—“Panel flag, member F2, F3, and F4 (F4F2PNFL)”—was used.

Weights were assigned to participants to account for the unequal probability of students being selected in the NELS sample. In this specific case, Non-Hispanic Black students were oversampled, and the (most) appropriate weight that ensured their national representativeness was “Panel weight, F2, F3, and F4 (F4F2PNWT).” After the selection, the subsample had a total of 842 cases. An additional decline in the subsample size also occurred due to missing data.

**Measures**

This section will focus on the variables selected for this study. A brief description of the dependent measure will be provided, followed by an explanation of operational definitions for the independent predictors used in various categories.

**Dependent Variable**

The outcome measure utilized in this analysis is the *Standardized Test (Composite Reading, Math) in 1992*. This is a variable already existing in the NELS dataset (F22XCOMP “Standardized Test Composite, Reading, Math”) that measured student scores on the combined standardized test of reading and mathematics in the spring of 1992 (second follow-up).

**Independent Variables**

**Control variable.** The *Standardized Test (Composite Reading, Math) in 1988* is a variable already existing in the NELS dataset (BY2XCOMP “Standardized Test Composite, Reading, Math”) that measured student scores on the combined standardized test of reading and

---

\(^2\) The NELS dataset categorizes Black Americans as “Black not of Hispanic origin,” so the term non-Hispanic Blacks will henceforth refer to the students identified that way in the NELS sample.
mathematics in the spring of that year. This predictor was chosen to account for ceiling and floor effects on the dependent variable, which could cause scores to cluster on either end of the distribution.

**Main independent variable.** To record differences between Black male students and Black female students on the dependent variable, a gender variable was created. *Male* is a dummy variable obtained from the recoding of the original variable F2SEX “Composite Sex” that indicates whether the respondent is male (coded 1) or female (coded 0).

**Individual characteristics.** *Single-parent Family Structure* is a dummy variable resulting from the recoding of the categorical variable BYFCOMP “Family Composition Composite.” BYFCOMP indicates whether the family structure of respondents consists of either a mother or father only (coded 1) or not (coded 0).

*Locus of Control* is a composite measure created by NCES (BYLOCUS1 “Locus 1 Locus of Control”) measuring the general attitude and control one has over his or her life. Its range runs from -2.67 to 1.24. Negative scores indicate an external locus of control, and positive scores signify an internal locus of control. A negative score on this measure (or an external locus of control) indicates that survey participants consider life outcomes as outside of their control. They see these outcomes as independent from their decision-making and hard work, maintaining that external forces determine their life trajectories. In contrast, positive scores (which refer to an internal locus of control) indicate that the survey participants are convinced that their life outcomes are within their control and therefore dependent on their determination to achieve predetermined goals.
**Individual educational outlook.** *Respondent’s Educational Aspiration* is an original variable (BYS45 “How Far in School Do You Think You Will Get”) ranging from 1-“won’t finish high school” through 6-“higher school after college.”

*Respondent Plans to Go to School Right After High School* (F2S49) is a dummy variable having a value of 0 for “no” and 1 for “yes.”

**School characteristics.** *Urban* is a dummy variable indicating which schools within the survey are in an urban area (coded 1) or not in an urban area (coded 0). This variable (and the following two), result from the recoding of G8URBAN “Urbanicity Composite.”

*Suburban* is a dummy variable indicating whether the school the respondent attended is in a suburban area (coded 1) or is not in a suburban area (coded 0).

*Rural* is a dummy variable indicating whether the school the respondent attended is in a rural area (coded 1) or is not in a rural area (coded 0).

*Total School Enrollment* is an original continuous item measuring the number of students enrolled in eighth grade in the respondent’s school. It ranges from 1-“1-49 students” through 6-“400+ students.”

*Percent Minority in School* is a continuous variable taken from the original dataset (G8MINOR = from 0-“none” to 7-“91-100%”) that measures the percentage of students considered minority in a respondent’s school.

*Percent Students with Free Lunch in School* is a continuous measure existing in the NELS data base (G8LUNCH) ranging from 0-“none” to 7-“91-100%.” This variable serves as a proxy measure of the socioeconomic status of schools.

*Level of School Problems* is a composite measure created by averaging the scores of a battery of 11 items. The items are (NELS variable name and label):
1) BYS58A “Student Tardiness a Problem at School”
2) BYS58B “Student Absenteeism a Problem at School”
3) BYS58C “Students Cutting Class a Problem at School;
4) BYS58D “Physical Conflicts Among Students a Problem”
5) BYS58E “Robbery or Theft a Problem at School”
6) BYS58F “Vandalism of School Property a Problem;
7) BYS58G “Student Use of Alcohol a Problem at School”
8) BYS58H “Student Use of Illegal Drugs a Problem”
9) BYS58I “Student Possession of Weapons a Problem”
10) BYS58J “Physical Abuse of Teachers a Problem”
11) BYS58K “Verbal Abuse of Teachers a Problem.”

The original scores of all 11 items ranged from 1- “serious” to 4- “not a problem.” Before creating the composite, all those items were rescaled to a new range running from “0” to “3.” The index of reliability for the final scale is α = .92. Higher scores indicate a more severe level of problems in school.

**Premature adult life events.** *Respondent Is or Has Been at Least in a “Marriage-Like Relationship”* is a dummy variable resulting from the recoding of F2S73 “Respondent’s Current Marital Status” (from 1-”single, never married” through 6-”other”). The relative values are “0,” if the respondent has never been married and “1” in all other situations.

*Respondent Has a Dependent Child or Expecting One* is a dummy variable created by collapsing the values of the original item “Respondent Has any Children of His/Her Own” (F2S76 = from 1- “yes, I do” to 3- “no, but expecting”). It indicates whether the respondent has a child or is expecting a child in short time (coded 1) or no child at all (coded 0).
**Respondent Employment Status** has been conceptualized in terms of increasing time dedicated to a job outside the household. The original categorical variable (F2N11 “Respondent’s Current Employment Situation”) ranged from 1- “working part-time” through 9- “none of the above.” The recoding produced a quasi-continuous measure ranging from 0- “not working” through 2- “working full-time.”

**Analytic Strategy**

This study investigates the gender gap in educational achievement among disadvantaged Non-Hispanic Black students by the twelfth grade and the differential influences that selected factors are having on the educational growth of male and female students from eighth to twelfth grade. For such purposes, two separate analyses were conducted employing multistage ordinary least squares regression modeling. In the first analysis I evaluate the Non-Hispanic Black gender gap and factors that could explain the difference. In the second analysis I evaluate a sample of students divided by gender and separate regression models for Non-Hispanic Black males and females.

The order in which the predictors are entered in the regression models follows a temporal logic as explained in the theory section. The order for the analysis of the overall sample (both male and female students) is detailed below. The first model, besides controlling for ceiling and floor effects by introducing eighth grade standardized test scores, evaluates the gender gap on twelfth grade standardized test scores before controlling for other predictors. A second model adds variables pertaining to the area of the individual characteristics (family structure, locus of control). In the third model, students’ educational outlook play a role in modifying the gender gap (i.e., educational aspirations and plans to continue school after graduation from high school). In the fourth model, variables regarding the school environment are added (e.g., level of
urbanicity, school enrollment, and minority concentration). Finally, in the last model, predictors related to premature adult life events (e.g., having or expecting a child and employment status) are added.

The relative regression equations of the above models are (predictors are grouped by semantic area):

1) Twelfth grade test score = a + b₁(eight grade test score) + b₂(gender);

2) Twelfth grade test score = a + b₁(eight grade test score) + b₂(gender) + b₃(individual characteristics);

3) Twelfth grade test score = a + b₁(eight grade test score) + b₂(gender) + b₃(individual characteristics) + b₄(individual educational outlook);

4) Twelfth grade test score = a + b₁(eight grade test score) + b₂(gender) + b₃(individual characteristics) + b₄(individual educational outlook) + b₅(school characteristics);

5) Twelfth grade test score = a + b₁(eight grade test score) + b₂(gender) + b₃(individual characteristics) + b₄(individual educational outlook) + b₅(school characteristics) + b₆(premature adult life events);

Where: “a = intercept” and “b₁ … b₆ = slopes for predictors.”

Although the same logic is used for male students as the analysis conducted separately for female students, the series of models run are slightly different. Since there is no need for a predictor for gender, four additional models for both male and female students are run. The first model consists of eighth grade test scores and individual characteristics; the second model adds data representing students’ educational outlook; the third model adds data identifying school characteristics; and the fourth model adds data concerning premature adult-life events.

In terms of regression equations they are:
1) Twelfth grade test score\textsubscript{(male/female)} = a + b_1(\text{eight grade test score}) + b_2(\text{individual characteristics});

2) Twelfth grade test score\textsubscript{(male/female)} = a + b_1(\text{eight grade test score}) + b_2(\text{individual characteristics}) + b_3(\text{individual educational outlook});

3) Twelfth grade test score\textsubscript{(male/female)} = a + b_1(\text{eight grade test score}) + b_2(\text{individual characteristics}) + b_3(\text{individual educational outlook}) + b_4(\text{school characteristics});

4) Twelfth grade test score\textsubscript{(male/female)} = a + b_1(\text{eight grade test score}) + b_2(\text{individual characteristics}) + b_3(\text{individual educational outlook}) + b_4(\text{school characteristics}) + b_5(\text{premature adult life events}).

**Results**

Before proceeding with the final analyses, I checked that all the selected variables approximated the normal distribution. There was no severe collinearity among predictors that might have biased the estimation of the regression parameters by inflating their standard error (i.e., making them not statistically significant). The normality assumption was assessed by checking skewness and kurtosis while the collinearity was evaluated by means of the Variance Inflation Factor (VIF). Among all models run: the largest value of skewness for continuous predictors = |1.4|; the largest value of kurtosis for continuous predictors = |1.6|; and finally the largest value on the VIF is 2.7.\(^3\)

One limitation of the present study regards the interpretation of the regression estimates for the analysis for male students. In fact, the lower size of this subsample (N = 131) compared to the sample of female students (N = 236) may affect the robustness of such estimates.

\(^3\) The most conservative approach regarding Ordinary Least Squares Regression considers a VIF = 4 to be a concern for multicollinearity (see O’Brien, 2007).
CHAPTER FOUR: RESULTS

Introduction

This chapter presents the results of the analysis performed on the NELS sample of Black students of low socioeconomic status. The results are presented in the following order: first, univariate statistics for the whole sample and divided by gender; then, a bivariate analysis to show the relationships between the dependent variable and both continuous and categorical predictors; finally, the findings from the multivariate analysis for the whole sample first and then for subgroups selected according to gender.

Univariate Analysis

Whole Sample

The second column of Table 1 shows the descriptive statistics for the whole sample of Non-Hispanic Black students of low socioeconomic status.

Starting from the first row of Table 1 we can see that the mean Standardized Test Score in Reading and Math in 1992 was 43.14 with a dispersion of 8.36 standard deviations, whereas the homologous measure in 1988 averaged 44.10 although less dispersed (SD = 7.63). Moreover, this sample consisted of 47% of male students.

In terms of the other individual characteristics, 39% of the students came from a monoparental family and had an average score on the Locus of Control measure of -0.12, which indicates an external locus of control, with a dispersion of almost eight-tenths of the standard deviation.

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4 See above in Data and Methods for more details about external vs. internal locus of control.
The viewpoints these students held of their educational futures in 1988 demonstrates their average educational aspiration (which was 4.50 (SD = 1.23) fell between the range of “will attend college” (i.e., level 4) and “will finish college” (i.e. level 5). Those earlier educational aspirations translated to later academic attitudes. In a 1992 interview, 79% of students from this test group declared to have plans for continuing their education, such as going to college immediately after graduating from high school. Looking at the characteristics of the school environment, half of these students were attending urban schools, followed by 27% in suburban schools and 22% in rural schools. The schools attended had an average enrollment of 4.16 (SD = 1.59) which fell between the levels corresponding to “600-799 (students)” and “800-999 (students).” The student body composition of those schools presented, on one hand, an average level of minority concentration of 5.40, which is between “41-60% (minority students)” and “61-90% (minority students),” with a standard deviation of 1.49; and on the other hand, a mean level of the percentage of students receiving free lunch of 4.67 (SD = 1.89), which fell between the level referring to “21-30% (students)” and “31-50% (students).” Finally, the average level on the index of school problems was 1.09 with a standard deviation of 0.83. The range ran from “0 = no problems” through “3 = all the problems (taken into consideration in the present study5).”

The last problematic area considered refers to what is labeled as “Premature Adult Life Events.” This domain comprises measures collected in the last wave of data collected for the present study, which is 1992. Of these students, 8% had been in a marriage-like relationship while attending high school; however, almost twice that percentage already had the responsibility of a dependent child or expected a child. Moreover, the average level in

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5 See above Data and Methods, section Measures for the list of problems combined in the index.
employment status was 1.34, which is a level between “working part-time” and “working full-time,” with a dispersion of almost nine-tenths of the standard deviation.

**Univariate Analysis by Gender**

The objective of the present study is to understand the pattern of influences that may have differentially affected the academic achievement of females and males within a defined subsample. This subsection points to a distinction between these two groups of students that seems to emerge at a descriptive level of analysis (see column 3 and 4 of Table 1).

Female students had higher test scores than males in 1992 (43.72 vs. 42.49). Both subgroups had the same average test score in 1988 (M = 44.10), although female students were less dispersed around that mean than were males (SD female = 7.06 vs. SD male = 8.23).

More female students belonged to a single-parent family than males (43% vs. 34%), but they presented approximately the same average (negative) score on the locus of control variable.

Females had higher average educational aspirations than their male counterpart (4.64 vs. 4.35), but both groups presented more or less the same percentage, below 80%, of students who declared their intentions to continue to study after high school.

When looking at School Environment, urbanicity, statistics show that 24% of females vs. 31% of males attended suburban schools; there were only small differences in gender ratios in urban and rural schools. Females, however, appeared on average to attend schools with smaller enrollments, with higher concentrations of both minority and free lunch eligible students, and afflicted by a higher level of school problems than male students.

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6 The heading “Univariate Analysis by Gender” is used to stress the fact that no significance test was run on the comparison of means between female and male students. Moreover, for consistency in the presentation of the results, I presented this subsection as part of the Univariate Analysis section rather than in the following Bivariate Analysis sections.
In the last domain of variables, Premature Adult Life Events, we see, on the one hand, a higher percentage of males than females (10% vs. 6%) engaged in a marriage-like relationship. Male students earned an average level rating, when evaluating employment status measures, higher than females (1.37 vs. 1.32), which indicates that more males held a full-time job in the twelfth grade than females. On the other hand, a higher percentage of female students carried the burden of motherhood (actual or upcoming) compared to the percentage of students who had responsibilities related to fatherhood (18% vs. 11%).

**Bivariate Analysis**

After the univariate analysis, bivariate relationships between the dependent variable, the combined Standardized Test Score in Reading and Math in 1992, and the independent predictors were estimated. These data are presented in both Table 2 and Table 3. The first series of bivariate relationships presented are those between the dependent variable and the independent dichotomous predictors.
Table 1. Weighted Means, Standard Deviations, and Ranges of Variables for Non-Hispanic Black Students Overall and by Gender

<table>
<thead>
<tr>
<th>Variables</th>
<th>All Students</th>
<th>Female Students</th>
<th>Male Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>Standardized Test (Reading, Math) in 1992</td>
<td>612</td>
<td>43.14</td>
<td>8.36</td>
</tr>
<tr>
<td>Standardized Test (Reading, Math) in 1988</td>
<td>804</td>
<td>44.10</td>
<td>7.63</td>
</tr>
<tr>
<td>Male</td>
<td>842</td>
<td>0.47</td>
<td>0.50</td>
</tr>
<tr>
<td>Individual Characteristics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Parent Family Structure</td>
<td>828</td>
<td>0.39</td>
<td>0.49</td>
</tr>
<tr>
<td>Locus of Control</td>
<td>825</td>
<td>-0.12</td>
<td>0.78</td>
</tr>
<tr>
<td>Individual Educational Outlook</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R. Educational Aspirations</td>
<td>823</td>
<td>4.50</td>
<td>1.23</td>
</tr>
<tr>
<td>R. Plans To Go to School Right After H.S.</td>
<td>631</td>
<td>0.79</td>
<td>0.41</td>
</tr>
<tr>
<td>School Environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban School</td>
<td>842</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>Suburban School</td>
<td>842</td>
<td>0.27</td>
<td>0.45</td>
</tr>
<tr>
<td>Rural School (Reference Category)</td>
<td>842</td>
<td>0.22</td>
<td>0.42</td>
</tr>
<tr>
<td>Total School Enrollment</td>
<td>842</td>
<td>4.16</td>
<td>1.59</td>
</tr>
<tr>
<td>Percent Minority in School</td>
<td>833</td>
<td>5.40</td>
<td>1.49</td>
</tr>
<tr>
<td>Percent of Student with Free Lunch in School</td>
<td>836</td>
<td>4.67</td>
<td>1.89</td>
</tr>
<tr>
<td>Level of School Problems</td>
<td>796</td>
<td>1.09</td>
<td>0.83</td>
</tr>
<tr>
<td>Premature Adult Life Events</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R. Is/Has Been in a Marriage-Like Relationship</td>
<td>614</td>
<td>0.08</td>
<td>0.28</td>
</tr>
<tr>
<td>R. Has a Dependent Child or Expecting One</td>
<td>696</td>
<td>0.15</td>
<td>0.36</td>
</tr>
<tr>
<td>R. Employment Status in 12th-Grade</td>
<td>728</td>
<td>1.34</td>
<td>0.88</td>
</tr>
</tbody>
</table>
### Table 2. Weighted Comparison of Means on Dependent Variable by Independent Variables

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Standardized Test (Reading, Math) in 1992</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n&lt;sub&gt;i&lt;/sub&gt; in parentheses)</td>
</tr>
<tr>
<td><strong>Male</strong></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>43.72†</td>
</tr>
<tr>
<td></td>
<td>(358)</td>
</tr>
<tr>
<td>Yes</td>
<td>42.49†</td>
</tr>
<tr>
<td></td>
<td>(254)</td>
</tr>
</tbody>
</table>

**Single Parent Family Structure**

| No                    | 43.09†                                    |
|                       | (373)                                     |
| Yes                   | 43.36†                                    |
|                       | (231)                                     |

**R. Plans To Go to School Right After High School**

| No                    | 40.08***                                  |
|                       | (131)                                     |
| Yes                   | 44.70†                                    |
|                       | (381)                                     |

**Urban School**

| No                    | 43.26†                                    |
|                       | (405)                                     |
| Yes                   | 43.01†                                    |
|                       | (207)                                     |

**Suburban School**

| No                    | 42.99†                                    |
|                       | (431)                                     |
| Yes                   | 43.54†                                    |
|                       | (181)                                     |

**Rural School**

| No                    | 43.21†                                    |
|                       | (388)                                     |
| Yes                   | 42.95†                                    |
|                       | (224)                                     |

**R. Is/Has Been at Least in a Marriage-Like Relationship**

| No                    | 44.01†                                    |
|                       | (461)                                     |
| Yes                   | 43.26†                                    |
|                       | (34)                                      |

**R. Has a Dependent Child or Expecting One**

| No                    | 44.64***                                  |
|                       | (505)                                     |
| Yes                   | 37.98†                                    |
|                       | (55)                                      |

†<sup>p</sup> ≤ .10  ***<sup>p</sup> ≤ .001

Note: Within each predictor on both dependent variables the level of statistical significance is placed just on one of the two categories. The compared means within each predictor without a superscript do not differ from each other at any of the levels of statistical significance considered.
Table 3. Pearson’s Correlations

<table>
<thead>
<tr>
<th>Variables</th>
<th>Standardized Test (Reading, Math) in 1992</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardized Test (Reading, Math) in 1992</td>
<td>--</td>
</tr>
<tr>
<td>Standardized Test (Reading, Math) in 1988</td>
<td>.707**</td>
</tr>
<tr>
<td>Locus of Control</td>
<td>.307**</td>
</tr>
<tr>
<td>R. Educational Aspirations</td>
<td>.324**</td>
</tr>
<tr>
<td>Total School Enrollment</td>
<td>.043</td>
</tr>
<tr>
<td>Percent Minority in School</td>
<td>-.151**</td>
</tr>
<tr>
<td>Percent of Student with Free Lunch in School</td>
<td>-.204**</td>
</tr>
<tr>
<td>Level of School Problems</td>
<td>.039</td>
</tr>
<tr>
<td>R. Employment Status in 12th-Grade</td>
<td>.049</td>
</tr>
</tbody>
</table>

** p ≤ .01

There was a statistically marginally significant difference on the average test score in reading and math between female and male students: female students had an average test score that was 1.23 points higher than male students. No statistically significant difference in test score was found between students coming from single-parent families and those from other types of families. There was, however, a large statistically significant difference, close to 5-scale points, on the dependent variable between students who planned to go to college after high school (M₁ = 44.70) and those who did not (M₀ = 40.08). No statistically significant difference was found between students attending schools in contexts at different level of urbanicity, although across the three levels the average achievement for students attending suburban schools is higher than students attending both urban and rural schools (43.54 vs. 43.01 and 42.95). No statistically significant difference was found between those students who were or had been in a marriage-like relationship and those who had not been, although the suggestion seems to be that
for this specific sample of students an engaging relationship may detract from achievement. As expected, having a dependent child or expecting a child represented a strong influence on school achievement. Students without such influence had an average test score that was almost 7-points higher than those who had or were going to have the responsibility for a dependent child, and such a difference was highly statistically significant (44.64 vs. 37.98, \( p \leq .001 \)).

The second series of bivariate relationships refers to the Pearson’s correlations between the dependent variable and the independent continuous predictors, which are present in Table 3. There is an obvious strong direct correlation between the test score measured at baseline (i.e., in 1988) and that which was measured in 1992. It may be useful to recall that this predictor was included in the analysis to control for floor and ceiling effect in the multivariate analysis. In regard to the other correlations, there was a direct correlation between test score and both locus of control (\( r = .307 \)) and students’ educational aspirations (\( r = .324 \)); both relationships were statistically significant at the .01 level. Therefore, students with a higher level of locus of control and with higher educational aspirations had a higher test score. There were statistically significant relationships (\( p \leq 0.1 \)), in the form of negative correlations between test scores and both school measures of minority concentration and percent of students receiving free lunch. The higher the level of the percent of minority students in the school attended, the lower the test score (\( r = -.151 \)). A similar trend but with a different magnitude in the strength of the relationship was seen in the second correlation (\( r = -.204 \)). No bivariate relationship was found between the dependent measure and the level of the total school enrollment or the level of school problems and the employment status of students.
Multivariate Analysis

Whole Sample

To investigate the factors influencing the school achievement of Non-Hispanic Black students in 1992, multivariate analyses were conducted using ordinary least squares (OLS) regression models, where it was sequentially controlled for all the variables described: baseline test score and gender, Individual Characteristics, Individual Educational Outlook, School Environment, and Premature Adult Life Events. The results of these regression models are presented in Table 4.

All of the variables added in each sequential stage increased the explanatory power of each model as indicated by the progressive increase in the adjusted $R^2$ that represents the amount of total variability of the dependent measure reproduced by the independent variables in the model. The parameter estimates in the first model, by including both baseline test scores, were able to control for floor and ceiling effect using the dummy predictor “male.” Compared to female students (i.e., the intercept = 14.99, $p \leq .001$), males have a lower average school achievement of 2.25 points ($p \leq .001$) when adjusting for the simultaneous linear change on the other predictor in the model.

In Model II, the family structure and locus of control variables were added. Of the two, only locus of control was statistically significant ($p \leq .001$). For each additional unit of change on the measure, the test scores increased 3.30 points after controlling for the simultaneous linear change on all other predictors. Considering that the range of this predictor ran from negative to positive (see column 5 in Table 1), however, this is true only for those students who had a positive score or, in more substantial terms, those who had an internal locus of control. Those who had a score on the locus of control measure below zero (i.e., students that can be identified
as having an external locus of control) had, according to the regression equation, a predicted test score decrease of 3.30 points for each negative unit of change. In this model, the variable “male” is still statistically significant because it retains the same direction as in the previous model, although its magnitude has decreased to -2.05 ($p \leq .01$).

In Model III, the two measures belonging to the domain Individual Educational Outlook were added. Both predictor variables were statistically significant and positively related to the dependent measure. Each additional unit in term of educational aspirations raised the test score 1.27 points ($p \leq .001$) after adjusting for the simultaneous changes in all other predictors. The students who had plans to go to college after graduating from high school showed an average achievement of 3.96 points higher than those who did not after adjusting for the simultaneous linear changes on all other predictors. In this model, the parameter estimate of “male” decreased (in absolute value) even more in relation to the previous model, but it was still statistically significant ($B = -1.43, p \leq .05$).

In Model IV, the variables referring to School Environment were added. Three out of six predictors showed a multivariate statistically significant association with the dependent variable. Each additional unit on the level of the total school enrollment produced an increase of almost three quarters of a point on the test score ($p \leq .001$) when controlling for the other predictors in the model. Each additional unit of increase on both students receiving free lunch and level of school problems decreased the test score .47 points ($p \leq .05$) and .98 ($p \leq .05$) points, respectively, when adjusting for all the other predictors considered in the model. Curiously, the parameter of the predictor “male” increased not only its (absolute) magnitude but also its level of statistical significance ($B = -1.92, p \leq .001$), which suggests that in the previous model there was some suppressed (adjusted) correlation that the new predictors unveiled in the new model.
Moreover, all the other regression coefficients that were significant in the previous model are still significant in the Model IV, although with a slightly lower strength.

Finally in the last model (Model V in Table 4), the variables relative to the area Premature Adult Life Events were included. All three measures present a negative parameter estimate. Only one, however, “Respondent Is/Has Been in a Marriage-Like Relationship,” was statistically significant. The results show that those students who declared in 1992 to be or had been in an engaging relationship had a test score 2.73 points \( p \leq .001 \) lower than that of those who did not have such a marriage-like relationship. In this final model, the variable “male” is still statistically significant with a coefficient \( B = -1.82 \ (p \leq .01) \). However, the majority of all other predictors retains their statistical significance with two exceptions: 1) the predictor measuring educational aspirations was significant in Model IV but no longer so in Model V; 2) the level of minority concentration in school was not significant in the previous model but became marginally statistically significant in Model V, which again seems to suggest a suppressed (adjusted) correlation, which was revealed by the additional predictors included in this last model.

**Multivariate Analysis by Gender**

In the previous section the presence of a gender difference in achievement remained unexplained even when other predictors were included in the various models. Moreover, it appears that locus of control, plans to continue to study, structural characteristics of the school attended, and experience of a marriage-like relationship contributed to the prediction of test score in 1992. The goal then was whether such an explanatory pattern held for both female and male students. Therefore, to investigate whether there were gender differences in how the factors included in the above models influenced school achievement, the above models were run
separately for female and male students. In this new series of models, there were similarities and differences between the two subgroups of students and with the homologous dynamics depicted in the models run for the whole sample. At this point, since “male” was not a separate predictor anymore the new series of models started by including test score at baseline and the Individual Characteristics, followed by the other three sequential models including Individual Educational Outlook, School Environment, and Premature Adult Life Events, respectively. These new results are displayed in Table 5.

In this analysis by gender, it is believed that each sequential model added some explanatory power. By looking at the adjusted $R^2$ in the last row of Table 5, however, it is clear that, discounting the (obviously large) part of variability of the dependent variable reproduced by test score at baseline, there are some differences. For female students it is the (variables included in the) last model that reproduced the highest percentage of variability of the dependent variable ($R^2$ rose to .775 in Model IV from .763-.765 in the previous three models), whereas for the analysis referring to male students the $R^2$ showed regular increases throughout the whole series of models.

Compared to the analysis on the whole sample, the only variables that maintained the level of statistical significance and direction of the parameter estimate for both female and male students were locus of control and having experienced a marriage-like relationship. All the other previously statistically significant predictors were in the new models either significant for female students (e.g., having a dependent child or expecting one) or for male students (e.g., predictors in the domain School Environment and employment status in twelfth grade). All those predictors have the same direction as in the models for the whole sample analysis.

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7 The same result could have been achieved by adding to the models run on the full sample the whole series of interaction terms between the variable “male” and each one of the other predictors considered.
Table 4. Unstandardized OLS Regression Coefficients (Beta in parentheses) for Standardized Test (Reading, Math) in 1992 for Low SES Non-Hispanic Black Students (N = 367)*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model I</th>
<th>Model II</th>
<th>Model III</th>
<th>Model IV</th>
<th>Model V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardized Test (Reading, Math) in 1988</td>
<td>.68***</td>
<td>.65***</td>
<td>.65***</td>
<td>.66***</td>
<td>.65***</td>
</tr>
<tr>
<td></td>
<td>(.66)</td>
<td>(.63)</td>
<td>(.62)</td>
<td>(.64)</td>
<td>(.63)</td>
</tr>
<tr>
<td>Male</td>
<td>-2.25***</td>
<td>-2.05**</td>
<td>-1.43*</td>
<td>-1.92***</td>
<td>-1.82**</td>
</tr>
<tr>
<td></td>
<td>(-.13)</td>
<td>(-.12)</td>
<td>(-.08)</td>
<td>(-.11)</td>
<td>(-.11)</td>
</tr>
<tr>
<td>Individual Characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Parent Family Structure</td>
<td>---</td>
<td>.69</td>
<td>.32</td>
<td>.51</td>
<td>.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.04)</td>
<td>(.02)</td>
<td>(.03)</td>
<td>(.02)</td>
</tr>
<tr>
<td>Locus of Control</td>
<td>---</td>
<td>3.30***</td>
<td>2.06***</td>
<td>2.28***</td>
<td>2.23***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.28)</td>
<td>(.17)</td>
<td>(.19)</td>
<td>(.19)</td>
</tr>
<tr>
<td>Individual Educational Outlook</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R. Educational Aspirations</td>
<td>---</td>
<td>---</td>
<td>1.27***</td>
<td>1.03***</td>
<td>.98</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(.18)</td>
<td>(.15)</td>
<td>(.14)</td>
</tr>
<tr>
<td>R. Plans To Go to School Right After H.S.</td>
<td>---</td>
<td>---</td>
<td>3.96***</td>
<td>3.74***</td>
<td>4.09***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(.19)</td>
<td>(.18)</td>
<td>(.19)</td>
</tr>
<tr>
<td>School Environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban School</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>-.26</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-.02)</td>
<td>(.00)</td>
</tr>
<tr>
<td>Suburban School</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>-.44</td>
<td>.03</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-.02)</td>
<td>(.00)</td>
</tr>
<tr>
<td>Total School Enrollment</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>.74***</td>
<td>.72***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.14)</td>
<td>(.13)</td>
</tr>
<tr>
<td>Percent Minority in School</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>-.31</td>
<td>-.40†</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-.06)</td>
<td>(.08)</td>
</tr>
<tr>
<td>Percent of Students with Free Lunch in School</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>-.47†</td>
<td>-.42†</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-.10)</td>
<td>(-.09)</td>
</tr>
<tr>
<td>Level of School Problems</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>-.98†</td>
<td>-.79†</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-.09)</td>
<td>(-.07)</td>
</tr>
<tr>
<td>Premature Adult Life Events</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R. Is/Has Been in a Marriage-Like Relationship</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>-2.73†</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-.08)</td>
</tr>
<tr>
<td>R. Has a Dependent Child or Expecting One</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>-1.46</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-.06)</td>
</tr>
<tr>
<td>R. Employment Status in 12th-Grade</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>-3.38</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-.04)</td>
</tr>
<tr>
<td>Constant</td>
<td>14.99***</td>
<td>16.56***</td>
<td>7.38***</td>
<td>9.93***</td>
<td>10.95***</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.448</td>
<td>.522</td>
<td>.601</td>
<td>.636</td>
<td>.643</td>
</tr>
</tbody>
</table>

*Information above is based on a listwise deletion of cases.
† p ≤ .10  ‡ p ≤ .05  § p ≤ .01  *** p ≤ .001
Table 5. Unstandardized OLS Regression Coefficients (Beta in parentheses) for Standardized Test (Reading, Math) in 1992 for Low SES Non-Hispanic Black Female and Male Students

<table>
<thead>
<tr>
<th>Variables</th>
<th>Female Students (N = 236)</th>
<th>Male Students (N = 131)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model I</td>
<td>Model II</td>
</tr>
<tr>
<td>Standardized Test (Reading, Math) in 1988</td>
<td>.93*** (.85)</td>
<td>.91*** (.83)</td>
</tr>
<tr>
<td>Individual Characteristics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Parent Family Structure</td>
<td>-.44 (-.03)</td>
<td>-.50 (-.03)</td>
</tr>
<tr>
<td>Locus of Control</td>
<td>1.42*** (.13)</td>
<td>1.35** (.12)</td>
</tr>
<tr>
<td>Individual Educational Outlook</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R. Educational Aspirations</td>
<td>--- .01 (.00)</td>
<td>.12 (.02)</td>
</tr>
<tr>
<td>R. Plans To Go to School Right After H.S.</td>
<td>--- .13 (.06)</td>
<td>.20 (.06)</td>
</tr>
<tr>
<td>School Environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban School</td>
<td>--- ---</td>
<td>--- .91 (.05)</td>
</tr>
<tr>
<td>Suburban School</td>
<td>--- ---</td>
<td>--- -.23 (-.01)</td>
</tr>
<tr>
<td>Total School Enrollment</td>
<td>--- ---</td>
<td>--- .29 (.05)</td>
</tr>
<tr>
<td>Percent Minority in School</td>
<td>--- ---</td>
<td>--- .05 (.01)</td>
</tr>
<tr>
<td>Percent of Student with Free Lunch in School</td>
<td>--- ---</td>
<td>--- -.00 (-.00)</td>
</tr>
<tr>
<td>Level of School Problems</td>
<td>--- ---</td>
<td>--- -.41 (-.04)</td>
</tr>
<tr>
<td>Premature Adult Life Events</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R. Is/Has Been in a Marriage-Like Relationship</td>
<td>--- ---</td>
<td>--- -3.77* (-.08)</td>
</tr>
<tr>
<td>R. Has a Dependent Child or Expecting One</td>
<td>--- ---</td>
<td>--- -2.20* (-.10)</td>
</tr>
<tr>
<td>R. Employment Status in 12th-Grade</td>
<td>--- ---</td>
<td>--- .18 (.02)</td>
</tr>
<tr>
<td>Constant</td>
<td>3.52† (.763)</td>
<td>3.21 (.764)</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.765</td>
<td>.764</td>
</tr>
</tbody>
</table>

a Information above is based on a listwise deletion of cases.
† p ≤ .10  ** p ≤ .05  *** p ≤ .01  **** p ≤ .001
Controlling for Individual Characteristics in Model I, the variable locus of control had a positive and statistically significant coefficient for both female and male students. The parameter estimate for female students, however, was much lower than the parameter estimate for their male counterparts: $B_f = 1.42 \ (p \leq .001)$ and $B_m = 5.16 \ (p \leq .001)$, respectively.\(^8\)

In Model II, the variables referring to students’ educational outlook were positive for both subgroups, but for female students the coefficients were low and not statistically significant, whereas for male students those same parameter estimates were quite large and highly (statistically) significant. In fact, having high(er) educational aspirations in early high school (in 1988) and harboring later intentions or behavior about continuing to study (in 1992) contributed to a greater return for the achievement of male students than female students (see Table 5, Model II for both female and male students).

A similar pattern as above was found in Model III, which, by including the predictors relative to School Environment, showed how several of these factors clearly influenced the academic achievement of male students. It is worth noting that, on one hand, the dummy predictor identifying suburban schools was marginally (statistically) significant for male students only ($B = -2.19$). On the other hand, the variable measuring the level of minority concentration in school is positive (although not statistically significant) for female students, but it is negative (and statistically significant) for their male counterpart. Finally, the index measuring problems in the school attended is—for male students—negative, statistically significant, and more than

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\(^8\) A direct comparison of unstandardized parameters is, in a strict mathematical sense, justified across sequential models for the same subsample (i.e., female or male students) because of the constant variability of the predictors and sample size across those models. However, when homologous parameters across subsamples are very different from each other, as in the cases I have emphasized in the text (see below, too), it is advisable to consider such a difference as suggestive of a real different impact of the predictor(s) considered on the dependent variable.
three times the magnitude of the homologous (non-statistically significant) parameter of their female counterparts ($B_m = -1.45$ vs. $B_f = -.46$).

The last model of the series of male and female students, Model V, included measures belonging to Premature Adult Life Events. The engagement in a marriage-like relationship penalized the academic achievement of both female and male students, this result is consistent with the homologous results estimated in Model V run on the whole sample of students (Table 4). In Model V, the parameter estimates of the remaining two predictors were both negative and not statistically significant. In Model IV, however, having a dependent child or expecting one presented a coefficient which was negative for both subsamples of students but statistically significant just for females; and the employment status held during high school is positive and not statistically significant for females but strongly negative and statistically significant for male students.

The patterns of statistical significance of the regression coefficients were more or less consistent across models for both female and male students. For females, the predictors that mattered were locus of control, having been in a marriage-like relationship, and having had a dependent or expecting one during high school. For males, predictors that in earlier models were (at least marginally) statistically significant were not so in the last model (e.g., attending a suburban school and level of school problems in the school attended). The striking difference, however, between this subsample and its female equivalent is that multiple variables belonging to all the domains considered in the analysis exerted an influence on the academic achievement of Black low SES male students, whereas Black low SES female students seemed to be unaffected by the School Environment.
Obviously, considerations of “practical significance” can overcome those relative to “statistical significance.” In fact, after having ascertained that the statistically significant predictors refer to the personal sphere (i.e., Individual Characteristics and Premature Adult Life Events), the mathematical equations for females suggest that the independent variable that (on average) predicts the largest part of the variation on the test score is locus of control with an absolute value of Beta = |.11|, followed by having had a dependent child or expecting one during high school and having been in a marriage-like relationship with Beta(s) equals to |.10| and |.08|, respectively. For male students, when considering the personal sphere, the order of importance of the predictors (in the sense outlined above) is: planning to continue education post-high school (Beta = |.27|); followed by both student’s educational aspirations and locus of control which had almost the same coefficient (relative Beta = |.23| and |.22|, respectively); and finally employment status in 12th grade and having been in a marriage-like relationship, which also presented close standardized parameters (Beta = |.14| and |.13|, respectively). If focusing on (school) environmental factors, the characteristics of the student body composition (i.e., school minority concentration and percent of students with free lunch) were almost equally predictive of school achievement (Beta = |.18| and |.17|, respectively) but more important than school size, which had Beta = |.11| (Table 5, Model IV).
CHAPTER FIVE: DISCUSSION

Introduction

Using data from the National Educational Longitudinal Study (NELS, 1988 and 1992), and ordinary least squares (OLS) regression analyses, this study examines the impact of individual student characteristics (locus of control), students’ educational outlook (educational aspirations), school environment (urbanicity), and students’ premature adult life events (pregnant or parenting) on the educational outcomes of low-income Black students. This chapter explores key findings as presented in Chapter Four in greater detail while contextualizing the findings within the literature review and the theoretical frameworks presented in Chapter Two.

As in the sociocultural tradition, this study is particularly focused on the educational outcomes of Black student respondents to the NELS:88 and NELS:92 survey who make-up the lower two-thirds of the Socioeconomic Status Composite (BYSES). This subset of respondents was selected because of the evidence presented by the 1966 Coleman Report but even more important because of the sociocultural stance that posits that there are in-group differences in educational outcomes that continue to go understudied (Gutiérrez & Rogoff, 2003; Lee, Spencer, & Harpalani, 2003). It is also important to note that this study controls for prior school experience and that these students are “persisters.” In spite of growing up in a racialized society, as socioculturalist argue, the students in this study made it to the twelfth grade and did not drop out of school. Much of the literature does not look specifically at the population of Black, low-income, students who persist through high school to the twelfth grade. That being said, the remainder of this chapter will discuss and highlight the key findings.
Individual Characteristics

- This study finds that a single-parent family structure was not statistically significant and therefore not a predictor of better educational outcomes for low-income Black males or females.

These findings are inconsistent with the literature review conducted for this study. There are many studies that have shown that students raised in single-parent homes (and particularly those headed by women) suffer adverse effects to their academic achievement, including higher dropout rates (Pong, 1997; Sigle-Rushton, & McLanahan, 2004) and lower standardized test scores (Bain, Boersma, & Chapman, 1983). Additionally, studies on the impact of family structure on the educational outcomes of students indicate that students from single-parent homes are also more likely to dropout, become pregnant, or get married than students from two-parent homes (DeGarmo et al., 1999; Nichols et al., 2010). In the late 1990s Bankston and Caldas in a study of 18,000 Black students found that there is a strong, negative correlation between the female-headed household and academic achievement (Bankston & Caldas, 1998, p. 718). The most important finding of this study, however, is that the concentration of Black students from single-parent homes in a school is the most important school-level predictor of academic achievement (p. 722).

- This study finds that locus of control had a positive correlation and was statistically significant for both Black male and female students.

- Shockingly though, for low-income Black males the explanatory power of having an internally motivated locus of control was nearly five times greater than for females.

For Black students, locus of control has also been found to be a significant influence on academic achievement. For instance, one study has shown that Black students with “higher
levels of locus of control” were more likely to have higher academic standards and aspirations than those with “lower levels of locus of control” (Flowers, Milner, & Moore, 2003, p. 44). The study concludes that in order to increase academic achievement in Black students, teachers and counselors should foster academic environments that help students feel comfortable, capable, and confident (p. 47). Such an environment would allow Black students to feel more in control of their educational outcomes, and they may therefore take the right steps to succeed academically.

**Individual Educational Outlook**

- *The current study reveals that students’ educational outlook had a positive impact on educational outcomes, although less so for low-income Black females than for males. The study reveals, however, that for males a stronger educational outlook going into high school was strongly correlated with better performance in the late high school years, which was not the same for Black females.*

- *This study also finds that plans to pursue post-secondary school right after high school were not statistically significant for Black female students but were more than five times more explanatory for Black male students.*

Academic self-concepts describe students’ general affect toward school and education and whether or not they generally feel competent enough to complete schoolwork and succeed academically. As such, students’ self-concepts can have a great impact on how poorly or well they perform in school (Bong & Clark, 1999). Prior research on Black students’ self-concepts as they relate to academic achievement is limited. Two recent studies, however, have demonstrated that academic self-concepts are also important for the educational outcomes of Black American students.
School Characteristics

- The current study finds that no school environment variables had a statistically significant impact on the educational outcomes of Black female students.

- For Black males, total school enrollment, percent minority, percent of students with free lunch, and levels of school problems were all negative and statistically significant.

Premature Adult Life Events

- For both Black male and female students being in a marriage-like relationship had a negative and statistically significant impact on the educational outcomes of low-income Black students.

- Having a child or expecting one had a negative and statistically significant impact on Black females but was not statistically significant for Black males.

- Finally, employment status in the twelfth grade was positive but not statistically significant for females, but strongly negative and statistically significant for males.

The literature shows that premature adult life events affect the educational outcomes of high school aged youth. For students in this age group, premature adult activities can be situations such as early pregnancy and parenthood or working schedules that interfere with schoolwork. Researchers have examined the link between student work schedules and their academic achievement (Bachman et al., 2011; Bracey, 1988; Patton & Smith, 2009; Singh, 1998; Staff et al., 2010) and found that intensive student employment schedules negatively impact educational attainment for adolescents. Specifically, it has been shown that students who work 20 or more hours per week perform less well academically than students who work fewer or no hours; these students spend less time on homework and extracurricular activities, have higher
rates of absenteeism, attain lower grade point averages and standardized test scores, and graduate from high school at lower rates (Staff et al., 2010, p. 183).
CHAPTER SIX: CONCLUSION

Introduction

By analyzing two waves (cohorts) from the National Educational Longitudinal Study (NELS) (1988 and 1992), this study examines the impact of individual student characteristics (locus of control), students’ educational outlook (educational aspirations), school environment (urbanicity), and students’ premature adult life events (pregnant or parenting) on the educational outcomes of low-income Black students. In this final chapter there is a brief summary of the study, and a discussion of the study’s limitations, contributions to the field, and suggestions for future research. While this study makes an important contribution to the field, like all studies it is not without limitations. The sample and methods of analysis, the data used, and methods selected actually limited the scope of the study.

This study set out to unpack the factors that contribute to or detract from the successful educational outcomes of low-income Black students. In an important contribution to the field, this study reveals that some variables had an impact on the educational outcomes of both low-income Black females and males. Most notable, however, is that multiple variables across each domain had some influence on the academic achievement of low-income Black males. For example, low-income Black female students seem to be unaffected by the School Environment variables. For low-income Black male students the external sphere variables (i.e., School Environment), the characteristics of the student body composition including school minority concentration, percent of students with free lunch, and school size were equally predictive of school achievement. Taken together, this study reveals that for low-income Black females the personal sphere variables (i.e., Individual Characteristics and Premature Adult Life Events) predict the largest variation in educational outcomes with locus of control being most predictive,
followed by having had a dependent child or expecting one during high school, and finally, having been in a marriage-like relationship. On the other hand, for low-income Black males this study finds that the personal sphere variables of most importance were planning to continue to study after high school, followed by both student’s educational aspirations and locus of control, employment status in 12th grade, and having been in a marriage-like relationship.

**Limitations**

This study examines the educational outcomes of low-income youth. By design, the sample size was narrow and excluded all respondents who were not in the lower two-thirds of the NELS:88 socioeconomic status composite. The study also only looks at the educational outcomes of non-Hispanic Black respondents. Therefore the scope of this study is limited to discussing the educational outcomes of a very specific subgroup within the NELS:88 dataset.

The study is also designed to measure students at two points in time, upon high school entry and then again in the twelfth grade. The study does not capture or measure any data regarding the years between ninth and twelfth grade. Relatedly, this study does not capture any students who may have dropped out of school before reaching the twelfth grade. Similarly this study does not capture students who may have taken longer to reach the twelfth grade. Low-income students are most vulnerable and often do not achieve educational credentials on traditional timetables. Some students “stop-out” and take longer time to complete their high school diploma while others may choose to sit for their states’ equivalency exam. Attewell and his associates have discussed the time to college degrees for low-income students, who often languish in remedial courses thus extending their time to earn a college degree (Attewell, Lavin, Domina & Levey, 2006). This study could have been strengthened by looking at students at moments in time along their path to graduation. The current analysis is linear and ignores the
reality of “ups” and “downs” most common in the lives of adolescents and particularly those of low-income Black students.

This study also uses standardized test scores as the dependent variable to measure. There is a growing body of research that criticizes the use of test scores as indicators of successful educational outcomes as they often mask true genius or different types of intelligences that are not measured by standardized tests (Kincheloe, 2005).

This study does not examine whether the findings can be attributed to race alone or simply class. To answer these questions, the study could have used a variety of more complex statistical analyses. To determine causality, this study could have employed structural equation modeling to explore the impact of race on the educational outcomes of these low-income Black students.

The use of ordinary least squares (OLS) does not test for community, school, class, and/or teacher effects on Black low-income students. To test those effects, this study could have used Hierarchical Liner Modeling (HLM). This study is also limited because there is no comparison sample that might lend additional weight to the study’s findings. More and more researchers are using propensity scoring matching to determine if a treatment, policy, or practice truly produces the desired outcomes on the treatment group versus non-treatment group members of a study.

Perhaps the biggest weakness of this study is that it is not a qualitative study. Working in the sociocultural tradition, the theoretical frame acknowledges that there are “in-group” differences that tell their own story of educational success or failure. This study unfortunately, replicates the age-old idea that all Black Low-income students should receive the same treatment. This assumption ignores the inherent heterogeneity of the Black community. The
study has revealed that Black males have a host of variables that exert influence on their educational outcomes. This study does not tell us why. We know that for Black males and females, locus of control is a strong predictor of successful outcomes. However, not only do we not know why, but this study does not tell us how to move a student from being extrinsically motivated to being intrinsically motivated.

This study does not examine the school and classroom-level interactions that impact educational outcomes. Qualitative studies have shown that teacher quality and dispositions toward teaching, children, and neighborhoods have an impact on the educational outcomes of students (Ladson-Billings, 2006; Patterson, Michelli, & Pacheco, 1999).

**Contributions to the Field**

This study begins to frame the issues of low-income Black students and their school success in a different way. It was prompted by the words of Gloria Ladson-Billings, who asked educational researchers to rethink the notion of an achievement gap that focuses on Black versus White students. In the January 2013 issue of *American Researcher*, Carla Monroe, theorizes about the nature of “colorism” in educational research. In the article, “Colorizing Educational Research: African American Life and Schooling as an Exemplar,” she argues that research on the ways that color classifications and social favor affect the educational outcomes of lighter skinned versus darker skinned Blacks (Monroe, 2013). The president of the Educational Research Association announced that the 2013 conference theme will focus on the effects of poverty on educational outcomes. Finally, in the spring of 2013 Teachers College, Columbia University hosted an International conference titled “Rethinking Culture, Context and Comparison in Education and Development.” The conference asked attendees to rethink social, cultural, and political contexts that undergird our current thinking on learning and development.
The emergence of sociocultural theory, against the cognitive grain, to a sea of educational researchers calling for new types of granular, more nuanced research projects that examine culture and context as important variables is what Kuhn calls the emergence of a “Scientific Revolution.” In his 1970 seminal text, Thomas Kuhn outlines the nature of change in scientific communities or the disciplines as we know them. In making the case for how theories are made and change Kuhn argues that when descriptions of paradigms, facts, theories, and research methods lack paradigmatic coherence and generalizability new structures are created that provide room for alternative approaches to explain phenomena (Kuhn, 1970). Kuhn argues that paradigm shifts occur when there is a new discovery within a discipline or an anomaly exists. Most paradigm shifts occur when there is a crisis within the scientific community. The crisis reveals discrepancies between theories and facts or a change in the social or cultural climate that forces the emergence of new ways of thinking. An example of such a crisis in our community of professional educators can be found in the federal No Child Left Behind Act of 2001 which requires schools and school districts to publish data on the achievement gap between students of color and White students. In addition to publishing “achievement gap” data the law requires significant efforts to reduce and eliminate the gap or face reductions in per pupil allocations. No Child Left Behind has cemented the behaviorist cognitive approach to teaching and learning by boiling school success down to performance on standardized tests. Across the country schools are being closed because of low-test scores, states are moving to connect teacher evaluation systems to standardized test scores, and students are identified based on their performance on state and city assessments (Vanneman et al., 2009).

A recent PBS documentary, 180 Days: Inside an American High School, documents a six month study of the administrators, faculty, and students of Washington Metropolitan High
School, also known as DC-MEC. It is a school that experienced a 50% drop on the mathematics section of the DC-CAS (a standardized assessment). In the 2012 school year, only 7% of students were “proficient.” In episode two, the school is gearing up for the year’s DC-CAS, and the documentary sadly chronicles the mobilization of the entire school to prepare students for the exam. From school-wide assemblies to monthly pre-tests, the DC-CAS is the only thing that matters. Never mind that in a meeting of school administrators and school support staff it is revealed that many of the students in the testing cohort have been absent, incarcerated, or pregnant and parenting and thus have not been in school. As for the students that have been present, they come to school hungry, homeless, with responsibilities to care for younger siblings after the death of parents, and from homes where their parents have themselves struggled with formal education (Public Broadcasting Service, 2013). The most poignant scenes in the documentary, although left unexplored, involve the out of school experiences of the highlighted students: the Black males who are dealing with the death of their mother and the significance of their tattoos and the Black female who is living in a foster home and commutes 40 minutes each way to attend DC-MEC. It was clear that extracurricular activities like dance, cheerleading, or sports played an active role in keeping the students coming to school and remaining engaged.

*180 Days: Inside An American High school* represents an example of the corporatization of schools, which has led to a teaching and learning environment that forces teachers and students to disconnect from the reality of their lived experiences. This study found that the personal and external spheres have a significant impact on the educational outcomes of Black low-income youth. No Child Left Behind and President Obama’s Race to the Top initiatives are examples of policies that, in their implementation, do not support the findings of this current study. It is probably easier to ignore the complexities of the myriad issues that low-income
Black students face coming to school, staying in school, graduating, and pursuing higher education. This section of the chapter offers examples of some promising strategies that offer alternative approaches within the sociocultural and possible selves tradition that are improving the prospects of school success among low-income Black students.

Classroom, Inc. is a non-profit organization in New York City that partners with urban schools across the country to use simulated learning environments to build literacy and numeracy skills by working in virtual career environments. The simulated learning environments are based on careers in banking, healthcare, technology, sports media, environmental science, non-profit management, and newspaper publishing. Working in teams students assume the role of a banker, physician assistant, producer of a sports network cable channel, plant manager, executive director, and editor in the respective simulations, all of which are between eight and ten episodes.

In the 2011-2012 school year, Classroom, Inc. served close to 10,000 students, working primarily with students who were not proficient in readings and mathematics. Students were given pre- and post-tests of the Reading and Mathematics Level Inventory (R/MLI). In an independent analysis, Metis & Associates found that students gained three months of reading and seven months in math after only using the program for four weeks during summer school (Classroom Inc., Annual Report 2011).

This study reveals that, standardized test scores, plans to go to college, locus of control, and being in a marriage-like relationship had an impact on the educational outcomes of both low-income Black females and males. The use of simulated work environments to teach literacy and numeracy in context is a pedagogical innovation that is consistent with both the sociocultural and possible selves paradigm in a number of important ways. In his provocative text, *Situated Language and Learning: A Critique of Traditional Schooling*, James Gee argues that video
games are highly effective in developing cognitive frames that support learning and literacy development and that schools and are in many ways “deliteracizing” 21st century students because of their emphasis on memorization and “drill and kill” pedagogies that are far less challenging than competing in modern day video games (Gee, 2003, 2004, & 2005). Gee identifies a number of psychological and learning principles that support his theory. First, video games allow learners to experiment with new identities, and because there is choice involved there is already a certain degree of commitment to the tasks associated with the game. Second, video games allow for interaction and immediate feedback between the player and the “world” they occupy in the game. In other words the “teacher” is embedded in the game because the player is getting feedback and acts accordingly. Alternatively, video games disrupt the “teacher effect” in which students have a dislike for the teacher in the front of the room, which activates the “I won’t learn from you complex.” Third, in playing the game the players are actually the “producers” in that they are presented with knowledge, take it in, and then create new knowledge based on what the game presents. Fourth, games and simulations encourage risk-taking that builds on a players initial interests. Game players are motivated to win, and that requires them to get better in the game, thus encouraging continued play until the goals of the game are accomplished. Finally, video games allow “customization and agency.” They provide multiple points of interest for game players of a variety of ability levels, and the players “own” their participation in the game. This example could easily be called differentiated instruction and is also an example of what educators want every student to do: take ownership of their own learning (Gee, 2003, 2004, 2005).

As noted earlier, for low-income students it is important to acknowledge that their access to the cultural institutions and experiences that promote school success that are afforded to
students from middle- to upper-class households is an important factor in closing the achievement gap. Research has shown that these experiences can make a difference on a student’s aspirations, and feelings of worth and contribution to society, (Putnam, 1995).

Another example lies in the work of Professor Christopher Emdin of Teachers College, Columbia University who is using hip-hop culture and rap to engage students in science. Noting that only 7% of Black students are proficient in science according to the National Assessment of Educational Progress, Emdin has partnered with a member of the Wu Tang Clan, GZA, to increase the level of engagement and performance in high school science classes. Working with ten New York City high schools Professor Emdin embraces hip-hop and brings rap into the science classroom. Students demonstrate their understanding of scientific concepts by producing rap songs that connect the concepts to their everyday lives. Emdin argues that this alternative pedagogical approach is rooted in the idea that science is interdisciplinary and can easily connect to the lives of urban youth. In creating the raps, students are demonstrating content mastery while engaging in the writing process, and building the confidence to see themselves as scientists (Emdin, 2010).

The work of Classroom Inc., James Gee, and Christopher Emdin are examples of the type of paradigm shift that the findings of this study support. This study asserts that in the 21st century we have the opportunity to embrace new ways of thinking that call us, as a professional community, to employ new tools to increase the educational outcomes of low-income youth. Simulations, video games, and pedagogies rooted in sociocultural and possible selves theory offer myriad opportunities to promote higher aspirations, internal loci of controls, and increased engagement in school among low-income Black students. Building on the work of Classroom, Inc. and Gee, additional studies are necessary to measure the impact of the use of simulations
and video games on the development of future selves, aspirations, and plans to go to college. The following questions also need to be addressed: When students are the producers of knowledge and teachers are facilitators of that knowledge, how does it shift the power relations in the classroom, and what impact does it have on student achievement? Do simulations and video games offer entry points to careers and college that later become internalized and then affect persistence in school?

**Implications for Future Research**

Building on the sociocultural and the possible selves paradigm, there is power in bricolage as advocated by Professor Joe Kincheloe. In “On to the next level: Continuing the conceptualization of the bricolage,” Kincheloe describes a qualitative research method that works against the “monological way of reading the word” that characterizes current educational research. Bricolage, he argues, is grounded in critical scholarship and interpretation. Drawing on the “social, cultural, psychological and educational sciences of complexity” this method enables researchers to draw upon the various ways of knowing that currently inform the disciplines (Kincheloe, 2005).

Bricolage is derived from the French word bricoleur, which describes a person who uses the tools at his or her disposal to construct something new or repair something broken. Bricolage, as a research paradigm, invites the researcher to work across methodological constraints and paradigmatic frames to uncover what grounded theory refers to as “thick description.” It is through this interdisciplinary lens that phenomena come to be understood in the most whole sense possible. Kincheloe argues that there is a theoretical possibility that leads to greater “coherence and epistemological innovation” as a by-product of the bricolage enacted as theory and research (Geertz, 1973; Kincheloe, 2005).
Race, class, and educational outcomes reflect the lived and living world and are examples of a complex interplay of dynamics that can be understood as being social, political, economic, geographic, philosophical, psychological, or biological phenomena. These phenomena are most often studied as discrete and separate units bounded by our respective disciplinary frames. Bricolage moves beyond these boundaries and seeks to unearth the natural complexity of any phenomena (Kincheloe, 2005). It recognizes and values, a priori, the importance of context, power and discourse and the ways that those elements converge or diverge as things happen. This way of knowing and understanding is complex but most demanding as bricoleurs attempt to know things from a variety of perspectives, voices, and from those who occupy a variety of spaces on the power and economic continuum (Kincheloe, 2005).

Finally, bricolage is enacted by bricoleurs who are reflective practitioners with an understanding of the value of locating themselves as human beings who ontologically occupy certain spaces, have certain experiences, and histories that shapes what they know, what they value knowing, and what they do and why. These are all important considerations in the work of teachers, researcher, and policy-makers working to improve the educational outcomes of all youth (Kincheloe, 2005).

Working within the framework of bricolage this study suggest that future research on the educational outcomes of low-income youth should begin with both quantitative and qualitative studies aimed to understand the social, political, economic, and geographic, influences and pressures that impact academic achievement. Beginning with the limitations discussed earlier, it follows that teachers themselves are already powerful actors in this scenario. Teachers teach in communities, and as a part of the educational reform agenda we need to know more about how teacher education programs work to educate pre-service teachers for teaching in communities.
that are predominately low-income. The following questions must also be addressed: How do we prepare teachers to work with the parents of low-income students? How do we communicate the importance of educational aspirations and plans to go to college while drawing out the strengths of students living in a home that doesn’t have that “insider knowledge”?

School administrators at the local and districts levels have enormous powers in the educational spaces that they create for teaching and learning. Additional research within this frame should seek to understand how schools conduct on-boarding programs that orient in-service teachers to the realities of teaching in low-income communities. The following questions must also be addressed: To what extent do these programs use large scale quantitative data to inform the policies, practices, and pedagogies of the school? Combined with reflective papers and other qualitative data sources, how are the results used to inform school policies, practices and pedagogies?

The data on low-income Black males and school success are clear. This study and countless others, found that a number of internal and external variables affect the educational outcomes of Black male students (Harper, 2012; Holzman, 2010; Howard, 2010). Further studies are needed to assess the extent to which Black male students resist the internalization of school success as the vehicle for upward mobility versus survival in their neighborhoods and communities. Ogbu’s theories, although recently challenged, call for deeper explorations given the differences in the ways that school environments impact the educational outcomes of Black male and female students. The following questions must also be addressed: Why do the school environment variables of percent minority in school, percentage of students with free lunch, and the level of school problems impact Black male students more than Black females?
Harper and Harris recently published a report on the state of Black males in college with advice to policymakers concerning issues of access, readiness, and college completion rates. The study noted that in 2009, Black males comprised less than 4% of full-time undergraduates at public colleges and universities but comprised 55% of top-tier football and basketball teams in Division I of the National Collegiate Athletic Association (Harper & Harris, 2012). Sadly, only one-third of Black males earn a college degree in six years (Harper & Harris, 2012). For far too many Black males, their engagement in school is tied to their engagement in sports. Ironically, these same students are those most at risk of being suspended, placed in special education for behavioral reasons, or simply left out to dropout (Noguera, 2012). Nationally, one in five Black males have received an out-of-school suspension, arrest, or referral to law enforcement agencies (Noguera, 2012). These findings are cause for P-16 educators and policy-makers to act to disrupt the school-to-prison pipeline by engaging in new and innovative targeted strategies that promote the success of Black male students along the continuum. As Harper and Harris noted, this is not a responsibility of one institution; it takes the coordinated and aligned efforts of multiple stakeholders. In their report, they highlight the work of the City University of New York’s (CUNY) Black Male Initiative. The CUNY Black Male Initiative is a system-wide initiative launched in 2005 by Chancellor Goldstein to improve the post-secondary outcomes of Black males. System colleges were asked to submit proposals for campus-based initiatives targeted with these goals in mind. As a result, in spite of several court challenges, each campus provides mentoring, academic support, and conferences and symposiums to share best practices. More recently, it has created an initiative that provides additional support for Black male students pursuing careers in education (City University of New York, 2014).
In the fall of 2013 the former chancellor of the New York City School system, Dr. Rudy Crew, became the president of Medgar Evers College. Upon his appointment he announced the creation of a Pipeline initiative that would partner with local elementary, middle, and high schools in Central Brooklyn to increase the college-going culture in the schools and attendant communities, and increase the enrollment and retention of students at Medgar Evers College. The 50 partner schools serve approximately 200,000 students and in the surrounding high schools the graduation rate hovers at 50%. In 2013, 20% and 17% met of students met New York State standards in reading and mathematics respectively. The skills gap continues as students enter Medgar Evers College where in 2013 80% of entering freshman are in need of some developmental coursework. The Pipeline initiative is an important example of an application of a policy that reflects a paradigm shift that is supported by this dissertation. First, the pipeline initiative recognizes that fluency in reading and mathematics can and must be established at earlier points along the students’ educational continuum. Understanding that, the Pipeline initiative seeks to not only work with students in the early grades but also uses out of school time to remediate and accelerate educational gains. Second, on the college side Dr. Crew has challenged academic and students’ affairs staff to rethink developmental education so that students have fewer levels and different educational models to accelerate their exit from remediation. Finally, the Pipeline initiative challenges schools and colleges to move away from deficit thinking to assets-based instructional models to bolster and support the affective domains that are keys to educational success. This is an example of the type of paradigm shift that considers motivation, locus of control, and self-efficacy as equally important as content knowledge and skill development as we work with low-income Black students (Medgar Evers College, 2014)
In 2011, New York City’s mayor Michael Bloomberg announced the young men’s initiative (YMI). Funded and managed by the Mayor’s Center for Economic Opportunity, approximately 127 million dollars have been allocated to programs that coordinate education, juvenile justice, employment, and health programs to be delivered in collaboration with community-based organizations and city agencies (New York City, Office of the Mayor, 2014). These important initiatives model inter-agency city-wide collaborations have the opportunity to create new landscapes of opportunity for Black males. While the programs are in the early implementation stages, reports indicate that in the 21 participating schools reformed disciplinary strategies have resulted in a decrease in student suspensions of up to 30% (Noguera, 2012).

The aforementioned strategies are examples of targeted approaches that recognize the severity of the state of the Black male while acknowledging that inequities exist and sociocultural and historical perceptions persist to this day. Harper and Harris have developed a series of standards to guide the work of systems working to have an impact on the educational outcomes of Black male students. While they target institutions of higher education, this study finds that they are easily applicable to P-16 pipeline initiatives. First, systems must work to document inequities and use the collected data to inform school leadership, teaching and supporting activities, and structures. In New York City, public schools will have a new accountability measure that assesses the achievement of Black male students. Second, schools must actively work to offer opportunities for youth to participate in the design and development of extracurricular activities. These activities allow students to engage with adult mentors and other peers in constructive, meaning-making activities that connect what is learned in school to the interest of students. Third, schools should connect with community-based organizations, local businesses, police precincts, and other stakeholders to create research-based and strategic
wraparound initiatives that support Black male achievement in and out of school. Finally, Black male students should engage with other Black males at each point along the school-to-college continuum. Black male students should have structured opportunities to reach back along the continuum to be role models for and mentor younger Black male students (Harper & Harris, 2012).

The questions raised by this study given the theoretical framework, findings, and current review of the literature on low-income Black students and educational outcomes are certainly just a beginning. For answers to the problem of Black student achievement in schools, it requires educational researchers to expand the “inputs bucket” that are used to generate new knowledge. Given the downward pressures of every variable in this current study, it is clear that new, innovative, and complex approaches are necessary to improve the educational outcomes of low-income Black students, particularly Black males. The best approaches point to targeted, collaborative, and system-wide reforms as the best remedy for these disturbing statistics. The use of standardized test scores alone leaves out students who have other strengths and abilities. In addition to test scores, schools and teachers must include an examination of those things personal and external to the school environment. After all, students do not present themselves in schools as empty vessels, and they all go home to places that are ostensibly foreign to their experiences in school. An acknowledgement of this will compel us to think differently about how we educate all youth and low-income youth in particular.
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