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An Exploration of the Experiences of Black High School Students in the Mathematics Classroom: A Qualitative Study

by

Jennifer Banks

DISSERTATION

Submitted to the College of Education

Eastern Michigan University

in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY in Educational Studies

Concentration in Urban Education

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August 29, 2016

Ypsilanti, Michigan
Dedication

I dedicate this work to my grandmother, Adlean Darty, my inspiration for pursuing a doctorate degree. Thank you, Grandma; this is for you.
Acknowledgement

Thank you, God, for providing me the strength and motivation to pursue and complete this dissertation. I want to give a special thank you to my husband Lloyd L. Banks, III for his unwavering support and encouragement throughout this process. Thank you for being my proofreader and challenging me to articulate my thoughts and arguments clearly. I also want to thank my parents, who have provided me with love and support throughout my life, and help to develop my passion for education. Thank you to my sister friends who also prayed and encouraged me to continue and finish this work. I extend a special thank you to my study partner Dawn Stewart, who kept me motivated to finish.

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I want to thank every teacher that encouraged and supported me throughout my educational career. To my second grade teacher Mrs. Jean Pagel, who brought learning to life for me. My first Black teacher and seventh-grade English teacher, Dr. Rita Teague, who was a role model for who I wanted to become, thank you. To Mrs. Datia Tamus-Isenberg, my high school English and Spanish teacher, who accepted nothing but my best. Thank you all for pouring a part of you into to me; you made a difference.
Abstract

For the past 30 years, there has been a significant “achievement gap” between the mathematics academic performance of Black and White students. This “achievement gap,” has been used to validate deficit thinking frameworks and portray Black students as unmotivated and deviant. This study suggests that it is necessary to change the national conversation of the achievement gap to one that Milner (2012) refers to as the opportunity gap.

Using the stories of Black high school students’ experiences in the mathematics classroom, this dissertation displays the various opportunity gaps that Black students experience within the classroom. This study utilizes qualitative research approaches, documenting the experiences of Black high school students through interviews and focus group discussions. A total of 23 students participated in the study, and the stories of 11 students are included in this dissertation.

The voices of the Black students within the study, lead to the development of three interpretative themes: race matters, teacher care, and the impersonal nature of the mathematics classroom. Race matters describe the difficulties and challenges that students face in racialized educational environments, including the difficulty of defining what it means to be Black. Teacher care examines the critical role that teachers play in developing a learning environment that promotes achievement. The impersonal nature of the mathematics classroom explores the lack of connection that students have with mathematics.

The result of this study not only challenges the validity of the “achievement gap,” it implores educators to critically examine their personal biases and the potential influence of these biases on students’ academic performance. Moreover, this study provides an alternative perspective to understand students’ negative classroom behavior. Additionally, this study
examines how inequalities are perpetuated through inadequate school funding initiatives, specifically in the state of Michigan.
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Chapter 1: Introduction

The National Council of Teachers of Mathematics (NCTM) described one of the consistent challenges facing mathematics educators as “the work that we still need to do to make mathematics achievement a reality for all students” (National Council of Teachers of Mathematics, 2014, p. 2). The task of making mathematics achievement for all students, regardless of their race or socioeconomics, is difficult but not impossible. To accomplish this complex task, it is first important to understand how Black children view the mathematics classroom (Stinson, 2013). In order to promote achievement, it is imperative for mathematics educators to listen to Black students (Stinson, 2013). To date, there are not enough studies that have examined in depth the learning experiences of Black high school students in the mathematics classroom. Research that brings to light students’ voices and experiences is necessary to dispel false perceptions of their experiences within these classrooms. Highlighting the voices of Black students provides a different lens for understanding why and how Black students succeed or fail in the mathematics classroom.

Problem Statement

The Black-White achievement gap in the area of mathematics is a persistent problem that plagues the American education system. The National Assessment of Educational Progress (NAEP) standardized assessment is used to evaluate the Black-White achievement gap (National Center for Education Statistics, 2011). Results from this assessment imply that Black children underperform by an average of 30 points in mathematics compared to their White counterparts (Vanneman, Hamilton, & Anderson, 2009). The measures of student achievement are too narrow to fit within the context of a single test. Hence the contextual factors that account for the performance difference are often ignored.
NAEP and other standardized assessments fail to provide a complete picture of the educational experiences of children. These assessments do not account for the other variables within the school and home environments, as well as historic and systematic inequalities that can influence students’ academic performance. By not considering these variables, the achievement gap discussion becomes a means to validate stereotypes and deficit thinking about Black students. For this reason, it is necessary to consider an alternate view of the Black-White achievement gap.

Purpose of the study. “We might too easily come to trust intellectual and scientific knowledge, and begin to distrust the world as reveals itself to us in language and by its very existence” (Henriksson & Saevi, 2009, p. 42). Standardized tests provide an incomplete picture of the achievement of Black children because they fail to account for the context of their learning environments. The primary purpose of this research is to analyze the issue of the underachievement of Black high school students in the mathematics classroom, by seeking first to understand their experiences there. An in-depth examination of the mathematics classroom experiences of Black students gives a different perspective through which the underachievement of these students can be evaluated.

Additionally, this study seeks to illuminate the role that race and racism have in impeding the academic performance of Black students. Critical race theorists suggest that it is necessary to acknowledge the structural inequalities that exist within American society that affect the daily lives of Black people (Bell, 1973; Crenshaw 1988; Delgado & Stefancic, 2012). These structural inequalities exist within schools as well. Exploring the classroom experiences of Black students illuminates these inequities and provides a clearer picture of the context of students’ underachievement. More important, this exploration is a starting point for addressing the
structural inequities that exist in schools.

In order to improve the mathematics academic performance of Black students, it is necessary for educators and policymakers to first seek to understand the experiences of Black students within the mathematics classroom. “Listening to understand” provides educators with a unique opportunity to reflect on how their own experiences, biases, and beliefs influence students’ perceptions of the classroom environment. By acknowledging one’s own biases, one can intentionally change them. Listening to the voice of students provides a lens through which teachers can engage in critical reflection of their attitudes and actions in the classroom that negatively impact students. This critical reflection is a gateway for teachers to change their behavior and, consequently, students’ academic performance in mathematics. Additionally, when the experiences of Black students in the mathematics classroom are examined, students are allowed to use their voice to identify instructional practices and teacher characteristics that empower and motivate them to achieve. Moreover, by listening to the voices of students, educators are forced to face the institutionalized biases that exist within schools. The acknowledgement of these biases provides a means for educators, parents, and policymakers to have constructive and transformative dialog that can lead to more equitable educational experiences and opportunities for Black children.

**Justification and Significance**

Mathematics, in particular, is described as the “gatekeeper” to societal success and opportunities (Martin, Gholson, & Leonard, 2010). Stinson (2013) has argued that mathematics is necessary to build cultural capital, yet Black children appear to have less opportunity to learn about mathematics, in particular advanced mathematics. According to the National Center for Education Statistics (2011), only 12% of Black students were enrolled in an Algebra I course
prior to entering high school, compared to 29% of their White counterparts and nearly 50% of their Asian counterparts. In 2009, more than 50% of Black graduates did not complete a standard level curriculum. A standard curriculum as defined by the National Center for Education Statistics (2011) consists of four credits of English, three credits of social studies, three credits of mathematics, and three credits of science. Additionally, less than 5% of Black students met the college readiness standards on the ACT, compared to 33% of their Asian counterparts (Aud, Fox, & Keweal-Ramani, 2010).

**Why are the voices of children important?** Sheppard (2006) referred to mathematics as “the proverbial Achilles heel for [Black] students” (p. 4). Stinson’s 2013 investigation of Black male high school students argued that mathematics educators need to use the voices of Black students to promote mathematics achievement: “Mathematics educators [must] learn to listen for and to the voices of Black students, using these voices to develop equitable and just schools and classrooms for all students” (Stinson, 2013, p. 94). To dismantle academic disparities, specifically in mathematics, Stinson asserted that it is important to understand how Black children view the mathematics classroom. The present study seeks to provide insight regarding the experiences of Black high school students in mathematics classrooms in order to understand the link between achievement and teacher pedagogy.

To understand the learning experiences of Black students, research is needed to ascertain how Black students perceive the high school mathematics classroom. Highlighting the voices of Black students can provide a different lens for understanding why and how Black students succeed or fail in the math classroom. Listening to Black students’ perceptions of the mathematics classroom also provides educators and policymakers with the opportunity to learn how to improve the mathematics classroom for all students.
Research Questions

In an effort to better understand Black high school students’ perceptions about mathematics, this study examined the experiences of these students within the mathematics classroom to understand the contextual factors that may contribute to the achievement gap. The primary research question was “How do Black students experience the high school mathematics classroom?” As a result of this question, sub-questions were considered, including the following:

- How do Black high school students experience the teaching and learning environment of the math classroom?
- How do Black high school students perceive the influence of their math teacher on their academic achievement?
- How do Black high school students construct their racial identity and agency within the math classroom?

Theoretical Framework

In order to examine educational disparities in the classroom, it is important to understand the impact and influence of race in various institutions of American society. For this reason, this study uses critical race theory (CRT) as the theoretical framework. CRT contends that race and racism are constant factors in the daily experiences of people of color (Bell, 1973; Crenshaw 1988; Delgado & Stefancic, 2012). By examining the broader context, CRT challenges the assumption that equality exists in our society. CRT argues that race is a significant factor throughout society; thus, racial inequalities are inevitable.

Therefore, CRT challenges the perception that all children have equal access to education (Ladson-Billings & Tate, 1995). A comparison of the differences between instructional environments of schools with a large population of Black students and schools with a large
population of White students illustrates the unequal opportunities. The U.S. education system has continued to maintain unequal learning environments for students of color, in spite of legislation that suggests otherwise (Ladson-Billings, 2006). Although historically Blacks have been affected by race and racism, there is limited research on how this history influences the present underachievement of Black students. Too often the research on students’ academic performance ignores the context of the learning environment (Ladson-Billings, 2006; Ladson-Billings & Tate, 1995). CRT construct affords the opportunity to examine the racist structural components of the American educational system that perpetuate educational inequalities. In addition, this analytical model uses the voices of marginalized groups to provide a counter-argument to the societal norms of inferiority (Ladson-Billings & Tate, 1995). More important, the CRT framework provides a counter-narrative to the argument that children and their families are responsible for the educational failures of students.

To develop a holistic perspective of the underachievement of Black high school students in mathematics, it is crucial that we examine the broader context of the classroom and schooling experience of these students. CRT provides a means for understanding the larger reality of schooling for Black children by highlighting the societal underpinnings that influence their educational experiences. This framework, therefore, is necessary for an examination of Black students’ educational experiences.

**Context of Inequities in America: Power and Influence**

It is also necessary to understand how social power and influence function in the United States in order to critically analyze the current experiences of Black high school students. Social, symbolic, and cultural capital are three concepts that describe American societal power. Power and influence in the United States is a product of two factors: socioeconomics and race (Anyon,
One’s ability to achieve specific goals is a result of social capital. Social capital is also determined by the social interactions and networks in which one participates (Coleman, 1988). Many times these networks are segregated by race and socioeconomic status (Anyon, 2005; Lewis, 2003; Moore & Lewis, 2014; Noguera, 2003). Socioeconomics and race provide a level of privilege that results in social capital. Symbolic and cultural capital are forms of social capital. Like social capital, symbolic and cultural capital refer to the amount of privilege afforded to an individual as a result of his or her membership within one or more networks.

Trustworthiness is a key aspect to gaining social capital, creating a sense of connectedness among members of the group (Coleman, 1988). The promotion of a sense of connectedness translates into an increase in social capital (Maeroff, 1998). For schoolchildren in particular, a sense of connectedness is essential for academic success. This creates a feeling of belonging and support for children (Maeroff, 1998). Students who feel connected understand that they are not alone in trying to reach their goals. These children are confident that there is someone available to guide and direct them through the educational terrain and that success is feasible (Maeroff, 1998).

The development of social understandings and norms is a consequence of the social interactions within a context (Coleman, 1988), or cultural capital (Bourdieu, 1986). Cultural capital is a form of social capital that enables one to seamlessly fit into mainstream culture. It is a keen understanding of the societal norms (Bourdieu, 1986; Lewis, 2003). In education, cultural capital influences parent-teacher interactions as well as teacher-student interactions (Ford, 2011; Lewis, 2003). Cultural capital can be difficult to obtain, as cultural patterns are often unspoken and learned through experiences (Hall, 1959). Bourdieu (1986) argued, nevertheless, that cultural
capital can be gained through an understanding of how to “play the game” in a dominant culture over an extended period of time.

Children’s learning styles can also be viewed as cultural capital. Hale-Benson (1986) suggested that Black children might have difficulty in school as a result of cultural distinctions between the home culture and school culture. Irvine (1990) concurred, suggesting that there may be incongruity between teachers’ instructional approaches and children’s learning styles. Boykins and Noguera (2011) referred to this as cultural disynchronization.

Symbolic capital refers to the cultural codes whose meanings are developed based on outward appearance (Lewis, 2003). Race and gender are examples of symbolic capital. The privileges given by symbolic capital may or may not be recognized by those who have access to it. In American society, being White affords numerous opportunities or privilege (Lewis, 2003; McIntosh, 1989). The impact of symbolic capital in American society is illuminated in McIntosh’s (1989) article, White Privilege: Unpacking the Invisible Knapsack. McIntosh (1989) reflected on her own experiences as a White female to describe the privileges that she was afforded as a result of her race. Being White allowed her the privilege to be neutral in race relations, a symbolic capital that people of color are not afforded.

The search for equality. Lack of social, cultural, and symbolic capital has translated into inequitable educational opportunities for students of color, particularly Black students. More than 50 years ago, the case of Brown v. the Board of Education of Topeka (1954) challenged the unequal educational opportunities available to Black students in segregated schools, including dilapidated buildings, lack of instructional resources, and teacher quality. This legendary case mandated school districts around the country to desegregate their schools. Desegregation allowed Black children to attend schools with their White peers, with the intention of guaranteeing equal
educational opportunities to all students regardless of race (*Brown v. Board of Education of Topeka*, 1954).

The forced desegregation of Black children into White schools resulted in a number of unintended negative schooling experiences for both Black and White children. For Black children, however, desegregation was a far more volatile experience, including death threats, being called derogatory names, and a lack of support within the classroom (Bell, 1980). Black children experienced protests from White parents, children, and teachers. Moreover, Black children were plagued with stereotypes and low expectations from their teachers and peers. In some cases, teachers refused to acknowledge Black students’ success (Bell, 1980). Many White children were encouraged by their parents not to play with Black children. Thus, the classroom experience for Black children was one of lack of care and support, which perpetuated low expectations and isolation from teachers and students. Aggression and tension were daily parts of the classroom experience for Black children (Bell, 1980).

**White flight.** Desegregation also gave rise to the phenomenon of White flight. *White flight* describes the mass exodus of European Americans from urban centers to suburban areas (Frey, 1979) in order to maintain the status quo of segregation (Bell, 1973). Many White families relocated to suburban areas, resulting in communities segregated by class instead of race (Bell, 1973). Discriminatory housing practices targeted at Black families further precipitated the housing divide. The limited financial capital of many Black families led to urban cities becoming impoverished ghettos (Frey, 1979).

Since public schools were a function of their tax base, urban schools received fewer financial resources as a result of White flight. Fewer resources equated to dilapidated public schools for Black children (Frey, 1979). The sub-par conditions of schools worsened as a result
of a culturally incongruent curriculum, discriminatory practices of tracking, micro-aggressions, and extreme disciplinary provisions. Unfortunately, many of these conditions still exist in urban centers today (Kozol, 1991; Moore & Lewis, 2014; Pine & Hilliard, 1990; Royce, 2015).

Overview of the Dissertation

The following chapters provide a more in-depth look at the experiences of Black high school students. Chapter 2 reviews the literature on the role of both race and class on the educational opportunities available to Black students. An overview of both the methodological approaches used and the methodological procedures implemented in this study are presented in Chapter 3. Chapter 4, entitled “Profiles of Schools and Participants,” introduces each of the respondents and provides background information about their schools. In Chapter 5, the voices of Black high school students are presented, and the thematic meaning behind the participants’ voices is explored in Chapter 6. This dissertation concludes with a summary of the key findings of this study and the potential for further research and pedagogical changes in Chapter 7.
Chapter 2: Literature Review

The purpose of this literature review is to provide a historical and sociocultural context of the educational experiences of Black children. In order to understand the biases and inequities that Black students face within the mathematics classroom, it is necessary to understand historical context of race and racism within American society. The historical context also provides a framework for understanding how the educational opportunities of Black children have been developed and/or hindered. It is also important to acknowledge the power of social, cultural, and political aspects of the American education system. Social, cultural, and political capital have an important role in American society. Education unfortunately is not equally available to all. The amount of capital is a determinant of the educational opportunities available to children; thus, this literature review will explore how opportunities are afforded. More important, this literature review examines different perspectives for analyzing the achievement gap, including the impact of the educational debt and Milner’s opportunity gap framework.

Following a review of the external powers that influence student achievement is a review of the internal school and classroom factors that influence student achievement. This review concludes by analyzing culturally responsive pedagogy and its influence on student achievement within the classroom.

Race, Social Class, and the American Education System

Race and social class are significant factors in American society that influence a student’s opportunity to obtain an education. In order to understand the experiences of Black high school students, it is necessary to examine the relationship between race and class in the educational opportunities afforded to Black students. Race and racism are social constructs that have to be recognized in order to address the underlying causes of underachievement (Ladson-Billings &
Tate, 2006). Racism is a reflection of the ideas of a social and political system that perpetuates a hierarchy among different groups (Bonilla-Silva, 1997, 2003a, & 2003b). In a racist society, there are dominant and subordinate races identified within the social system. The dominant group is provided with rewards in all social systems, including political, education, economic, social, and psychological, while the subordinate group is denied rewards. Consequently, racism can be deliberate and blatant, or it can be subtle, as it is embedded throughout every part of the societal system (Bonilla-Silva, 1997, 2003a, & 2003b).

Discriminatory practices or prejudice that occurs as result of an individual’s social class is known as classism (Liu, 2002; Lott, 2012). Institutional classism is evident when there are barriers that preserve or strengthen a lower status on the social economic ladder (Lott, 2012). These practices result in inequitable social and political dominance (Saegert et al., 2006). Our society’s acknowledgment of the influence of social class on children’s educational opportunities is limited. This is the result of the general belief that an individual’s hard work will lead him or her to a higher social class (Saegert et al., 2006). Hence, it is difficult for society to fully accept the idea that social class influences the learning opportunities of children in poverty. As a result, there are limited government programs that support children in impoverished areas. Governmental programs such as Title I provide additional funding schools in impoverished areas. However, there are no federally funded programs available to support children with the emotional and social trauma they might experience as a result of poverty. Similarly, government programs outside of the schools seem to penalize, rather than support, poor families for their economic hardships.

**The Unworthy: Children in poverty.** “To be poor in America today … is to be an outcast in your own country” (Krugman, 2008, p. 1). Children living in poverty have limited
social, cultural, and symbolic capital and have been categorized by some as the “underclass”; this is especially true for children of color (Reed, 1990). Bauman (2007) described the underclass as those who are viewed as worthless within our consumerist society. These individuals are thought to be taking advantage of social welfare programs—in essence, taking more than they give to the economy. Their lack of resources results in their being categorized as “failed consumers” (Bauman, 2007, p. 124), unable to actively participate in our consumer-driven society (Bauman, 2007).

According to Bauman (2007), the members of the underclass are plagued by negative stereotypes as a means of promoting economic competition. Moreover, government policies are imposed on the underclass for the purpose of expanding market potential and personal economic gain. The elite recognize that some individuals and communities are adversely impacted by these policies; however, the market is considered to be more important, and thus, negative consequences are ignored (Anyon, 2005; Bauman, 2007). Bauman (2007) referred to this concept as “collateral casualties”; the harm of poverty to individuals is preventable, but maintaining the market is viewed as more important. The underclass, according to Schram (1995), is “racially coded” and is built on the assumption that members of this group are dysfunctional. The dysfunction of the underclass is exhibited through their status as high school dropouts, welfare-dependent single mothers, and unemployed adult males.

The assumptions or stereotypes of the underclass are mainstream within American society and have been associated with poverty (Reed, 1990; Royce, 2015). Shifting the focus to the perceived actions of the underclass allows society to ignore the role that governmental policies have played in creating and perpetuating poverty (Reed, 1990). Although there is no
measure for being labeled *underclass*, the usual criteria for membership is living in urban settings and being Black or Hispanic (Reed, 1990).

Unlike most Western and Northern European countries, the United States provides inadequate social service resources to support individuals who are classified as low income. Thus, escaping poverty in American society is difficult (Anyon, 2005; Darling-Hammond, 2010; Rank, 2005). According to Rank (2005), almost 36% of the population will have experienced at least one year of poverty, and more than 38% of the population will have experienced two or more years in poverty in their lifetimes. These numbers dramatically increase for Black Americans, of whom approximately 90% will have had some experience with poverty by the time they are 75 years of age (Rank, 2005).

In a more recent study, Rank and Hirschl (2015) defined poverty as the state of an individual in the bottom 20th percentile of income distribution. Based on this definition, approximately 60% of the American population will experience a year of poverty. Although Rank and Hirschl’s (2015) more recent study did not specifically disaggregate the data by race, their regression model suggests that non-White members of society are nearly three times more likely to experience poverty. The U.S. Department of Commerce 2014 Income and Poverty population report suggests that 22.7% of Black Americans have an annual income of less than $15,000, and 14.7% have an annual income between $15,000 and $24,999. Based on these data, more than one third of the Black population lives on a household income of less than $25,000 (DeNavas-Walt & Proctor, 2015).

According to the U.S. Department of Health and Human Services 2016 Poverty Guidelines (https://www.federalregister.gov/articles/2016/01/25/2016-01450/annual-update-of-the-hhs-poverty-guidelines), the income requirement to be classified as living in poverty is an
annual income of $16,020 or less for a family of two. Per the Department of Labor (2016), the
minimum wage is $7.25, as a result of the Fair Labor Standards Act of 2009. Considering the
minimum wage of $7.25 per hour and assuming that an individual works forty hours a week, this
is approximately $15,080 a year, less than the income requirement for poverty in the United
States, thus guaranteeing poverty for a family of two. Minimum wage does not equate to a
minimum standard of living (Thampi, 2011).

According the the National Center for Children in Poverty (NCCP) approximately 49
million children live in low-income or poor households. Nearly 55% of these children live in
single family households (Jiang, Ekono, & Skinner, 2016). The National Women’s Law Center
suggests single mothers are twice as likely as single fathers to live in poverty (Entmacher,
Robbins, Vogtman, & Morrison, 2014). For a single mother working a minimum-wage job,
meeting basic needs in addition to childcare is a struggle. According to the Economic Policy
Institute “Family Budget Calculator,” a family of four living in a metropolitan area of Michigan
needs an annual income of $64,470 in order to meet basic needs including housing,
transportation, and child care. This annual income is nearly four times the annual income of a
person working 40 hours a week for minimum wage job in Michigan, where the minimum wage
is $8.50 per hour. Although the US government does supply childcare subsidies, they are limited;
only 1 in 7 of eligible families receive them, and these parents are still required to make a co-
pay. In addition, many of the approved facilities do not provide quality child care (Polakow,
2007). Moreover, the bureaucratic red tape of applying for child care and other social supports is
often a long, tedious process that may or may not result in support (Shulman & Blank, 2015).

Housing options for low-income families are another challenge. Although housing
subsidies are available, it takes a significant amount of time to be approved for the support (Joint
Center for Housing Studies of Harvard University, 2013, 2016). Moreover, often times the housing options available are limited to areas where there are poor quality schools and high incidents of violence and crime (Joint Center for Housing Studies of Harvard University, 2013). Children who do not have a consistent nighttime residence are considered homeless in the state of Michigan (Kies-Lowe & Whitener, 2012). Since 2008, the number of homeless students in Michigan has increased. According to Kies-Lowe & Whitener (2012), children make up 33% of the homeless population in Michigan.

In Michigan, the homelessness of 80% of homeless families is the result of a lack of affordable housing options (Kies-Lowe & Whitener, 2012). The lack of affordable housing causes families to live in temporary housing such as shelters, hotels, and motels (Kies-Lowe & Whitener, 2012). Parents and children in low-income families are in a constant battle to find resources to survive.

Underachievement is the norm in school districts serving the poor in the inner city and rural areas, particularly in settings where there is racial isolation (Noguera, 2003). In poverty-stricken areas, being seen as “underclass” influences parents’ and community members’ participation and control in the school community. Parents and community members do not feel that they can bring about change, and thus they have lower levels of parental involvement (Noguera, 2003). Noguera (2003) suggested that social capital is a determinant for the level of service provided by public institutions; thus, a better education is available to those with high levels of social capital. The poor have low levels of social capital and hence are afforded the lowest level of education. Noguera (2003) further asserted that the quality of the education provided by public schools is a function of the degree of shared values and expectations between parents and school officials. In poverty-stricken communities, there is a tendency toward tense
relationships and distrust between parents and school officials (Noguera, 2003). As a result, schools are viewed as creating problems, and from this perspective schools build negative social capital (Noguera, 2003).

**The intersection: Poverty and education.** Assumptions and associated stereotypes plague poor children when they walk into the classroom. Based on these assumptions and stereotypes, teachers begin instruction with low expectations, before actual learning can begin. As early as preschool, teachers label students and have limited expectations for their success (Polakow, 1993). Based on preconceived low expectations, teachers may provide instruction through a remedial context, unable to see the potential in students (Noguera, 2003; Ford, 2011). Because of these low expectations, students are often tracked through a lower level curriculum (Darling-Hammond, 2010; Oakes, 1990, 2010).

Students in low-level tracks tend to be provided curriculum that offers limited engagement opportunities and are more procedural learning experiences. Information given to children lacks connection to their lives or other content areas (Anyon, 1981). On the other hand, children attending schools in more affluent areas are provided with learning activities that challenge and develop independent thought. Students in more affluent schools are taught for the purpose of developing conceptual understandings and problem-solving skills (Anyon, 1981). Poverty enslaves children by restricting their academic potential (Ford, 2011). Moreover, the instructional approaches are aimed at preparing children to go to work in a factory setting, rather than creating meaningful learning experiences that promote critical thinking. The curriculum for the underclass maintains the elite’s advantage and dominance over the poor (Lakes, 2011; Steele, 2011).
**Instructional quality.** Poverty also has a significant impact on the quality of instruction provided to students (Darling-Hammond, 2010; Fine, Burns, Payne, & Torre, 2004; Oakes, 2010; Royce, 2015; Steele, 2011). Schools in poverty-stricken areas tend to have inexperienced teachers and larger class sizes (Royce, 2015). In addition, urban schools have higher enrollments, and students are less likely to attend schools for the gifted and talented. Teachers in schools located in high poverty urban areas also tend to have fewer instructional resources and less autonomy over the curriculum (Lipman et al., 1996). More important, schools in high poverty areas are often plagued with high teacher turnover (Royce, 2015), and administrators often are faced with the challenge of trying to find replacements for these teachers (Lipman et al., 1996).

Due to the difficulty associated with hiring qualified teachers, administrators often have to resort to hiring less qualified teachers to fill positions through programs such as Teach for America (TFA). TFA is a federally sponsored program that allows graduates from four-year universities to become teachers in low-income areas. The requirements for participation in TFA include U.S. citizenship and a bachelor’s degree with a grade point average of 2.5 for most placements. However, in six identified states or cities, TFA applicants can apply for a waiver to the grade point average requirements (https://www.teachforamerica.org). TFA teachers make a commitment to teach in a low-income school for a minimum of two years.

TFA teachers are required to participate in summer training programs and teach summer school prior to their fulltime placement in a school (https://www.teachforamerica.org). Throughout the school year, TFA teachers also participate in professional development to support their instruction. TFA teachers are not certified, although most are required to take classes or have satisfactorily passed a content knowledge exam and work towards obtaining a teaching certificate (https://www.teachforamerica.org). In the state of Michigan, TFA teachers
can apply for an interim teaching certificate if they are enrolled in an alternate route program and perform satisfactorily on the Michigan Test for Teacher Certification (MTTC) (http://www.michigan.gov/mde/0,4615,7-140-5683_14796---,00.html).

Teachers in alternative certification programs often do not have the opportunity to student-teach under supervision of an experienced teacher. This is a critical component of the teacher education programs (Darling-Hammond & Ducommun, 2011). In addition to their lack of qualifications, teachers in high poverty areas often do not have an understanding of students’ culture or the community in which they teach. Often these teachers are middle-class and bring their own perceived beliefs about the students and their abilities (Fine et al., 2004; Kozol, 1991).

**Different opportunities to learn.** In the United States, the economic disparity between children in poverty and their more affluent counterparts translates to significant differences in their opportunity to learn and achieve academically (Darling-Hammond, 2010; Lewis, 2003; Noguera, 2003; Steele, 2011). Some researchers have argued that, as a result of their social class, children in poverty are at a disadvantage upon entering preschool. The cognitive performance of these children at this level is 60% below their affluent counterparts (Klein & Knitzer, 2007). Moreover, children living in poverty are five times more likely than their counterparts to drop out of high school (Chapman, Laird, Ifill, & KewalRamani, 2011). Academic failure and poor health of children under the age of 6 have also been linked to poverty (Schmit, Matthews, Smith, & Robbins, 2013). In Michigan, approximately 30% of children under the age of 6 live in poverty, and 20% of those children have additional risk factors for academic failure, including teen mothers, low parent education, and single parents (Schmit et al., 2013). Furthermore, high school students in poverty have less access to counselors who could adequately prepare them for early college admissions, college entrance exams, and the college application process (Royce,
2015). After high school, students in poverty tend to perform lower on college entrance exams and are less prepared than their more affluent peers for a rigorous college curriculum (Royce, 2015).

The differences between the schooling experiences of children in poverty and children in middle-class households extend beyond teacher qualifications and the curriculum. Children in poverty often attend schools that fail to empathize and provide adequate support for their home situations. Students are expected to be focused in spite of being hungry, homeless, or worried about basic survival. Maslow’s (1943) hierarchy of needs argues that individuals must have basic needs satisfied in order for learning to occur. The basic needs include the physiological needs of food and shelter, as well as the need for safety. These basic necessities are not being met, yet students are expected to focus on their academics (Oakes, 2010). Schools in poverty fail to provide adequate social supports to address the children’s basic needs, thereby creating another barrier to student learning. The aesthetics and maintenance of the school buildings in poverty-stricken areas also appear to promote failure rather than success (Fine, et al., 2004). Schools in urban settings also tend to have larger enrollments than suburban schools, as a result of limited financial resources. Additionally, students attending schools in high poverty areas are more likely to feel unsafe at school (Lipman et al., 1996).

A More In-Depth Look at Critical Race Theory

The idea that race is a predictor of the educational opportunities available to students is one that is not often acknowledged by society at large. Differences in the performance of Black and White students on standardized assessments are often associated with deficit thinking models. Deficit thinking models blame children and their families for their children’s underperformance. The differences in performance are analyzed by focusing on factors outside
of the classroom, instead of factors within the school and classroom. Moreover, the underachievement of Black children is explored without considering the influence of institutionalized racial disparities that have existed historically and continue within American society. In order to thoroughly examine these factors, it is necessary to further review the critical race theory (CRT) framework.

According to Derrick Bell, “CRT is a body of legal scholarship … ideologically committed to the struggle against racism, particularly as institutionalized in and by law” (Taylor, Gillborn, & Ladson-Billings, 2009, p. 40). Delgado and Stefanic (2012) defined CRT as a movement that seeks to empower and facilitate change between the power relationships that exist as a result of race and racism. This movement is one that examines the contextual structures of society that influence the power relationship. Bell (2009) further asserted that CRT is a form of “scholarly resistance” (p. 42) in the hopes of facilitating systematic change. Although they are similar, there are various approaches to and definitions of CRT. It is important to understand the historical influences of CRT, as well as to review the different approaches to it.

**Historical perspective.** CRT is an offspring of critical legal studies (CLS) (Crenshaw, 1988; Delgado & Stefanic, 2012; Ladson-Billings, 1998). CLS developed during the 1970s, after the Civil Rights Movement (Delgado & Stefanic, 2012). This theoretical framework challenges the jurisprudence of the law (Ladson-Billings & Tate, 1995) by critically examining legal doctrine and law and identifying contradictions (Crenshaw, 1988). CLS applies the ideology of legal indeterminacy or the belief that there is more than one correct result to a legal case (Delgado & Stefanic, 2012). The critical examination employed by critical legal scholars shows how the American legal system perpetuates societal inequities (Crenshaw, 1988).
The groundwork of the CLS framework was laid by various Black scholars such as W.E.B. Dubois, Fredrick Douglass, and Sojourner Truth (Delgado & Stefancic, 2012). The scholarship of Antonio Gramsci, an Italian neo-Marxist who developed the concept of hegemony, also contributes to the foundation of CLS (Crenshaw, 1988). Gramsci (1971) described hegemony as “soft” power, where the views of the dominant group are used to exert political, social, and economic influence over the populace, repressing alternative ideas and promoting a false consciousness of consensus. This consensus results in the establishment of a class system that places subordinate groups at different positions on the hierarchical ladder (Gramsci, 1971). Hegemony allows the dominant group to impose legal consequences on subordinate groups that fail to comply with their norms (Gramsci, 1971). Using Gramsci’s definition of hegemony, CLS acknowledges that there are structural systems that prevent the acquisition of equal opportunity for all (Crenshaw, 1988).

Essentially, CLS suggests that the governing laws of American society are geared towards meeting the needs of the dominant society, without explicitly addressing the role of race in its examination (Crenshaw, 1988). Derrick Bell, the identified father of critical race theory (Delgado & Stefancic, 2012), argued that race and racism are permanent constructs embedded in every system and structure of American society. CRT, from his perspective, highlights the inequalities that are a consequence of racism in order to enact change. However, critical race theorists realize that another battle of inequality will or does exist (Bell, 1992). Bell (1992) further maintained that since race and racism are mainstays within American society, it is important to realize that legal doctrines and laws beneficial to Blacks also have a perceived benefit for Whites. Hence civil rights legal doctrines and laws are interest convergent (Bell, 1992; Crenshaw, 1988). CRT, for Bell (2009), is a form of commitment to fight institutionalized
racism implemented by law. It represents the understanding that the law needs to be radically critiqued and revised in order for all to have equal opportunities (Bell, 2009).

Crenshaw (1998) argued that racial consciousness is an essential component to consider in examining the inequities that exist in American society. Racial consciousness elucidates the limited opportunities afforded to Blacks as a result of their racial classifications. This perspective shows the role that hegemonic forces have in precipitating stereotypes and negative perceptions of Blacks (Crenshaw, 1988). Moreover, racial consciousness sheds light on the privilege and position that Whites have in American society (Crenshaw, 1988).

The concept of race consciousness supports the work of Cheryl Harris (1993), who contended that the racial classification of White has inherent privileges, therefore making it a form of property. The property value of “whiteness” was established during slavery and has continued through the Jim Crow South until the present. During slavery, whiteness was associated with freedom, while blackness was associated with captivity (Harris, 1993). These associations still exist, and the stereotypes and falsehoods about Black people persist (Crenshaw, 1988). Hence there are advantages available to individuals classified as White that are not afforded to non-Whites, thereby giving it worth or value to racial classifications (Harris, 1993).

The acknowledgment of whiteness as a property provides another lens for understanding the contextual underpinnings of educational opportunities available to Black children compared to those available to White children.

**CRT in education.** The work of CLS scholars focuses largely on law and legal doctrine. Using the work of W.E.B. DuBois and Carter G. Woodson as a foundation, Ladson-Billings and Tate (1995) were the first to apply CRT to the field of education, in the article *Toward a Critical Race Theory of Education*. Ladson-Billings and Tate (1995) proposed that the norm is
characterized by the actions of White society. Other racial and ethnic groups are ranked in comparison to these identified norms (Ladson-Billings, 1998).

Ladson-Billings and Tate (1995) argued that there are three propositions necessary for applying CRT in the field of education. The first proposition is that race is a determinant factor for inequity. A focus on socio-economics and gender differences fails to provide a complete explanation regarding the underachievement of Black students. CRT, from their perspective, is a theory that reviews the influence of race through the lens of cultural and social structures (Ladson-Billings & Tate, 1995). The second proposition is that power and influence in American society is a function of property rights; the amount of property an individual has access to is a determining factor for the type of school he or she attends. Similarly, the amount of property also influences the school resources available to children (Ladson-Billings & Tate, 1995). Third, school inequities that exist can be understood by analyzing the influence of both race and property (Ladson-Billings & Tate, 1995). A focus simply on poverty fails to explain the underachievement and inequities that Black students experience (Ladson-Billings & Tate, 1995). It is essential to review the inequities within schools through the lens of both race and property in order to develop a holistic perspective of the issue.

The traditional belief of the American educational system, which argues that all children have equal access and opportunities to education, is false. Race and racism are central factors in understanding the educational experiences of students (Solórzano & Yosso, 2001). However, there is also an intersectionality of race and racism with various other forms of oppression, including class and gender (Solórzano & Yosso, 2001). CRT represents a commitment to facilitating social change that will result in the elimination of oppressions based on race, gender, or class (Solórzano & Yosso, 2001). Moreover, CRT seeks to empower marginalized groups
In order to accomplish the goals of understanding race and racism in education, CRT uses the experiential knowledge of those impacted (Solórzano & Yosso, 2001). Additionally, CRT uses cross-disciplinary knowledge from various disciplines including law, history, ethnic studies, and gender studies (Solórzano & Yosso, 2001).

**Critiques of critical race theory.** In more recent years, CRT has been used as a theoretical approach; there are still various scholars who challenge the validity of this construct. Litowitz (1997) suggested that the interest-convergence argument of CRT is an unfair critique of liberalism. He believes that liberalism is focused on ensuring equal rights and fairness for all. CRT does not provide specific enough explanations of why liberal arguments should not be trusted or are interest-convergent. He further argued that it is not difficult to find legal policies that are not interest-convergent, and thus, it is inaccurate to suggest that all legal policies are in the interests of White society. In addition, Litowitz (1997) argued that the use of counter-stories is dependent on the readers’ emotions instead of logical reasoning. In other words, the writer takes a stance and persuades the reader with dramatic stories instead of concrete facts. Litowitz’s (1997) argument is based on the assumption that the law is fair for all. Additionally, Litowiz (1997) assumed that researchers who use counter-stories exaggerate realities for the purpose of telling an emotionally driven story.

Other scholars who have also critiqued CRT argue that the theory promotes divisiveness among races. Furthermore, these scholars suggest that CRT does not provide specific prescriptions for addressing the perceived inequalities (Pyle, 1999; Subotnik, 1998). Subotnik (1998), in particular, argued that the focus should be on helping to instill middle-class values within all American citizens. Middle-class values, according to Subotnik (1998), require that individuals seek to have a high standard of living, moral compass, work ethic, and ambitions.
These values, according to Subotnik (1998), open the door of opportunities for Black people and other marginalized groups. Similarly, Pyle (1999) suggested that existing inequities are a result of the circumstances that marginalized groups face, such as lack of job stability and high quality education, not race. Pyle’s (1999) and Subotnik’s (1998) arguments are grounded in the assumption of meritocracy. In other words, all Americans have access to equitable to high-quality employment and education, if they choose to pursue it. The secondary assumption that Subotnik (1998) specifically suggested is that marginalized groups that face inequities lack “middle class values,” or what can be viewed as White normed values. He stated that the middle class is associated with the desire to achieve high standards, in essence suggesting that marginalized groups do not have these desires.

All of these scholars’ arguments are grounded in the assumption of stereotypical White “middle class” cultural norms. They fail to acknowledge the privilege that individuals classified as “White” have in American society. By ignoring the significance of race and racism in American institutions, CRT is seen as unnecessary and an unfair challenge of the status quo. Failure to acknowledge the historical role of race and racism results in an incomplete portrayal of minorities’ daily lives. Their critiques illustrate the embedded structural racism that critical race theorists discuss.

How is CRT used within this study? The premise of this study is that, regardless of the socio-economics of the school’s community, students’ race is a primary factor in their classroom experiences. Class is also a significant predictor of children’s classroom experiences. For the purposes of this study, race is a deliberately identified construct through which the experiences of the participants are analyzed. Ladson-Billings and Tate (1995) contended that it is important to acknowledge the effect of both race and property while employing a CRT approach.
Additionally, a central argument to a CRT framework is that structural and systematic inequities exist as a result of individuals being labeled Black versus White (Crenshaw, 1988). Acknowledging the privilege that is acquired as a result of being labeled White is necessary in order to develop a holistic understanding of Black children’s classroom experiences (Ladson-Billings & Tate, 1995). An extensive discussion of CRT and its use as a methodology is reviewed in Chapter 3.

Race and Education Opportunities

“The hearts and minds of children are shaped and controlled—have been dominated for far too long by the attitudes, the beliefs, and the value system of one race and class of people” (Pine & Hilliard, 1990, p. 3). Poverty is a significant factor that influences that achievement of Black high school students; however, it is not the only cause of underachievement (Ogbu, 2003). For Black students, underperformance on standardized assessments persists, in spite of attending suburban schools in more affluent areas. Although research shows that Black students in affluent suburban schools perform better than their Black counterparts in urban schools, they still underperform when compared to their White counterparts in similar socioeconomic conditions (Ogbu, 2003).

In addition, Black students are enrolled in fewer Advanced Placement (AP) courses (Collegeboard, 2014). According to the 10th Annual AP Report to the Nation State of Michigan Supplement, published by the Collegeboard, approximately 1,600 Black students in Michigan participated in an AP examination in 2013, and 30% of those students received a score of 3 or higher. On the other hand, nearly 4,400 White students in the state took an AP examination, and almost 50% of those students received a score of 3 or higher. It is therefore necessary to examine
the other variables within the structure of schools that may lead to the underachievement of
Black students.

**In the shadow: The achievement gap and education debt.** Black students enter
classrooms in the United States in the shadow of the Black-White achievement gap, a
phenomenon that has led to negative perceptions regarding the achievement abilities and
potential of Black students (Ladson-Billings, 2006, 2007; Milner, 2012; Rothstein, 2004). The
focus on the Black-White achievement gap has resulted in Black students and their families
being blamed for students’ underachievement, as illustrated through the 1968 Coleman Report

As a means to fix the gap, politicians have enacted laws to hold teachers and schools
more accountable, requiring students to meet proficiency requirements for standardized
assessments. Schools’ failure to meet these requirements can lead to, and has led to, school
closings. In spite of these policies, the Black-White achievement gap has continued to persist
(Ladson-Billings, 2006, 2007; Milner, 2012; Rothstein, 2004). Although both Blacks and Whites
have improved on the National Assessment of Educational Progress (NAEP) assessments in both
reading and math, the achievement gap has remained consistent (National Center for Education

Ladson-Billings (2006, 2007) argued that the achievement gap is a result of an “education
debt” that American society has incurred. The education debt consists of four entities: historical
debt, economic debt, socio-political debt, and moral debt. The historical implications stem from
slavery and the Jim Crow South. In slavery, Blacks were prohibited from learning to read and
write (Anderson, 1988; Ladson-Billings 2006, 2007). In the Jim Crow South, although slavery
had ended, Blacks were still not given access to the same education as their White counterparts.
Black students did not have access to equitable educational resources, curriculum, or learning environments. More important, secondary education was not available to all Blacks until 1968 (Anderson, 1988; Ladson-Billings 2006, 2007).

The economic debt is illustrated through the disparity in the opportunity for Blacks to acquire wealth. Whites have had more access to wealth for decades; in some cases, wealth has been passed down through generations. On the contrary, Blacks have not had this same access. Wealth in American society translates into more political and social power and control (Anderson, 1988; Ladson-Billings 2006, 2007). The sociopolitical debt is revealed by the fact that Blacks were historically barred from participation in the governmental process. Black people were not given the right to actively participate in the political process until 1965, with the passage of the Voting Rights Act (Voting Rights Act of 1965). The moral debt is a result of the negative images of Blacks that have been perpetuated throughout American society (Anderson, 1988; Ladson-Billings 2006, 2007). The view that Blacks are associated with the underclass contributes to this moral debt that Ladson-Billings (2006, 2007) discussed. The education debt is a result of the lack of investment in the education of Black students to counteract the impact of the historical, economic, social-political, and moral debts incurred by our society (Anderson, 1988; Ladson-Billings 2006, 2007). In analyzing the achievement gap, Ladson-Billings (2006) argued that the focus should be on social, economic, and political disparities that are preventing equitable access to education for all students.

Another argument for repositioning the achievement gap is that the current discourse about it validates the myth that one group is better than another (Gutierrez & Dixon-Román, 2010). In addition, the current discourse about the achievement gap encourages the notion that underachievement is the standard for Black and Latino students (Gutierrez & Dixon-Román,
More important, the achievement gap discussion allows society to ignore the social and economic disparities that perpetuate the achievement gap (Gutierrez & Dixon-Román, 2010).

Similarly, Milner (2012) argued that concentration on the achievement gap ignores the social context that has contributed to the gap. Furthermore, he asserted that the achievement gap is a deficit-thinking module that normalizes the performance of White students and emphasizes the underachievement of Black students (Milner, 2012). Milner (2012) contended that the achievement gap should be reconsidered as an opportunity gap. Milner’s (2012) opportunity gap explanatory framework consists of five tenets: color blindness, cultural conflicts, myth of meritocracy, low expectations and deficit mindsets, and context-neutral mindsets (Milner, 2012). The following pages examine each of the tenets of Milner’s opportunity gap framework in detail.

**Milner’s opportunity gap explanatory framework.** One of the first tenets of Milner’s opportunity gap framework is color blindness. Color blindness ignores the impact of race in the classroom environment. In a color-blind classroom environment, teachers fail to recognize how their own racial experiences and biases can influence their instructional practice and curriculum (Milner, 2012). This failure to acknowledge race results in limited or no culturally relevant instruction. Students may find it difficult to relate to the classroom instruction because they do not see themselves, thus leading to an opportunity gap (Milner, 2012).

Ignoring the existence of racism on educational opportunities does not change the fact that it exists (Ladson, Billings, 2009). Too often culture is dismissed in the American classroom. Teachers use the idea of color blindness in the classroom as a means to justify the academic failures of Black children. The teacher is perceived as an objective entity that provides information to those who are willing to accept it. Hence, a lack of academic success is viewed as a consequence of the failures of students and their families (Ladson-Billings, 2009; Richard,
Brown, & Ford, 2007). Some teachers and policymakers perceive education to be equally accessible for all, regardless of race and socio-economic status. Ladson-Billings (2006) categorized this classroom view as *racial optimist*. The racial optimist’s perceptions of students are grounded in cultural deficits. Cultural deficits blame the home environments for students’ failures (McElroy & Hollins, 1999; Weiner, 2006). Moreover, remediation is viewed as an instructional approach to counteract these deficits (Hollins, 1999; Weiner, 2006).

Another opportunity gap is established through the low expectations and deficit mindsets of educators. As previously discussed, low teacher expectations prevent students from being exposed to rigorous content knowledge. Teachers’ expectations influence the nature of the classroom learning environment (Teel & Obidah, 2008). Black children enter the classroom at a disadvantage, simply because their teacher may not believe that they are capable. In some instances, teachers and administrators seem to share the idea that “these” children cannot perform at high levels, so they do not require them to (Ford, 2011; Hale-Benson, 1982; Noguera, 2003). Instructional approaches focus on controlling children instead of building content-level knowledge. Students are tracked into low-performing classes. Large percentages of Black children, primarily boys, are labeled as special education. Schools’ failure to adequately address the needs of minority children results in students resisting the norms. Consequently, these schools are plagued with disciplinary referrals and violence (Ferguson, 2001). Content knowledge is provided to Black students at a significantly lower level than to their White counterparts (Anyon, 1981; Gorski, 2013). Teacher-student relationships are influenced by teacher expectations; hence, low expectations result in negative teacher-student relationships. Minority parents are frequently the easiest to blame (Torres & Hurtado-Vivas, 2011; Valencia,
Schools blame students and their parents to justify students’ lack of academic achievement (Ford, 2011).

Schools promote racial intolerance and reinforce negative views of Black children and their families (Pine & Hilliard, 1990). Pine and Hilliard (1990) argued, “Schools have become sites for producing and making acceptable myths and ideologies that systematically disorganize and neutralize the cultural identities of minorities” (p. 3). The disciplinary actions of administrators and teachers seem to prepare children for prison rather than for becoming productive members of society (Robbins, 2008). According to the 2012 Civil Rights Data Collection (CRDC), although less than 20% of the students in the sample were Black, more than 80% of the suspensions issued were to Black children. Moreover, Black children account for almost 40% of the students expelled from a school. Black girls have a 10% chance of being suspended, while the probability of a Black boy being suspended is double that (Duncan & Ali, 2016). It is difficult for students to learn if they are not in school. Disciplinary actions that result in students being removed from their learning environments perpetuate the educational divide between Black students and their peers. Nationally, Black boys in particular are being labeled as “endangered” (Ford, 2011). More important, they are more likely to be suspended and to attend a school that is in poverty (Duncan & Ali, 2016; Ford, 2011). As a result, Black boys are also more likely to drop out (Ford, 2011). The excessive number of disciplinary referrals seems to label Black children as unworthy, deviant, and troublemakers. School is not an uplifting place of encouragement but rather a place of condemnation and a reflection of unworthiness (Ferguson, 2001).

Cultural differences and conflicts. Cultural conflicts between teachers and students can also lead to opportunity gaps. Actions on the part of both educators and students can be
misinterpreted, leading to a confrontational relationship (Milner, 2012). Educators are frustrated; students feel disrespected, as a result, students disengage from the learning process, and another opportunity gap is developed (Milner, 2012).

Various scholars have studied and presented theories or models for understanding the academic performance of students of color. Some, such as Hale-Benson (1982), have argued that teachers fail to provide instruction in a manner that is compatible with students’ culture and learning styles, particularly with Black students. Instruction that is more aligned to the needs of students incorporates the learning styles and cultural patterns of students. For example, Boykins (2011) suggested that instruction that incorporates characteristics of Black culture better meets the needs of Black children. Black culture is influenced greatly by the following characteristics: spirituality, harmony, movement, verve, affect, communalism, oral tradition, expressive individualism, and social time perspective. Instruction that incorporates these characteristics is more attuned to the needs of Black children (Boykins, 1978, 2011). Similarly, Leonard (2008) found that the achievement for Native American/Alaskan Native students increased when culturally based instructional programs were utilized. This suggests that the incorporation of students’ culturally based norms within daily instruction has the potential to increase the academic achievement of all students.

Similarly, Irvine (1990) suggested that there is a lack of cultural synchronization in the classroom that results in missed learning opportunities for children of color. The experiences and privileges of teachers are often different from those of their students. As a result, teachers misunderstand or misinterpret behaviors of children of color, resulting in more disciplinary problems. Moreover, instruction is not aligned to students’ interest and lacks meaning in their
world. Boykins, Tyler, and Miller (2005) concurred, suggesting that poor academic performance is a result of cultural divergence between instruction approach and students’ learning styles.

One of the final tenets of Milner’s (2012) opportunity gap framework is the myth of meritocracy: the belief that all children have an equal opportunity to education, if they are willing to work for it (Milner, 2012; Lemann, 2000). Meritocracy suggests that an individual’s lifestyle reflects the amount of work that he/she puts into it (Lemann, 2000). For this reason, poverty in American society is portrayed as an individual’s problem and as a consequence of individual irresponsibility (Anyon, 2010; Ford, 2011; Polakow, 1993; Rank, 2005). This myth ignores all of the social, economic, and moral factors that make up the education debt. The consequence for failure to acknowledge the significant impact of these factors provides another opportunity gap (Milner, 2012; Ladson-Billings, 2006).

Milner (2012) further asserted that educational environment could also provide opportunity gaps. Inner city schools have more new and inexperienced teachers than more affluent areas. In addition, teacher absenteeism and turnover rates are higher in urban areas. Moreover, suburban schools have more financial resources to support students (Milner, 2012).

Other factors that may also contribute to the opportunity to learn gap include racial isolation and microaggressions. Racial isolation occurs when students attend school in the largely segregated areas in which they reside. According to Darling-Hammond (2004), 70% of Black children attend school with other people of color. One third of Blacks and Latinos attend schools where the demographics of the school are more than 90% minority. Darling-Hammond (2004) suggested that local and state governments promote racial segregation through schooling assignments. As a result of racial isolation, children have again been segregated and provided with unequal educational opportunities (Darling-Hammond, 2004; Gillborn, 2006). As the data
from the Civil Rights Data Collection (CRDC) (2016) suggest, although most children of color experience some form of racial isolation, Black students are the primary targets.

Research has shown that in school environments, Black students are often the targets of subtle insults. These attacks are referred to as microaggressions (Davis, 1989; Pierce, 1995; Solórzano Ceja, & Yosso, 2000; Sue, 2010; Sue, & Constantine, 2007). Microaggressions can be displayed in a variety of ways and are imposed on people of color in various aspects of their lives (Pierce, 1995; Sue, 2010). There are three types of microaggression: microassaults, microinsults, and microinvalidations. Microassaults are blatant and deliberate attacks on differences and communicate that others are inferior. Conversely, microinsults are unintentional attacks that are the result of a lack of sensitivity or awareness of the experiences of Black students. These are illustrated through interpersonal relationships between groups that perpetuate stereotypes and biases. Microinvalidations are attacks that can be experienced through the school’s or teacher’s failure to acknowledge or validate the feelings and experiences of Black students. These take place in environments that indirectly devalue differences or fail to acknowledge that difference exists (Allen, 2012; Sue & Constantine, 2007; Sue, Nadalm, Capodilupo, Lin, Torino, & Rivera, 2008). Each of these microaggressions has an impact on the classroom environment (Allen, 2012).

In a society that is grounded in a culture of racism, it is likely that biases exist towards different groups. Hence, there is also a sense of alienation that can be experienced by students of color. This can manifest itself through teachers’ lack of understanding of the learning and communication styles of Black students, becoming another example of a microaggression that Black students face (Hale-Benson, 1982; Pierce, 1995; Sue, 2010).
Racist views are outwardly considered unacceptable in society; however, subtle indirect racism is acceptable. Although microaggressions are not necessarily intentional, they create a hostile classroom environment that Black students are forced to combat daily in their educational experiences (Gillborn, 2006; Pierce, 1995; Sue, 2010). Perpetrators of microaggressions are at times unaware of the impact of their actions, yet microaggressions can have a significant impact on the psychological and physical well-being of Blacks. Microaggressions can disengage Black students from the learning process and can even lead to racial mistrust, in that Black children may not trust their White teachers (Pierce, 1995; Sue, 2010).

Allen (2012) contended that Black males feel apprehension from teachers when they are academically successful. In addition, teachers are fearful of engaging with Black males, even as children. Hence, Black male students feel they were treated unfairly with regard to discipline and perceived abilities (Allen, 2012). The constant battle of defending one’s self can result in racial battle fatigue that negatively impacts the psychological and physical well-being of an individual (Allen, 2012; Smith, Allen, & Danley, 2007). Yosso, Smith, Ceja, and Solórzano (2009) highlighted the experiences of Black graduate students who often spend time defending themselves as it relates to stereotypes of perceived misbehaviors. As a result of microaggressions on campus, students in this study expressed feelings of self-doubt and isolation (Yosso et al., 2009).

Students’ inability to appropriately handle microaggressions can lead to anger that manifests in the form of misbehavior. This misbehavior often leads to disciplinary actions such as school suspensions or expulsions (Ferguson, 2001; Yosso et al., 2009). Irvine (1990) argued that young Black children have difficulty managing feelings related to racial isolation. Their
feelings of anger are often displayed through their behavior, and as a result, they are more likely to be suspended than their White counterparts (Irvine, 1990).

The Mathematics Classroom

Mathematics is considered to be complex and abstract subject that is difficult to master. In our society, although we recognize that mathematics is a gateway to economic gains, it is acceptable to not be proficient in mathematics (Ladson-Billings, 1997). The traditional mathematics classroom is often geared towards a White middle-class culture (Ladson-Billings, 1997; Romberg, 1992). Hence mathematics instruction is not related to Black students’ real life experiences and thus lack connection and meaning (Tate, 1994). As a result, Black students can feel isolated and lack support within the mathematics classroom. Since the mathematics classroom is the focal point of this study, it is necessary to examine the specifics factors that contribute to the opportunity to learn in the mathematics classroom. Too often the classroom consists of low expectations and instruction that does not promote critical thinking or problem-solving for Black students (Ladson-Billings, 1997; Delpit, 2012; Tate, 1994; Walker, 2007). This is particularly true in the mathematics classroom. Therefore, Black students are more likely to participate in remedial mathematics than the college preparatory mathematics courses their White counterparts are taking (Delpit, 2012). Walker (2007) further asserted that Black students often experience racial isolation in advanced math courses and tend not to take these courses. This racial isolation can lead to emotional and psychological stress characterized by feelings of inadequacy, negative peer influence, and perceived negative societal perceptions (Sheppard, 2006). Black students have limited access to mathematical technology and less access to strong mathematics teachers (Tate, 1994).
A Different Instructional Approach: Culturally Responsive Pedagogy

Leonard (2008) contended that mathematics teachers are a crucial part of the solution for the underachievement of Black students in the area of mathematics. She further asserted that mathematics teachers have to make mathematics relevant and culturally specific, and they should give students permission to solve problems in multiple ways. This approach to instruction is known as culturally responsive pedagogy (CRP), a pedagogical approach that empowers students by allowing them to see themselves within the classroom learning environment. CRP develops a positive self-identity and contradicts the stereotypes portrayed by society (Ladson-Billings, 2009; Richard et al., 2007).

CRP is instruction that recognizes, values, and honors the various differences that students bring to the classroom (Ladson-Billings, 2009; Gay, 2000). An integral part of CRP is centered in the teacher’s ability to engage in critical reflection (Richard et al., 2007). This allows teachers to critique their own biases and stereotypical beliefs and also to examine the impact of their life experiences and privilege on their instructional approach (Howard, 2010).

CRP is an inclusive approach to educating children, encompassing the acknowledgment of external factors that influence children’s behaviors and achievement. Ford (2011) described teachers who engage in culturally responsive pedagogy as those who develop a learning environment that appreciates and understands their students’ cultural and developmental needs. These teachers recognize that the needs of children extend beyond the classroom environment, and they look for ways to accommodate these needs within the learning environment.

Access to equitable education has been a constant battle for Black students. For this reason, education in the Black community is a valued commodity (Walker, 2001). The
experiences and academic achievement of Black students prior to desegregation provide a lens for understanding the learning needs of Black children in the 21st century (Walker, 2001).

**More than a teacher.** During the era of the Jim Crow South, Blacks pursued education with the hope that it would lead to a voice in political, economic, and educational institutions. The landmark case *Brown v. the Board of Education* initially was thought to be a step in the right direction (Patterson, Mickelson, Petersen, & Gross, 2008). Yet some suggest that the educational opportunities afforded to students decreased. Prior to forced integration, Black students had predominantly Black women as teachers (Coats, 2010). These teachers were community members and held teaching Black students as a prized obligation. Teachers and students were held in high esteem. Teachers were educated members of society, while students were viewed as future proponents or fighters against racial injustices. Students and teachers both understood how they needed each other (Coats, 2010; Walker, 2001).

Studies on the schooling experiences of Blacks in the South during this period have yielded various findings. For one, students sought to receive validation or approval from their teachers. Consequently, discipline overall was not viewed as an issue in school (Coats, 2010; Walker, 2001; Patterson et al., 2008). Another key theme was the idea of a caring teacher. Teachers genuinely cared about students and their well-being (Coats, 2010; Walker, 2001; Patterson et al., 2008). In the Coats (2009) study, a participant reflected, “The teachers were serious about teaching and about us learning” (p. 12). Teachers were also anchors in the community they served. As a result, students frequently interacted with teachers outside of the classroom. Families also interacted with teachers, so parents had a sense of security in knowing that their children were being properly educated (Coats, 2010; Walker, 2001; Patterson et al., 2008). Their teachers also had high expectations and encouraged students to persevere through
difficulties. Students left those classrooms empowered to take on the world, with the understanding that difficulties lay ahead but could be overcome (Coats, 2010; Walker, 2001; Patterson et al., 2008).

Patterson et al. (2008) argued that parental communication was another key element to student achievement; teachers frequently spoke with parents and students about progress. Furthermore, subjects of learning fostered positive images of the Black community. Classes explored Black history, poetry, and scientists. Teachers developed a sense of self-pride and community pride with their students (Patterson et al., 2008). Education was important, not simply to the individual student but to the community as well. One participant recalled teachers frequently saying, “You gotta work hard and make your people proud! You hear that over and over again” (Patterson et al., 2008, p. 316). Consequently, students learned to persevere in spite of difficulties as well as how to navigate through a society that viewed them as second-class citizens (Patterson et al., 2008).

Siddle Walker (2001) suggested that teachers were invested in the education of their students, thereby providing instruction that related to students’ world. Education was also viewed as a moral obligation, and teachers sought to ensure the success of their students. Teachers wanted the best for their students, and it was displayed in their instructional approach (Walker, 2001).

The qualities outlined above describe the qualities of culturally responsive pedagogy. This pedagogical approach shifts the focus from the deficits that students have to the assets that they bring to the classroom. In order to understand the impact of culturally responsive pedagogy, it is necessary to examine various programs/models that have instituted this pedagogy (Boykins, 2011; Ladson-Billings, 2009).
Instructional Programs Using Culturally Responsive Pedagogy

There are a variety of educational programs that have been successful in addressing issues of Black underachievement by helping teachers and schools develop their capacity to enact culturally responsive pedagogy (CRP) with Black children. The Algebra Project and the Talent Development Model Schools are two examples of these types of programs.

The Algebra Project. The Algebra Project was started in the mid-1980s by Robert Moses in Cambridge, Massachusetts. Moses identified the program as a Civil Rights Movement, arguing that high-level math proficiency is a necessity for success in the 21st century. The program begins in middle school, with the goal being to prepare students for college preparatory mathematics in high school (Moses & Cobb, 2001).

The Algebra Project allows students to take control of their learning by having them establish both short- and long-term goals. More important, the Algebra Project provides various ways for students to analyze math concepts. Instruction is geared towards meeting students where they are academically, and in a context that they can understand (Moses & Cobb, 2001).

Positive teacher-student relationships are an essential part of this program’s design. Teachers work intently to learn about students and their interests. Moreover, instruction and projects are geared towards student interests (Moses, Kamii, Swap, & Howard, 1989). Math becomes less an abstract concept and more a concrete object that is illustrated in everyday life. Students are provided with a significant amount of support, helping them to develop perseverance through difficult problems (Moses & Cobb, 2001; Moses et al., 1989). In addition, this support helps students aspire to and achieve goals that they might otherwise have not thought possible. The Algebra Project empowers students, thereby increasing their confidence in
mathematics. Consequently, students are intrinsically motivated to succeed (Moses & Cobb, 2001).

The Algebra Project engages in culturally responsive pedagogy by first connecting with students. The activities relate to students’ daily lives, thereby creating a context to develop new knowledge. The program disregards the traditional mindset—that children cannot perform algebra without understanding basic facts - and instead uses knowledge that students already have in order to achieve. Students learn to set goals and persevere to achieve those goals. More important, the teachers establish a relationship with students and support them through difficulties. Students know that they will be uplifted, not demeaned, for asking questions. Furthermore, students know that their success is the goal of their teacher.

Students’ achievement in high-level mathematics as a result of participation in the Algebra Project suggests that the program works. In Cambridge, Massachusetts, the number of students entering geometry classes at the start of high school doubled from 1991–1997. There was a 14% increase in the number of Black students entering geometry classes (West, 2007). As students continued to progress through advanced mathematics, well over 60% of them were successful in advanced algebra. Since its initial implementation in Cambridge, the Algebra Project has been implemented in more than 200 schools around the country. In various schools, African-American, Latino, and low-income children are finding success in algebra at the middle school and elementary level (West, 2007).

**Talent Development Model.** The Algebra Project is specific to the content area of mathematics; however, other programs that have focused on overall academic achievement have also been successful. The Talent Development Model of Schooling is one such model.
The Talent Development Model of Schooling (TDMS) was a product of the Johns Hopkins University Center for Research on the Education of Students Placed at Risk (CRESPAR). The model is grounded on the assumption that all students are capable of learning, given a challenging learning environment (Boykins, 2011). High expectations are an essential component of culturally responsive pedagogy (Ladson-Billings, 2009). Thus, high expectations are a central feature of the TDMS model, which requires adequate support and structures to cultivate an environment in which to learn.

TDMS is a collaborative effort of all stakeholders, including teachers, administrators, parents, students, and the community. All stakeholders are held accountable for supporting academic achievement (Boykins, 2011). Failure is not an option with TDMS; thus, there is the over-determination of success principle. This principle suggests that multiple support systems are in place for students, in order to ensure academic success (Boykins, 2011). These systems include after-school programs, family support, peer-support groups, cultural and social enrichment, tutoring, teacher development, curriculum, instruction, and assessment. All of the support systems are aligned to meet the needs of students (Boykins, 2011).

There are six dimensions to the TDMS model: focusing on assets, transitional support, preparation for the 21st century, constructivist and activist learning, meaningful and connected learning, and school as community (Boykins, 2011). Culturally responsive pedagogy encourages teachers to view differences as assets instead of deficits (Ladson-Billings, 2009). TDMS does this by focusing on the assets that students bring to school, including their values and languages. These assets are used in the classroom to support and expand knowledge as well as to display the value of student uniqueness (Boykins, 2011). Transitional support refers to support for students as they transfer to the next critical grade level, such as from elementary school to middle school
or middle school to high school. Transitional supports help students negotiate the new environment as well as adjust to the higher expectations (Boykins, 2011).

TDMS promotes critical thinking and problem-solving in order to prepare students for the 21st century. For this reason, the TDMS model promotes constructivist and activist learning. Through exploration, students are able to construct their own knowledge, thereby creating meaning for themselves (Boykins, 2011). Students engage in academic tasks instead of gaining knowledge through traditional lectures. Boykins referred to this as creating “intellectual entrepreneurs” (Boykins 2011, p. 12). Moreover, TDMS promotes meaningful and connected learning for students. Instruction is relevant to students’ interests and lives. More important, content knowledge is connected to prior experiences and knowledge, thus allowing students to understand how various content topics are related, developing a conceptual understanding of the content (Boykins, 2011).

Culturally responsive pedagogy also empowers students and creates a sense of belonging; therefore, an essential part of this model involves creating a culture of community within the school (Ladson-Billings, 2009). In a community, each stakeholder is valued and has a voice. As a means of creating this sense of community, every student has a mentor. Furthermore, all stakeholders are committed to the goal of academic success for all students, and both staff and students are able to express their voices with regard to the school community (Boykins, 2011).

**Research evidence of TDMS.** TDMS was piloted at Patterson High School in Baltimore, Maryland, during the 1994–1995 and the 1995–1996 school years. At the time of the implementation, this school was plagued by poor attendance, low graduation rates, and negative morale and school climate. In addition, the school was one of the poorest-performing schools in the state of Maryland (Jordan, McPartland, Legters, & Balfanz, 2000). The model at Patterson
consisted of the development of academies that divided students into small learning communities. All of the students had the same teachers, making it easier for students to establish relationships with staff. Additionally, each academy had its own administrator (Jordan et al., 2000). The placement of students in the academies was based on their career interests. Teachers shared a common planning period, allowing more time for collaboration. Every student was enrolled in high-level coursework; however, additional time was given to ninth-grade courses to assist with transition support (Jordan et al., 2000).

As a result of the implementation, significant improvements were seen in graduation rates, grade level promotions, student attendance, staff morale, and school climate. Overall student attendance increased by 10% while the number of students promoted nearly doubled (Jordan et al., 2000). Since that time, TDMS has been implemented in more than 30 schools in 12 states across the country. In 2004 an independent review found that gains continue to be seen in the high schools that have implemented TDMS. The greatest gains are visible at the ninth-grade level, where the percentage of students completing coursework increased by 13%. Likewise, graduation rates continue to increase by 6%, yet these rates fell in schools that have not implemented the program (Kemple & Herlihy, 2004).

TDMS and the Algebra Project illustrate that high achievement in mathematics is possible for Black students. Both highlight the definite influence of positive teacher-student relationships, a relevant challenging curriculum, and high expectations of student achievement. More important, these programs show the positive effect that relevant curriculum has on the academic achievement of Black students.
Chapter 3: Methodology

In order to conduct an in-depth examination of the mathematics classroom experiences of Black students, a qualitative research approach was used for this study. Qualitative research is based on the underlying assumption that it is important to explore and understand an individual’s lived reality shaped by social interactions within an environment. An individual’s perceptions and perceived meanings are dependent on socio-cultural and socio-political relationships, as well as the environment in which these interactions take place (Glesne, 2006; Hatch, 2002). This form of research develops a context for understanding individual and social realities. Using the voices of the participants in addition to documenting the details of their lifeworlds, qualitative research allows for meaning to be constructed. The voices of participants, provided through narratives, construct a participant-centered and “thick description” of the issues or problems being explored (Fine, 1998; Geertz, 1973, p. 27; Glesne, 2006; Hatch 2002; Weis & Fine, 2000).

In qualitative research, data are often gathered through multiple interviews and/or observations. Participants relate their experience, and themes are identified through common patterns of experiences. The data collected are used to portray the experiences of individuals and groups and to provide an in-depth portrait of their worlds. As a result, qualitative research can be a means of bringing awareness to injustices and inequalities (Fine, 1998; Schram, 2006; Weis & Fine, 2000). Qualitative research is grounded in the belief there are multiple perceptions of reality hidden within the social interactions of individuals’ lived experiences (Glesne, 2006; Schram, 2006). Multiple perceptions of the experiences paint a holistic picture of the experiences being explored.
Qualitative Research Approaches

The purpose of this study was twofold: the first and primary goal was to understand the lived experiences of Black high school students within the context of the mathematics classroom. The second goal was to provide a counter-narrative to stereotypical perceptions of Black students within the high school mathematics classroom. In order to achieve these goals, this study incorporates three modes of qualitative research: phenomenology, critical ethnography, and critical race methodology. The phenomenological approach allows the researcher to illuminate the perceived reality of Black students within the high school mathematics classroom. Critical ethnography is used as a means to challenge the current stereotypical beliefs about the achievement of Black high school students. Critical race methodology provides a more in-depth examination of the role that race and racism, specifically, have on the participants’ experiences. Various parts of each of these approaches intersect; however, each approach provides a unique view for analyzing the data collected for this study, as Figure 1 illustrates.

Figure 1. Three qualitative approaches used in this study.
**Phenomenology.** Phenomenology seeks to explore the essential meaning behind a lived experience, with the hope of articulating perceptions and experiences of individuals, in order to increase understanding (Schram, 2003). There are two primary strands in phenomenology: transcendental and existential phenomenology. Transcendental phenomenology arose through the work of the early philosophers of phenomenology, Brentano and Husserl. Brentano’s (1888/1982) work focused on the idea of consciousness, and his most important contribution was the construct of intentionality, arguing that it had to be understood from the perspective of the individual. The notion that the intentionality of action influences the lived world is a central premise of phenomenology (Barritt, Beekman, & Bleeker-Murldreij, 1983).

Transcendental phenomenology is a systematic approach to studying a phenomenon, seeking to take on the natural attitude of the participants (Moustakas, 1994; Moerer-Urdahl & Creswell, 2004; Munhall, 2012; Wertz, 2005). Brentano (1888/1982) described phenomenology as a means of uncovering and sorting the attitudes and perceptions that an individual formulates about the natural world of objects and interpersonal encounters. Husserl, a student of Brentano’s, developed the construct of transcendental phenomenology further as “pure” phenomenology (Husserl, 1913/1999; Roche, 1973). Pure phenomenology is based on two concepts: the idea of the natural attitude and the epoché (Brentano, 1888/1982; Husserl, 1913/1999; Roche, 1973). The natural attitude is the notion that people naturally accept social norms, beliefs, values, and/or facts as “real” in their everyday lives. The natural attitude is embedded in people’s lifeworlds. While Husserl (1913/1999) formulated the construct of the lifeworld, existential phenomenology developed by later philosophers such as Merleau-Ponty and Schutz emphasized the lifeworld as the most important foundation of phenomenology. The lifeworld includes the influence of social...
and cultural relationships on an individual’s natural attitude about the world around him or her (Roche, 1973).

The époché is a means to discern the essential elements of an object or phenomenon (Roche, 1973). Husserl (1939/1970) suggested that the époché removes previous knowledge and/or perceptions about the phenomenon being studied. Its modern application in existential phenomenological research involves bracketing and critical reflexivity as well as professional distancing. Peshkin (1988) argued that the acknowledgement of one’s preconceptions in the research allows the researcher to become acutely aware of personal biases. Critical reflexivity, derived from the époché, is the critical examination of the researcher’s personal perceptions, assumptions, and embedded history as he/she explores the various facets of a phenomenon. Peshkin (1988) suggested that it is necessary for the researcher to conduct a personal audit of his/her perception and biases of the lived world. By conducting a personal audit, the researcher is pushed to consider different perspectives of the issue being explored (Peshkin, 1988).

Existential phenomenology, which seeks to understand how an individual’s perception is influenced by the lived world (Heidegger, 1953/1996), involves the in-depth study of a phenomenon that frequently brings to light consciousness, perceptions, and experiences that lie beneath the surface of the natural attitude. Existential phenomenology looks beyond what is, in order to better understand the relationship between an individual subject and the lived world (Moustakas, 1994; Roche 1973). Interpretation of individuals’ experiences and the acknowledgement of the researcher’s subjectivity are essential components of a modern existential phenomenological approach. It is through this critical lens of the lived world that systematic structures that perpetuate inequalities are revealed.
Phenomenology seeks to highlight the various truths exhibited through participants’ experiences. Husserl (1913/1983) described phenomenology as “not a science of matters of fact but as a science of essences (p. xx). An existential phenomenological approach recognizes that truths differ based on individual experiences. The focus of this approach is on analyzing the ordinary lived experiences of participants to illuminate the small different nuances of encounters (Munhall, 2012). Husserl (1913/2001) further argued “but must secure these meanings in concrete intuitions: we must go back to the things themselves (Wir wollen auf die "Sachen selbst" zurückgehen, LI, Intro. §2, p. 252; Hua XIX/I10)” (Moran, 2000, pg. 93).

As a qualitative methodology, existential phenomenology seeks to provide a more complete picture of the lifeworld, based on the perspective of the subject (Munhall, 2012). The lifeworld represents our consciousness or a mental map of common, everyday experiences (Heidegger, 1953/1996, Roche 1973; Schram, 2003). This mental map directs our actions, develops our lifeworld, and is acquired through social interactions within our world. Our culture, language, rational thought, and personal experiences all construct the mental map. Biases and assumptions are also a product of our mental map, which is constructed based on socially accepted norms and experiences (Roche, 1987; Schram, 2003). Individuals’ mental maps influence their perception of truths and reality (Roche, 1973). Existential phenomenology considers the influence of temporality, spatiality, embodiment, relationality, and intentionality (Munhall, 2004). Spatiality is examining how meaning is constructed based on the environment of the experience being explored. Temporality acknowledges the impact that lived time has on participants’ perception of the experience or phenomenon (Munhall, 2004). Embodiment is understanding that the mind and body are collective parts of an experience, while relationality speaks to the relationship in which participants find themselves with others within their lived
world who are perceived as active agents with intentionality (Munhall, 2004; Roche, 1973). In existential phenomenology, the individual experience of participants is highlighted through the articulation of these key components. The narratives of respondents tell the story of the experience and situate the context in order to construct the meaning of these experiences (Munhall, 2004).

This study uses an existential phenomenological approach by critically focusing on the lives of Black students in the mathematics classroom and exploring the context in which their experiences are situated. Using this approach acknowledges the role of context on students’ experiences and their perception of the mathematics classroom.

**Ethnography.** Ethnography is a holistic approach to analyzing a phenomenon (Ogbu, 1981; Schram, 2006; Wolcott, 2002). Ethnography is the story of participants’ lived experiences. It creates a picture of the experiences being examined through the actual words of the participants. Ethnographies are also constructed based on firsthand interactions with the participants in their natural environment (Edmond, 2005; Wolcott, 2002). Becoming a part of the natural environment, the researcher collects data through immersion into the experiences of those being studied (Emerson, Fretz, & Shaw, 1995; Glesne, 2006). Thus, the researcher becomes an active player in the research and has to carefully navigate the dual role of participant and observer. The ethnographic researcher has the understanding that as a participant within the research, he/she influences the context (Emerson et al., 1995). The use of interviews and observations allows for the structural corroboration of themes (Eisner, 1997), and a careful analysis of the meanings contained in the stories told by participants provides detailed understanding of the context of the experiences (Wolcott, 2002).
The context is constructed through what Geertz (1973, p. 10) called “thick descriptions.” Thick descriptions provide the reader with a detailed visual picture of the events and behaviors that occur within the setting and include both verbal and nonverbal interactions as well as a detailed account of setting and context. The picture painted through an ethnographic record may also describe the values and beliefs of the participants. In essence, ethnography describes cultures at a specific moment in time under identified circumstances from the perspective of the participants as interpreted by the researcher (Schram, 2006). Qualitative research, specifically ethnography, allows the researcher to focus on the life experiences of participants through the use of interviews, observations, and field notes (Glesne, 2006; Hatch, 2000).

There are a variety of data-gathering techniques used for ethnographic studies, including participant interviews, observations, field notes, and life histories (Merriam, 1998; Geertz, 1973). However, the technique itself does not solely determine whether a study is ethnographic. In this particular study, access to the actual classroom environment was unavailable; therefore, interviews and field notes were the primary source used to gain insight to the respondents’ perception of their classroom worlds. Interviews give the researcher access to the respondents’ feelings and perceptions about the problem being explored (Manning & Stage, 1997; Wolcott, 2008). The context of the students’ social world was developed and represented by their interview narratives, their schools’ yearly AdvanceEd reports, a demographic survey, and data collected from the 2014 U.S. Census. In addition, as a mathematics teacher, I used insider knowledge of the mathematics classroom to create a thick descriptive context and to situate the students’ narratives in the socio-cultural environment of their schools.

**Critical ethnography.** Critical ethnography is an ethnographic approach that seeks to highlight inequities and/or injustices that are seemingly ignored or taken for granted. The
purpose of critical ethnographies is to challenge societal assumptions (Madison, 2012). Critical ethnographies also examine how power is constructed in cultures relative to ethnicity/race, gender, and class (Schram, 2006). Data within these studies are collected by collaborating with those being oppressed (Kincheloe & McLaren, 2002). The data collected are then used to empower marginalized groups to evaluate and challenge the social problems that negatively impact their lives (Glesne, 2006; Marecek, Fine, & Kidder, 1997). As a critical ethnography, this study challenges the dominant view of the underachievement of Black high school students in the mathematics classroom. More importantly, this study seeks to change the focus of underachievement from students and their families to the classroom environment and experience. Finally, this critical ethnography seeks to provide a different perspective of Black high school students’ opportunities to learn. For these reasons, this study is also classified as a critical ethnography.

This study explored the experiences of low income and/or middle class Black high school students in the mathematics classroom. Black high school students were viewed as experts about their own experiences, and their voices are an essential and central component of the study.

**Critical race theory and critical race methodology.** Phenomenology and critical ethnography examine “otherness” and depict the harsh realities of being different from mainstream society. Yet Fine and Weis (1998) argued that race and racism are social constructs that have significant implications in our daily lives, and critical race theory (CRT) specifically emphasizes that race and racism must be understood as a foundational framework for exploring otherness. Although many have argued that race and racism should have no influence on the results of a study, they influence participants’ perceptions of their lived realities (Fine & Weis, 1998). Race and racism influence how the participants interact with others and the world around
them, as well as how they wrestle with their own identity. In that same manner, the researcher’s awareness of the impact of these constructs influences his/her portrayal of the perceived realities. To critically examine the role that race and racism play in the classroom environment, a critical race methodology was also employed.

Critical race methodology (CRM) is an extension of the CRT framework. CRM is a theoretical approach that is rooted in the belief that race and racism contribute to each part of the research process (Solórzano & Yosso, 2009). In addition, CRM seeks to inform how race, gender, and class intersect and influence the experience of students of marginalized groups (Solórzano & Yosso, 2009). More importantly, CRM challenges the deficit thinking and false stereotypical narratives that plague students of color.

An integral part of the CRM is the use of stories that offer an alternative perspective to the dominant views of marginalized groups. These groups are often silenced as a result of their position within societal hierarchy (Delgado, 1990). CRM uses counter-stories to illuminate the inequities that exist as a result of race, gender, and class categorizations (Solórzano & Yosso, 2009). In CRT, the use of first-person counter-stories creates a vivid picture of the participant’s reality (Bell, 2009). These counter-narratives are used to develop scholarly resistance to the hegemonic beliefs regarding race and racism (Bell, 2009; Delgado 1990). Furthermore, these stories display how policies and practices perpetuate inequities as a result of race, gender, and class (Solórzano & Yosso, 2009). Counter-stories provide a means for disenfranchised individuals to share their stories, thereby empowering themselves individually and collectively (Parker & Lynn, 2009; Solórzano & Yosso, 2009). In addition, sharing their collective and common experiences develops agency among the group (Delgado, 1990). More importantly, counter-stories are a tool that allow for critical reflection of the systematic political, social, and
cultural structures that perpetuate inequalities (Bell, 2009; Solórzano & Yosso, 2009; Delgado & Stefancic, 2012).

As marginalized groups are frequently at a disadvantage and are not provided with equal opportunities within society, Ladson-Billing (1998) defines CRT as a scholarly construct and research tool that uses the narratives of marginalized groups to dismantle oppressive structures, empower, and promote equal distributions of power (Ladson-Billings, 1998). CRT situates the educational experiences of students of color within the context of race and racism, developing a realistic portrayal of children’s schooling experiences. These portraits of students’ experiences challenge society’s traditional perspectives of school. More importantly, CRT analyzes the educational experiences of students through the lens of historical, political, and socio-cultural influences (Ladson-Billings, 2006).

**Data Collection**

Data for this study were collected through a demographic survey, focus group discussions, and in-depth semi-structured interviews (Emerson et al., 1995; Glesne, 2006; Seidman, 2013). The demographic survey consisted of questions regarding participants’ grades, the middle school and high school levels of course work, and the behavior of the participants. Participants were asked to complete the demographic survey at the start of the focus group discussion or interview. The demographic survey was used to establish a context for understanding the experiences of the respondents.

Hennessy and Heary (2002) argued that focus groups can provide a more supportive environment than individual interviews, and student respondents may be willing to tell about their experiences in detail. Moreover, focus groups may also decrease the perceived authority that the researcher has as an adult (Hennessy & Heary, 2005). For these reasons, focus groups
were an important part of this study. Focus group discussions occurred after school hours in order to provide a less restrictive environment for students. The four focus group discussions in this study were approximately 60 minutes long. They were also used to identify potential interview participants.

Semi-structured interviews were used to give respondents the opportunity to share their specific experiences and reflect on these experiences. Some students were unable to participate in the focus group discussions and participated only in interviews. However, interviews were limited to participants’ availability.

Seidman’s (2013) three-phase interview protocol was used to further explore and deepen identified themes that emerged during focus group interviews. The interview questions were open-ended, allowing participants to tell their experience in the mathematics classroom. The focus group discussion and/or first interviews were used to gather information about the participants’ schooling and mathematics classroom experiences. The second interview gathered specific information regarding participants’ experiences in the mathematics classroom. The goal of the third interview was to develop a context for understanding the participants’ experiences in the mathematics classroom. Participants were asked to describe their experiences within their current math class. The final interview provided respondents with the opportunity to reflect on their responses and construct their own meaning. The interviews were held in public facilities throughout southeastern Michigan, including local libraries, high schools, or at other locations convenient for the participants. Table 1 provides an overview of the participants included in the study.
Table 1

Overview of Participants Ages/Grade Level

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>School Context</th>
<th>Participation</th>
<th>Grade</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Urban</td>
<td>Both</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>Samantha</td>
<td>Urban</td>
<td>Both</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>Adam</td>
<td>Urban</td>
<td>Focus group</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>Lisa</td>
<td>Urban</td>
<td>Both</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>Lauren</td>
<td>Urban</td>
<td>Both</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Faith</td>
<td>Urban</td>
<td>Focus group</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>Hope</td>
<td>Urban</td>
<td>Focus group</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>Charity</td>
<td>Urban</td>
<td>Focus group</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>Essence</td>
<td>Urban</td>
<td>Focus group</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>Mason</td>
<td>Suburban</td>
<td>Focus group</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>Matthew</td>
<td>Suburban</td>
<td>Focus group</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Amber</td>
<td>Suburban</td>
<td>Both</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>Brandon</td>
<td>Suburban</td>
<td>Interview</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>Calvin</td>
<td>Suburban</td>
<td>Both</td>
<td>11</td>
<td>16</td>
</tr>
</tbody>
</table>

Study protocols. All of the participants submitted a completed parental consent form and a participant consent form prior to their participation in the study (see Appendix A). Copies of the consent forms were provided to and distributed by the youth group leader or coach. I also had
additional copies available the day of the initial focus group or interview. Completed consent forms were submitted to me at the first focus group discussion or interview. Students who did not have a signed parental consent form were not allowed to participate in the focus group discussions or interviews. The interviews and focus groups were audiotaped and later transcribed by a professional transcriptionist. To ensure anonymity, the transcriptionist signed a confidentiality agreement (see Appendix A). The recruitment flyer used to identify participants is included in Appendix B.

**Exclusion of data.** One student participated in the focus group discussion when he was entering the ninth grade, so he did not have any experiences in a high school mathematics course. Additionally, two participants of a focus group discussion attended schools within the district that I currently work in. To avoid a conflict of interest, these students were also removed from the study.

**Potential risks.** Known risks to students and teachers were minimal because all of the data collected were kept anonymous. To ensure minimal risk of harm, the research proposal, protocols, and consent forms were reviewed and received approval from the Internal Review Board (IRB) at Eastern Michigan University. Student participants were identified by pseudonyms. Pseudonyms were also used for the participants’ school names to ensure anonymity. All data were securely housed on a password-protected USB drive that will be kept in a locked safe, as well as on a password-protected cloud drive. (See Appendix C for IRB approval.)

There was a potential minimal risk for students who chose to participate in the focus group discussions. Participants were instructed not to discuss the conversations that were shared within the focus group, but there was no way to ensure that students would adhere to this request
(Emond, 2005). Participants were not required to sign confidentiality agreements. To ensure confidentiality, the interviews and focus group discussions were held in areas where the conversations could not be overheard.

**Recruitment of participants.** In an effort to understand how social class affects the educational experiences of Black students, participants were recruited from various socio-economic backgrounds in southeast Michigan. Participants for this study were recruited informally through parent networks, sorority youth group programs, summer youth programs, and athletic teams. The inclusion criteria for participants required that students (a) self-identified as Black or African American, (b) were enrolled in grades 9–12 during the 2013–2014 school year, and (c) attended a public or charter school. Students were initially asked to participate in a focus group discussion and two follow-up interviews. However, due to schedule conflicts, some respondents participated in only the focus group discussions. Conversely, some respondents were unavailable for focus group discussions and participated in three individual interviews instead.

Per the identified criteria, all of the participants for this study were students enrolled in grades 9–12 and identified as Black. Their ages ranged from 13 to 17 years old. A total of 23 students participated in focus group discussions, interviews, or both. However, only eight students were available to complete three interviews as described by Seidman’s (2013) interview protocol.

Table 2 illustrates the demographics of the participants based on their gender and class. As the table displays, 15 of the participants lived in an urban community, while 8 participants lived in a suburban community. Approximately 48% of the participants were female, and 52% were male. Most of the respondents had attended high school for two or more years, as illustrated in the Table 3.
Table 2

*Participants’ Gender & Socio-economic Distribution*

<table>
<thead>
<tr>
<th># of Students</th>
<th>Female</th>
<th>Male</th>
<th>Receive Free Lunch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>8</td>
<td>7</td>
<td>86%</td>
</tr>
<tr>
<td>Suburban</td>
<td>3</td>
<td>5</td>
<td>13%</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>12</td>
<td>65%</td>
</tr>
</tbody>
</table>

Table 3

*Participants’ Grade Level Distribution*

<table>
<thead>
<tr>
<th># of Students</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade</th>
<th>12th Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>3</td>
<td>2</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Suburban</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

Data Analysis

Each interview or focus group discussion was recorded using a voice recorder. Field notes were collected throughout the data collection process (Emerson, Fretz, & Shaw, 1995; Seidman, 2013.) After each interview, the researcher listened to the tape, made notes, and wrote additional interview questions. Interviews were transcribed by a professional transcriber. To ensure the accuracy of the transcriptions, I listened to the interview recordings while reviewing the transcripts. After reviewing the transcripts for accuracy, I reread and marked the transcriptions for the purpose of the initial coding of interesting phrases and potential themes. A secondary reading of the transcripts, along with a review of the field notes, followed.
Charmaz (2006) suggested that notes and transcription data should be categorized to identify potential themes. Hence patterns were identified based on verbatim quotes of common phrases from participants, thus creating the preliminary coding system (Charmaz, 2006). Coding was conducted by hand. Verbatim quotes from all respondents’ responses were written on color-coded cards and placed on a chart based on the preliminary codes identified. Color-coded cards allowed for the overlapping phrases to be easily identified and also provided a visual for identifying common patterns among school groups based on location.

**Thematic analysis.** The initial codes were broken down into more specific codes based on follow-up question responses. For example, one of the preliminary codes dealt with teacher and student relationships. This dissected into other sub-themes including trust, teacher-student interactions, teacher expectations, and teacher’s perceived level of care. Field notes taken from observations, interviews, and the focus group sessions were also used to probe identified themes for students. Verbatim quotes from the participants were used for consensual validation (Eisner, 1997). Consensual validation (Eisner, 1997) is developed through this process, as the participants’ responses create a context for understanding of the issue being explored. A secondary literature review was conducted to establish referential adequacy (Eisner, 1997) for the identified themes. The triangulation of the data collected through interviews, observations, focus group discussions, and the secondary literature review was used to develop an interpretive set of thematic findings and recommendations.

**Positionality, Reflexivity, and Bracketing**

The life experiences of the researcher influence her interpretation of the data. For this reason, it is essential for qualitative researchers to reflect on the meaning derived through data (Geertz, 1973). Reflexivity involves reflecting on the possible impact of personal experiences,
biases, and preconceived notions on social interactions within the study (Peshkin, 1988). The researcher must allow herself to be open to new possibilities for viewing reality. It requires an honest evaluation of oneself (Kincheloe & McLaren, 2002). Moreover, reflexivity for critical ethnographers requires a willingness to be vulnerable to express the emotions that are felt as a result of the lived stories of informants (Foley, 2002). It is therefore important to understand the participants’ beliefs, biases, values, and cultures, and the impact of these on the interpretation of the world. The discussion of self-reflexivity allows the reader to understand the possible impacts of the researcher’s experiences and biases on the study (Peshkin, 1988).

Consequently, critical ethnographers need to be transparent regarding their subjectivity and positionality (Foley, 2002). These are a consequence of the researcher’s personal experiences and cannot be removed. However, researchers can be keenly aware of their subjectivity in an effort to limit the influence that it may have on the research study (Peshkin, 1988). Peshkin (1988) refers to this keen awareness as “tamed subjectivity,” which requires reflection on one’s personal biases, judgments, and assumptions. It is self-monitoring of these biases, judgments, and assumptions, and understanding the impact these may have on the study (Peshkin, 1988). The researcher has a dual role: to understand the emic meanings—that is the participants’ perceived reality (Behar, 1996)—and to reflexively interrogate one’s own preconceptions. This is done in order to avoid projecting one’s own perceptions and distorting the emic (Behar, 1996). The dichotomy of these roles is difficult to manage. Peshkin (1988) suggests that the emic cannot be accurately identified if the researcher’s subjectivity is untamed.

My experiences. As the researcher for this study, it is therefore necessary for me to recognize and identify my own personal biases, which are a consequence of my experiences. When I was a child, my educational experiences were varied, and they have shaped my view of
the world. In elementary school, I attended a predominantly Black urban private school, with all White teachers. I perceived public schools in the city as dangerous and with limited educational opportunities. In middle school and high school, I attended suburban public schools, where the student body and the teaching staff were mostly White. However, it was in middle school that I met my first Black teacher. Although I was aware of race and its influence on others’ perception of me, it was college that opened my eyes to our racist society. It was there that I was called derogatory names as a result of my race. It was in college that classmates and professors questioned my abilities to perform and succeed as an engineering student due to both my gender and race. After working in the corporate sector as an engineer for several years, my true passion for helping others was realized by means of a career change. I became an elementary school teacher.

Although I was inexperienced and untrained, my teaching experience began as a fourth grade teacher at an elementary charter school in the inner city. It was here that I witnessed firsthand the experiences of poverty-stricken, orphaned, and homeless children. It was here that I realized the privileged life that I had as a middle class Black woman. Several years later, after obtaining my K-12 teacher certifications, I left the charter school environment for the opportunity to teach at my former high school in a suburban school district. The student body of the district that I currently work is predominantly Black, while the teaching staff is diverse. Working in this district has provided me with the opportunity to teach mathematics to both middle and high school students. Currently, I am serving in the role of a mathematics coach. I have the opportunity daily to observe students and teachers in the mathematics classroom.

**Positionality.** As an educator, I at times found it difficult to remain passive and to maintain a professional distance as I heard some of the students’ responses. In some instances,
the descriptions of the students’ experiences were shocking and disheartening. During one interview I attempted to provide the students with alternative resources to support them. In my interactions with the students I also had to be aware of the language I used, in order not to be viewed as an authority figure. This was a difficult task with the larger focus group of eight students because some of the respondents would get off task or have separate conversations. Moreover, as a Black female who works as a mathematics high school educator, I had to acknowledge my own assumptions about the experiences of Black high school students. This required me to reflect constantly on my assumptions and potential biases. For this reason, I kept a research journal throughout the study that allowed me to question and challenge my assumptions.

**Limitations of the Study**

There are several limitations of the study. For one, I had limited access to participants in the actual school setting. All of the interviews took place after school or on the weekends. Although one focus group took place at the school, access to the students within the mathematics classroom was not feasible. Schools were protective of students within the classroom environment; hence, the opportunity to observe students within a mathematics classroom was not available.

This study focuses on Black students because their voices have often been ignored throughout the discourse on the underachievement of Black students. By highlighting their experiences, this study hopes to shed light on the unique challenges that Black students face in the mathematics classroom that prevent or limit their opportunities to learn. For this reason, only the perspectives of Black students are presented and not the perspectives of other ethnic minorities or other students who may be marginalized due to poverty or disability. This study
also does not include the perspective of the classroom teacher or school administrators.

Additionally, the study did not examine the perspective of the respondents’ parents and how these perspectives may influence students’ perception of mathematics, the mathematics classroom, or schooling in general.
Chapter 4: Profiles of Schools and Participants

In order to understand the experiences of the study respondents, it is necessary to understand the broader context in which their experiences are situated (Anderson, 1989). The participants of this study are students at public and charter high schools in Southeastern Michigan. Over half of them are enrolled in high schools located in a larger inner city. The remaining participants attend high schools located outside of the city limits, in suburban, more affluent areas. There are four inner city high schools and four suburban high schools represented in this study. The following is a summary of the community demographics of the schools that the respondents attend.

According to the U.S. Census (2014), there are significant differences between the average income and education levels of residents living in suburban areas and those living in the inner city. Table 4 illustrates the average income of the wealthiest and poorest school communities represented in this study, as well as the racial and education demographics of these communities. The table shows a nearly $60,000 difference in the average income of the wealthiest suburban area and the lowest-income inner city area.

The racial composition of these communities is also drastically different. The Black population of the wealthiest suburban area community is less than 5%, while the Black population in the inner city community is 80%. In terms of the educational attainment of these two communities, over 90% of the residents of the wealthiest suburban community have a high school diploma, and more than half are college graduates. However, in the inner city community, slightly more than three quarters of the community have high school diplomas, and less than 15% are college educated. The inner city community’s high school and college graduation
percentages are approximately 10% lower than the state average, yet the wealthiest suburban community exceeds the state average for both categories (U.S. Census, 2014).

Table 4

**Income and Education Demographics**

<table>
<thead>
<tr>
<th>School</th>
<th>Average Income of Community (2014 U.S. Census Updates)</th>
<th>Percent of Community below poverty (2014 U.S. Census Updates)</th>
<th>Percent of Whites living in the community</th>
<th>Percent of Blacks living in the Community</th>
<th>Percent of High School Graduates in the Community</th>
<th>Percent of College Graduates in the Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wealthiest Community School</td>
<td>$85,685</td>
<td>7.2%</td>
<td>74.1%</td>
<td>4.4%</td>
<td>94.0%</td>
<td>57.6%</td>
</tr>
<tr>
<td>Inner City Schools</td>
<td>$26,325</td>
<td>39.3%</td>
<td>14.2%</td>
<td>82.7%</td>
<td>77.6%</td>
<td>12.7%</td>
</tr>
<tr>
<td>State</td>
<td>$48,411</td>
<td>16.8%</td>
<td></td>
<td></td>
<td>88.9%</td>
<td>25.6%</td>
</tr>
</tbody>
</table>

At the time of this study, the state of Michigan used the scores from the college entrance exam known as the ACT to measure students’ overall academic performance. In the area of mathematics specifically, the state average was 19.9. According to the Michigan Department of Education (2015) MI School Data report, all of the suburban schools in this study met or exceeded the state average of 19.9 on the mathematics portion of the exam. In addition, in suburban communities the average ACT score on the math component was lower for economically disadvantaged groups. Conversely, in the inner city community, the scores of the economically disadvantaged were the same or higher than the non-economically disadvantaged (https://www.mischooldata.org/). A comparison of the scores also illuminates a 10-point difference between the highest average ACT mathematics score and the lowest mathematics score.
In an effort to establish a context of the learning environments of the respondents of this study, the following pages provide an overview of each of the participants’ schools. Pseudonyms are used for all students and schools. After the description of the school, a brief profile of the students who attend this school is provided. Schools and participants are discussed based on their location within an urban or suburban area.

The Suburban Experience

**Mayberry High School.** Mayberry is a suburban high school located in Southeastern Michigan in one of the wealthiest communities in the state. According to the Executive Summary of the school’s 2013 AdvancedEd report, the school has been recognized by Newsweek as being one of the Nation’s Top High Schools and is one of the top high schools in the state of Michigan. According to this report, the city consists of over 70% White, 19% Asian, 4% Black, and approximately 3% other races. Per Mayberry’s website, the school offers more than ten advanced mathematics courses, including Advanced Placement (AP) Calculus, AP Computer Science, Linear Algebra, and Operations Research.

Amber is a Black female who attends Mayberry High School. She is 17 years old and is currently in the twelfth grade. Next fall, Amber hopes to attend Michigan State University, but she is also applying for admission to Tennessee State University and Central Michigan University. She plans to major in history or accounting. Amber is of average height and slender, with a caramel color skin tone. She is poised, articulate, and has an outgoing personality.

Amber believes that her school offers a rigorous curriculum and prepares students for college. She said, “As long as you take the required classes to graduate, that is a pretty rigorous schedule. So even the easiest schedules are not easy compared to other districts.” Consistent with
Mayberry’s AdvancedEd Report, Amber commented that most of the students in her school are White, and the minority groups most represented are Asian and Indian Americans. “There’s not a lot of Black people in the school, so two is a lot in a class,” Amber explained. Amber has been enrolled in this school district since kindergarten, so the small number of Black students does not bother her; she is “used to it.”

Amber is an active member of her school community, participating on the cheer team for three of the four years of high school, as well as the Powder Puff team. This school year she is working as a part-time nanny; therefore, she no longer participates on the cheer team. She also works as an assistant dance coach on Saturdays at the local library.

Amber is retaking Algebra 2 as a senior this year to raise her overall grade point average so that she can be admitted to Michigan State University. She received a C in the course last year and would like to replace the grade with an A. She stated, “I need a higher G.P.A. [grade point average] to get my scholarships … so I’m retaking a class, and you can retake any class if you get a C, they’ll just completely accept it if you retake it.” Amber described herself as a “fairly good [math student] … I am confident in my math abilities.”

Amber learned about this study through her parents’ participation in a local community organization known as the African American Parent Network. She participated in one focus group discussion and two individual interviews. The focus group discussion occurred on a Saturday morning, in a private room at the library of a nearby community. At the time of the focus group discussions, Amber had just finished her first full week of school for the new school year. She had gotten lost and arrived late to focus group discussion, so initially she was a little frazzled. However, it did not take long for her bubbly and friendly demeanor to shine through. The subsequent interviews took place in the cafeteria area of her local community library.
Loveberry High School. Loveberry High School is located several miles from Mayberry High School, and both schools are in the same school district. Loveberry students, like those at Mayberry, have a variety of advanced mathematics courses available including AP calculus, AP statistics, and AP computer science. In 2015, Loveberry High was recognized by U.S. News & World Report as being one of the best high schools in the United States. This is the fourth year that the school has received this recognition. Per the 2013 AdvancedEd Report, the school’s population is slightly over 1,600 students. The student body is predominantly White, with minority groups representing slightly less than 30% of the student body.

Calvin is a 15-year-old Black male high school student in his junior year in at the affluent Loveberry High School. This is his third year at Loveberry. Calvin’s cumulative grade point average (G.P.A.) is a 3.2, and he describes his academic performance in high school as average. His mathematics abilities, however, he considers to be advanced, even though he is on “the regular track.” As a middle school student, Calvin had the opportunity to participate in the accelerated math program; however, he did not want to participate, explaining,

[The] super smart people go ahead one, so they start with like Algebra One, in seventh grade, and then do geometry in eighth grade. And I coulda done that, but I woulda had to take a summer course, along with doing the next math the next year … [shaking his head … I didn’t want to do that.]

Calvin is currently enrolled in various honors courses including two mathematics courses, AP statistics, pre-calculus, and physics. Although Calvin performs well in mathematics, he feels that math is “just okay”; his favorite subject is English. Calvin has plans to attend college after high school; however, he has not decided where he wants to attend. He is considering studying business.
Calvin is active in the school community at Loveberry, participating as a peer tutor and member of the basketball team. Calvin described his school as “kind of diverse, but not really again. There’s lots of Asians, lots of White people and a little of everything else.” Calvin is one of five Black students on the varsity basketball team. The team has a grade point average requirement to participate; according to Calvin, “You have to have like a 2.5 or something, I think, to be on the basketball team.” In describing the Black kids on the basketball team, he said:

Last year was JV [junior varsity], and it was two there, me and this kid named Devin, and then this year there is three guys. Two guys coming back, um, us the two Black guys that were on JV last year and a kid that didn’t get in cause of his grades. So, this year there will be five.

Calvin is tall, approximately 6’1”, and slender, with a chocolate color complexion. Like Amber, Calvin learned about this study through his parents’ participation the local community’s African American Parent Network. Calvin participated in the initial focus group discussion with Amber. At the initial meeting, Calvin appeared to be timid, mild-mannered, and somewhat apathetic about his participation in the study. However, he was polite, poised, and articulate. At the follow-up interviews Calvin seemed to come out of his shell. He was more relaxed and engaged in each of the follow-up interviews.

**Grand Canyon High School.** Grand Canyon is located in a middle-income area. The school offers a variety of advanced mathematics course as well, including pre-calculus, calculus, AP calculus AB, AP calculus BC, and AP statistics. In addition, students also have the opportunity to take classes through Dual Enrollment, a program that allows high school students to take college courses. The school also provides several support courses to assist struggling
students, such as Read 180 and other math-focused support classes. In addition, the school has a specialized program for ninth-grade students (AdvanceEd Report, 2014).

Brandon is a 16-year-old Black male student in his junior year at Grand Canyon High School. Brandon is 5’8” in height, thin, with a cinnamon color complexion. He currently has a 3.0 G.P.A. and hopes to attend a historically Black college or university (HBCU) after graduation. Brandon has an interest in the social sciences, stating, “… just like learning about the past and how the government works.”

Brandon considers himself to be an average student, but he is not confident in his math abilities. Math is Brandon’s “least favorite subject,” even though he has done well in both Algebra 1 and Geometry. He is currently taking Algebra 2, although he had initially planned to take a lower level course. After receiving a B+ in Algebra 1, he explained, “It just seemed like a better [pausing] better path to go on … my parents helped and they said it would was probably better to do the Algebra 2 in two years.” Although Brandon is in the higher-level course, he has been able to maintain a decent grade. He further expounded, saying,

‘Cause I know this year, I thought I was going to do bad in Algebra [2], but I’m doing better than what I was expecting, and like, same with my previous years. It’s like sped up but so far it’s all right … right now, I am pulling a B minus, C plus.

Brandon described the demographics of Grand Canyon as predominantly White. Attending a school where he is a minority does not bother Brandon, as this has been his experience with school since the first grade. He recalled, “I remember there was probably like…three Black people in the whole grade in first grade and then as I like moved up there, like more Black people.”
The demographics of the teaching staff are similar. Brandon reflected, “I’ve only seen one [Black] teacher there … I’ve had Black substitutes but not teachers.” However, for Brandon race has no impact in the mathematics class, saying, “It just looks like everybody looks the same. Come in do the math. Everyone talks to each other; I know people kind of dive into cliques.”

Although Brandon is not involved with organizations at school, he is active in a variety of activities outside of school. He works part-time at a local establishment and is active in his church community, participating in the youth group and choir. He also participates in a local community youth group program for Black males. He learned about the study through the community youth group program.

Interestingly enough, Brandon is the only participant who specifically discussed the importance of understanding one’s history and culture as a part of his identity. He reflected, “You don’t wanna like forget where you came from and like—I’m a big family person and so like just like the things we eat and the things not really the things we do, cause we don’t really do that much but…yeah, I think it’s an important like to know who I am. I’m proud of being Black.

Brandon participated in three separate interviews since his work schedule did not permit him to attend the focus group discussions. The interviews took place in a local coffee shop and the conference room of a local business. Initially he displayed a timid demeanor; however, by the second interview he eagerly expressed his feelings and shared his experiences.

**Orangewood High School.** Orangewood is located in a middle class community in Southeast Michigan. The high school is a part of a larger high school campus that houses two additional high schools. The enrollment for Orangewood is approximately 2,000, and another 4,000 students attend the corresponding high schools on the same campus. Black students
represent roughly 4% of the student population, and 14.2% of the students are economically disadvantaged. Orangewood offers a variety of honors, AP, and International Baccalaureate (IB) courses. The advanced mathematics courses that are offered include AP Computer Science, AP Calculus AB, AP Calculus BC, AP Statistics, IB Math Studies Standard Level, and IB Math Studies Higher Level. The school also has a variety of supports to assist struggling students, such as Math Lab and the Writing Center. These supports are available to students at lunch and after school.

Mason and Matthew both attend Orangewood High School and are good friends. Their playful mannerisms and practical jokes on one another illustrate their camaraderie. Mason is a 16-year-old Black male student in his sophomore year of high school. He is timid and self-conscious. Mason has a stocky build and stands at a height of 6’2”. His black square-framed glasses accentuate his mocha skin tone and low cut haircut. Mason is a starting running back and linebacker on his high school junior varsity football team.

Mason attended two different middle schools prior to high school. His first two years of middle school he participated in an honors middle school program. This experience was not a positive one; he reflected with frustration, “I mean [that] stupid university program did not work for me … It didn’t work out too well.” Mason then moved to a neighboring suburb where he repeated the seventh grade. He considers himself to be a low-performing student with a G.P.A. of 2.0, and math is his worst subject. Mason is self-conscious about his performance in the math classroom specifically, saying, “I am gonna be confident and I get it wrong, somebody’s gonna laugh … I am not that comfortable with that, especially if I really just don’t get it and I didn’t raise my hand with confidence.”
Matthew is a 15-year-old Black male who is also in the tenth grade. He attended two middle schools prior to high school as a result of his family moving. Matthew is a confident young man who does not care much about how his peers perceive him, shrugging his shoulders, saying, “I mean, if you get it, you get it. If you don’t, you don’t.” Like Mason, he is a member of the football team, playing the position of a defensive lineman. Matthew described himself as an average student but acknowledged that he could do better in school. His G.P.A. is 2.3.

Mason and Matthew heard about the study through Mason’s aunt, who is active in a community group. Both respondents were only available to participate in one focus group discussion.

The Inner City Experience

Rise Up @ Lincoln High School. Rise Up @ Lincoln High School is located in an inner city community. The community is one plagued by poverty and unemployment. Per the school’s AdvancedEd report, all of the students at the school receive free or reduced lunch. The school also provides bus passes to assist students who do not have access to transportation to and from school. In addition, students receive free breakfast, lunch, and dinner if they participate in after-school activities.

According to Rise Up@ Lincoln High School’s 2014 Advanced Ed Report, Rise Up opened in 2011 at Lincoln High School. Rise Up had been a separate school from Lincoln High, and its purpose was to provide students with a college preparatory curriculum. The school initially began with 50 students; however, by 2012 the enrollment increased to 110. In 2013, due to budgetary constraints, Lincoln High School closed, and as a result Rise Up and Lincoln High School merged, creating Rise Up @ Lincoln High School. Consequently, the total enrollment
increased to more than 600 students. Per the State Department of Education, more than 90% of their school population is Black (MI School Data, 2015).

To support students’ academic success, the school integrated the research and curriculum of various non-profit organizations including Diplomas Now, Communities in Schools, and Johns Hopkins University. Diplomas Now is a program that partners with a local nonprofit, City Year, to encourage student attendance and provide afterschool tutoring to support students. Diplomas Now also provides social services to meet students’ basic needs. Additionally, the school used the Talent Development Model developed by Johns Hopkins University in conjunction with Howard University to support student success.

Approximately half of the staff at Rise Up @ Lincoln High have more than ten years of experience. Nearly 15% of the teachers were recruited from Teach for America (TFA). The TFA teachers were inexperienced; however, they did participate in professional development through the summer months and throughout the school year. TFA teachers commit to serving in a school for two to three years.

Faith, Charity, and Hope, members of the varsity girls’ basketball team at Rise Up @ Lincoln High School, learned about the study through their coach. Faith, Charity, and Hope are Black female students at Rise Up @ Lincoln High. All three are 17 years old and in their senior year of high school.

Faith displays a bubbly, talkative, and passionate teenage personality. She is approximately 5’6” tall and has a mocha complexion. Faith has attended Rise Up @ Lincoln High School since the ninth grade. In middle school she attended a local gifted and talented school. She described her academic performance in high school as average. Mathematics is her favorite subject, although she considers her performance in mathematics to be average. Faith’s
cumulative G.P.A. is 3.4. She has taken the ACT college entrance exam; however, she was frustrated by her score of 15, explaining, “My momma ... put me in like ... ACT classes throughout my junior ... and sophomore years. But I don’t think like the English teachers ... oh no, none of my science teachers prepared me ... from ninth grade up, I did not have a good science teacher.” This semester she is not enrolled in any mathematics courses; however, her previous mathematics coursework included Algebra 1, Algebra 2, Geometry, and Pre-Calculus.

Hope appears to be a talkative and confident teenager. She is slender and about 5’8” in height. Her caramel color complexion accentuates her animated personality. Prior to high school, Hope attended a suburban middle school. She, like Faith, has attended Rise Up @ Lincoln High since the ninth grade. Hope described her performance in mathematics as advanced and stated, “Math was always my favorite subject.” She has a cumulative G.P.A. of 3.0. She has also taken the ACT and is disappointed with her score of 14, explaining, “I’d say the math part, yes. Not the English, not the Science part. I got to the science part, I am thinking Japanese. I am thinking I am reading another language.” Hope depicted her performance in high school as average. Hope, like Faith, is not currently enrolled in a mathematics course; however, she is studying physics and has previously taken Algebra 1, Algebra 2, geometry, pre-calculus, and trigonometry classes.

Charity comes off as a mild-mannered teenager with an infectious smile. She is the same height as Faith at 5’6”. She also has a coffee color complexion. In middle school she attended a local charter school. She has also attended Rise Up@ Lincoln High since the ninth grade. Like her teammates, she is extremely disappointed by her ACT scores, with a composite score of 13. Her performance in school is average, yet she described her performance in mathematics as advanced. Mathematics is also her favorite subject. She has taken Algebra 1, Algebra 2,
geometry, and pre-calculus classes. In her senior year of high school, she is enrolled in three classes: gym, health, and Spanish.

**The first two years.** Faith, Hope, and Charity were part of the specialized Rise Up program for their first two years of high school. Faith explained, “Rise Up and Lincoln were two different schools my ninth and tenth grade years.” The specialized program Rise Up was challenging, according to the participants, but they felt that they learned a lot. Faith shared her journey to Rise Up:

My mom, when I was in middle school, wanted me to go to [the magnet school], but in middle school, I kinda slipped up … so … I couldn’t go to [the magnet school]. She told me, “Okay, we're gonna go to a school that looks like it’s gonna be a second best school,” which was [Rise Up].

The Rise Up program was viewed by Faith as rigorous and strict. She explained, “The teachers … the school was very strict, and we actually learned … we had like work to do and they will fail you in a minute. I think my first failure was my first failure notice in history.” Hope agreed that the Rise Up specialized program was more challenging, stating, “When I first came here … I learned in a few classes like, I learned in my physics class and then my geometry class.”

Their eleventh grade year of high school “everything changed,” according to Faith, when the specialized program Rise Up was merged with the general population of Lincoln High, becoming Rise Up @ Lincoln High. Faith explained, “So, when we merged basically no, everything got thrown in the garbage from our curriculum. They tried to keep the curriculum the same, but it didn’t work out the same.”

The focus group discussion took place in December, a week before the winter semester break. We met after school during the girls’ scheduled basketball practice, in the athletic office
diagonal to the gym. The room was small and cramped, appearing to be more of a storage room than an office. Two girls sat on storage containers, and the other two sat on the floor. At the prompting of the girls I sat in the office chair. The light was dim, and the activity of basketball practice in the gym provided background noise. Although none of the respondents returned requests for follow-up interviews, they shared compelling stories in the focus group discussion.

**Bentler Academy.** Bentler Academy is an inner city public magnet school that has a legacy and expectation of excellence in the community. Lauren shared, “My biology teacher last year used to say all of the time, ‘This is Bentler Academy. If you don’t understand things, you should go to your neighborhood school.’… ‘we’re gonna be working fast, this is Bentler Academy.’” The admission guidelines for Bentler require students to have a 2.75 grade point average and pass an entrance exam.

The community surrounding Bentler Academy is plagued by poverty; however, the school is known for preparing students for college and to be community leaders. Per Bentler Academy’s 2014 school profile, the school’s enrollment was slightly over 2,300 students. Approximately 87% of the student population is Black, while the remaining students were White, Bengali, or other ethnicities. The school has been recognized as one of the top high schools in the state in 2012 and 2013 and is also an international baccalaureate world school. Bentler Academy offers a multitude of advanced placement courses. Per the school’s 2014–2015 profile, the advanced mathematics course offerings were Advanced Placement (AP) Calculus, Honors Algebra, and Honors Geometry.

Lisa and Lauren are sisters who attend Bentler Academy. Lisa is a confident and talkative ninth-grade Black female student. She is 14 years old and this is her first year at Bentler Academy. Lisa has not found her first year of high school to be challenging, particularly in
mathematics. “I've always been good in math. I think math is my best subject,” she said. She currently holds a 4.0 grade point average. Lisa is approximately 5’5” in height and has a mocha color skin tone. She does not receive free/reduced lunch and is currently taking Algebra I, Oral Communications, English Language Arts, Biology, Chinese, U.S. History, and Health.

Lauren is Lisa’s older sister. Like her sister, Lauren is a confident Black female, although she does not talk as much. Lauren is 15 years old and a sophomore at Bentler Academy. She has a 3.6 grade point average and does not find school challenging overall. However, she acknowledged that she has experienced difficulty in Honors Geometry and Chemistry this school year. Lauren is 5’5” in height, slender, and wears glasses.

Both Lisa and Lauren participated in a focus group discussion and two interviews. The focus group discussion included their cousin, who also attends Bentler Academy, and took place in December. The follow-up interviews took place at the same library but in a small conference room in March. Their cousin did not participate in the follow-up interviews. Each of the follow-up interviews was approximately 50 minutes.

**Camille, Samantha, and the summer youth program.** The respondents in this focus group discussion were attending a community summer youth program provided by a social service agency in the inner city. At the time of focus group discussion and interviews, students were on summer recess.

**Gardenville High School.** Gardenville is a public application-based school located in the inner city. The school has an enrollment of 612 students, and 99% of the student body is Black. The school has avoided closing on three occasions, and it is an integral part of the community it serves. Students are admitted solely based on their academic competency, displayed by their grades.
Camille is a mild-mannered, confident 16-year-old Black female. She is 5’6” and slender, with a caramel color skin tone. Camille has sandy brown hair that she wears pulled back in a bun. She wears stonewashed skinny jeans and a cream color shirt. In the fall Camille will be entering the 12th grade at Gardenville High School and has a 3.2 G.P.A. The student population of her school is predominantly Black. Although Camille appears to have a mild-mannered temperament, she claimed, “I can be a very cruel person, but when it comes to other people, I will protect anybody … I’m my mama’s child, like, not the mom that I’m with now, but my biological mom’s child. She was violent.” As a result of her temper and her protective actions, Camille has had a few disciplinary infractions in high school. Unlike the other respondents, Camille has a unique home experience in that she lives with foster parents. Camille “hates” math, although she has received passing grades in her math courses.

**Brickstone Academy.** Brickstone Academy is a charter school that opened in 2004 as an elementary school and expanded to a high school in 2012. Nearly 100% of the student population is Black, and 90% of the students are economically disadvantaged. Brickstone offers all the core subject areas; however, the school offers only one advanced math course, College Algebra. There are, however, two mathematics electives offered: general math and personal finance.

Samantha is an energetic and talkative 16-year-old Black female who attended Brickstone Academy. Although she is entering her senior year, she will be attending a new suburban public school in the fall. Samantha has a 2.8 G.P.A and has a strong dislike for school. Samantha hates mathematics and school in general and stated, “My favorite subject is lunch, and maybe gym.” She has a cocoa brown skin tone and is 5’6” in height.

The remaining six respondents from the focus group were Black male students who had recently completed the ninth, tenth, or eleventh grade. Although most of the boys were not as
talkative about their school experiences as the girls, they did share insightful details regarding
their experiences in the mathematics classroom.

**Interview Setting—The Focus Group**

All of the respondents were participants in a summer youth program for middle and high
school students at an inner city social service center. Prior to the start of the focus group
discussion, the organization’s counselors had a discussion with the group regarding acceptable
behavior for field trips and activities at the center. Most of the students looked irritated by the
discussion, since they had lost their privileges for the field trip that day due to their behavior the
previous day. The day of the focus group discussion, the students had the choice to watch a
movie at the center or participate in the focus group. Students who did not have the parent and
individual consent forms were not allowed to participate. Most of the male students were fairly
quiet, while the female participants were more eager to talk. The subsequent follow-up
interviews also took place with the two female participants at the center.

**Conclusion**

The respondents of this study represent varied educational and socio-economic
backgrounds, as well as different family, community, and school experiences. Each of these
respondents enters the mathematics classroom with these experiences and backgrounds. Their
diverse backgrounds and experiences are the underpinning for how they perceive and interact
with their teachers, administrators, and peers, and school as a whole. In the same manner, the
high schools profiled provide a diverse experience for the respondents of this study. By profiling
the schools, the contextual factors outside of the classroom that may influence students’ learning
experiences are revealed.
Table 5 provides an overview of the students whose voices are included in this study as well as an overview of the academic performance of students attending the profiled schools. The table illustrates the stark differences in the academic performance of students in suburban and urban communities. The average math ACT score at the magnet school in the urban community is nearly six points below that of the average student at the wealthiest high school. Table 5 further illustrates the discrepancy between the academic performance of Black students and White students in either urban or suburban schools. In suburban schools, there is nearly a five-point difference between the average ACT scores of Black students and White students. In the urban community, there is only one who school has a comparable White population, and there is a minimum difference in the academic performance of Black and White students. How do the high school experiences of Black students living in suburban communities differ from those of Black students in urban communities? In the next chapter, participants’ experiences are illuminated through their own voices.
Table 5

**Summary of Participants’ Schools and Average ACT Scores**

<table>
<thead>
<tr>
<th>Schools Public/Charter</th>
<th>Participants</th>
<th>Mean ACT Math Score ED Students</th>
<th>Mean ACT Math Score Non- ED Students</th>
<th>Mean ACT Math Score Black Students</th>
<th>Mean ACT Math Score White Students</th>
<th>Mean ACT Math Score All Students</th>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Mayberry High Public</td>
<td>Amber</td>
<td>20.1</td>
<td>24.7</td>
<td>19.4</td>
<td>23.9</td>
<td>24.1</td>
</tr>
<tr>
<td>Loveberry High Public</td>
<td>Calvin</td>
<td>21.0</td>
<td>25.9</td>
<td>20.1</td>
<td>23.8</td>
<td>25.4</td>
</tr>
<tr>
<td>Grand Canyon High Public</td>
<td>Brandon</td>
<td>18.3</td>
<td>20.6</td>
<td>17.1</td>
<td>20.5</td>
<td>19.9</td>
</tr>
<tr>
<td>Orangewood High Public</td>
<td>Matthew Mason</td>
<td>19.0</td>
<td>23.8</td>
<td>17.5</td>
<td>22.9</td>
<td>23.1</td>
</tr>
<tr>
<td>State</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>19.9</td>
</tr>
<tr>
<td><strong>Urban Schools</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rise Up @ Lincoln High Public</td>
<td>Faith Charity Hope</td>
<td>14.7</td>
<td>14.8</td>
<td>14.7</td>
<td>Not Applicable</td>
<td>14.7</td>
</tr>
<tr>
<td>Bentler Academy Public</td>
<td>Lauren Lisa</td>
<td>18.8</td>
<td>18.0</td>
<td>18.2</td>
<td>18.5</td>
<td>18.6</td>
</tr>
<tr>
<td>Gardenville High Public</td>
<td>Camille</td>
<td>15.6</td>
<td>14.6</td>
<td>15.1</td>
<td>Not Applicable</td>
<td>15.4</td>
</tr>
<tr>
<td>Brickstone High* Charter</td>
<td>Samantha</td>
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<td>Unavailable</td>
<td>Unavailable</td>
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<td>Unavailable</td>
</tr>
<tr>
<td>State</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>19.9</td>
</tr>
</tbody>
</table>

*The 2013–2014 was the first year of the high school, hence, no data was available
** ED – Economically Disadvantaged
***The data for the table below was collected from the Michigan Department of Education for the 2013–2014 school year.
Chapter 5: The Narratives of Black High School Students

This chapter provides an in-depth look at the perceptions and experiences of Black high school students in the mathematics classroom. It challenges the assumption that Black students are provided with the same rigorous learning experience as their White counterparts. Although their experiences are varied, there are commonalities in respondents’ experiences in the mathematics classroom and school overall. These commonalities and patterns were used to identify the key themes for this study. The four key themes that emerge from this study include race matters, relational trust, math is impersonal, and teacher care. This chapter will explore each of these themes in the context of the participants’ experiences.

Race Matters

Microaggressions in the classroom. Several participants believed that their White teachers make assumptions about their behavior and academic achievement because they are Black. The inner city students Camille and Samantha, in particular, seem to have an inherent distrust of their White teachers. This distrust fuels their lack of respect and defensive approach to classroom instruction. Camille shared her experiences, saying, “School is just irritating … I told him [math teacher] I wasn’t gonna do the test … and he was like, ‘That’s why you Black kids never succeed at anything.’ And I looked at him, I said, ‘Excuse you?’” Camille proceeded to correct the teacher, saying, “If you gone put race in it, at least get my race right; I am half Arabic and half African American, sir.” And then he was like, “Well, you’re still Black.” Camille replied, “Well, you still White.”

Camille perceives the teacher’s generalization of Black students as a personal attack. It angers Camille that she and her peers have teachers who have negative perceptions about Black students. She shared how she looked at him and asked, “Why do they even hire you?” He
responded, “Excuse me?” to which Camille said, “I'm not scared of you, I ain’t scared of anybody in this school.” The teacher demanded, “Well, you can get out my classroom.”

Samantha has similar negative perceptions of her White teachers. Samantha said of her White teachers, “They don’t care, they’re all White.” She said that her math teacher “had an attitude problem.”

Calvin’s experiences in a suburban school with White math teachers are less confrontational. Calvin, who is enrolled in advanced mathematics courses, is regularly acknowledged by his White teachers for his high performance in math. Calvin is one of two Black students in his pre-calculus class. Calvin explained:

Most of the classes, like the lower classes, a lot of Black people [are] in there. There’s not a ton of black people in the classes I am in. So, I think they, like, make note…. Like I am … I don’t know, I wouldn’t say better, but I am like, I work harder I guess than all the other ones. They are, like, gives me props for that ‘cause all my teachers know that I work hard.

Receiving extra “props” no longer brothers Calvin because he is used to it; he said, “I don’t really feel that much about it because I’ve been in those classes my entire life.” Unlike Camille, Calvin suggested that teachers avoid the discussion of race within the classroom, saying, “They stay more to their topic of whatever they’re teaching, so they don’t really go over race that much.” Calvin perceives that teachers are afraid to discuss race in the classroom, saying, “I don’t think they’re comfortable with the idea.” He explained further, sharing the story of a teacher who was reprimanded:

Lots of teachers get in trouble all the time…. One teacher, my freshman year, like people go smoke in the bathroom, like whatever. And he’d be like “Don't go smoke marijuana in
the bathroom” to one of the black kids. One of the white kids told on him and he got in trouble. It was more as a joke, but that was one of the only jokes that I’ve ever heard a teacher make.

The race discussion does take place among Calvin’s peers; however, they are not serious conversations. He stated, “It’s more of like a joke. Like people use jokes more, but not really like in a serious manner.” From Calvin’s perspective, the discussion of race is not an important matter in school, but it should be considered: “I don't think it’s like really an important aspect. It’s like—it’s a factor, but it’s not a huge like really important thing.” According to Calvin, his school does not have any clubs or activities specifically geared towards Black students: “Um, I don't think—there’s not really a club.”

**Counteracting microaggressions.** The Black parents in Calvin’s school district formed a group called the African American Parent Network (AAPN). The primary purpose of AAPN is to support Black students. Calvin explained, “There’s an African American parents network thing that’s kind of like the thing, but not really.” He further expounded: “It’s like just all of the involved black parents and teachers and stuff … they’re really proactive in like the empowerment of us.”

Calvin feels that unlike their parents, many Black students are not as proactive and are indifferent to education, stating, “But like [Black students] aren’t as proactive as them … we’re not trying to be as proactive as them….I think it’s a problem, like we should try and be more proactive.” Calvin thinks that the Black students need to understand the importance of schooling and the education system in order to improve the experiences of the Blacks in our society, adding, “I think change is needed for like the betterment of Black society in our school system.”

Although Calvin believes that the underperformance of Black students is a problem, he has no
confidence that things will change, saying, “But I don't think it’s going to be solved anytime soon…. it’s kind of laziness I think.” He thinks that other Black students are indifferent to education, reflecting, “But it’s just like the Black people, they don’t really care about academics as much as they should, as everybody else I mean.”

Setting yourself apart. As a result of Calvin’s advanced coursework and his views about the importance of education, Calvin does not associate a lot with his Black peers at Loveberry. He stated, “I’m friends with a couple. Not like really, really close friends because I rarely have them in classes. Like I do most of my friends, but I’m friends with some of them.” Matthew and Mason have similar views and experiences about their Black classmates at Orangewood. Mason described his classes as “predominantly White, Asian, Indians…. I was really the only black dude in my class … anyways, [it’s] kinda sad.” Similar to Calvin, Mason also believes that Black students are not invested in their education, stating, “They don’t take it seriously. You can do it at summer school. A lot of the Black kids don’t even know it. They just come fooling in the hallway. A lot of them [are] still failing their classes.” Mason also believes that Black students act differently in groups than as individuals, saying,

Separately, they’re their own people. Once they get together, they just make you look bad when you’re around them. Every other sentence begins with the word “Nigga.” They just fool around all the time. They don’t say anything remotely intellectual… at all…they just make you look bad.

Hence, Mason tends to have more White friends than Black friends. He stated, “Definitely more white friends, for me at least. Steven and John on the football team are walking stereotypes when they’re together. When they’re together.” Matthew attempted to justify the actions of the Black players, saying, “That’s teenage guys, that’s fine, but they just make you
look bad. Cause when they’re separate with other people, then they’re typically no trouble, just ‘have fun Black dudes,’ but when they’re together, naw.” Matthew distinguishes between the students who are playing around and the [Black] students who really do not care, sharing, “It’s with the true ones. The ones that stand in packs in the hallways. The ones that fool around and throw each other back and forth and say whatever they wish to.” Mason further explained, “They stand out too much. Because all the Black friends I do have, they only hang with Black people and they stand out too much. They’re too loud and they’re too disrespectful.” Mason and Matthew attempt to avoid bringing attention to themselves at school. Mason said,

I’d rather not have that attention. It’s not that I am racist. It’s not that I don’t like Black people, and it kind of comes off like that sometimes and I say, “NO, it’s not that at all. I just want you to act presentable in the hallway when you’re standing in front of the Spanish class.”

Mason and Matthew agree that Black students are held to a different standard, attending a predominantly White suburban high school. Matthew explained, “We already get a bad rap because we’re in the suburbs, so they’re kinda of waiting for us to mess up... why I try to put myself in good spots. If I see bad things going on, I kinda walk away.”

Mason maintained that it’s sometimes difficult for him to interact with Black kids: “One kid cursed me out just for saying ‘hi.’ He was a Black kid. He called me a nigga. He said, ‘I don’t want random nigga talking to me.’ I said ... ‘I am not a nigga.’ He got real mad for no reason.”

Matthew shared what he tells his Black friends:

Listen, you’re really cool. I would have your back, but I can’t hang around this foolishness. I don’t want to be perceived as this disrespectful dude who stands in the hall
doing all these things. Talking to women like this and that. I can’t do that, I don’t like that.

**Black Is...White Is...Racial Identity and Agency**

Inner city student Camille described Black students who do not consistently hang out with Black kids as “The preppy ones they act like they ain’t Black.” She further clarified, saying, “They hang out with the White people and act like they can’t talk to the Black people like uh—they look at us different, [shrugging her shoulders] like we the same color.” The Black people and the preppy Black girls do not associate with each other in her school; Camille said, “It’s a certain hallway that you go down, and it’s like all the preppy-like black girls over there….and we all have our own hallway.” Camille said that she carries herself differently in front of her classmates, saying, “If you don’t act a certain way, then … like if you act nice and quiet, people… [are going to] take advantage of you.” In order to gain respect, she believes students have to be outgoing, saying,

If you like outgoing … then people gonna be like, “Oh well, she ain’t nobody to play with,” and then you get your respect. I mean, you respect me, I respect you…. I shouldn’t haveta be on my mean side just for people to respect me. No. But.

Samantha said that every Black student “cusses out they teachers…. everybody has in their lifetime. At least two of ‘em….The preppy kids do too sometimes, properly.” She also explained that she acts differently based on who she is with and the context of the environment, stating, “Like if you was…out with your friends, and you go to a party or somethin’, then no [cussing], because like they don’t need to know what kind of person you are.” Samantha further explained that she does not want people to have a negative impression of her, saying, “Cause like, you don’t really know them like that, and if they got this assumption then it’s gonna make you look
bad, make your friends look bad, and it’s gonna be some drama between them, me my friends and whoever.” However, in the context of school, cursing is appropriate; she said, “But at school then yeah.” She further explained, especially about her teachers,

Because like, we here, for like 9 months in school … I’m gonna see you every day. So, I feel if you [are] on my good side, it’s gonna be a smooth year for you … But if you on my bad side, I’m gonna make this school year hell for you. I will do my best to do that.

For Samantha, teachers are the determinant factor for her behavior in the classroom. She has a feeling of empowerment in knowing that she can “make [the teacher’s] … school year hell.”

**Who do we respect?** A few of the participants asserted that their experiences in the classroom are different based on their teacher’s racial classification. Black students are disrespectful to White teachers, according to Lauren. She gave the example of the Black students’ behavior with a White teacher in her English class last year. She explained,

Ms. Harris was trying to teach, but they would talk … really loud and she was like

“Please stop talking, cause it’s interrupting other students who are trying to learn.” But then, they would start arguing with her and then it would go back and forth and they didn’t have any respect for her.

Ms. Harris’s reaction to students’ blatant disrespect was to yell throughout the class. Lauren recalled, “[She] would … yell almost every class and get really frustrated.” Lauren attributes the lack of respect for Ms. Harris to her being older and White. She explained, “I guess because they probably didn’t respect her much cause she was an old White lady trying to teach us.” However, in Lauren’s middle school math class, the White teacher, Ms. Gray, was “respected.” Lauren suggested that this respect was a result of her teaching style. She said, “They respect her cause she’s like—she she’s not boring, but she’s really serious, and so they know that you don’t really
play with her cause she doesn’t… It never happened.” It is difficult for Lauren to categorize all
White teachers, but in her opinion, “I guess it pretty much depends on the person and their
teaching style because that obviously doesn’t go for all teachers.”

Although Ms. Harris was disrespected by students, Lauren believes that she and some of
the other White teachers at her middle school really cared about their students, unlike her high
school teachers, who are primarily Black. She explained with uneasiness in her voice:

Last year in my old school, all my teachers were White and it was different really
because some of them did care and then some of them kinda acted like how my other—
my teachers now act.

Lauren does not recall any of her Black teachers being “pushovers.” According to Lauren, Black
teachers display more authoritarian behaviors in the classroom. She explained:

To me, when I have [Black] teachers, they’re all hard, they’re gonna be strict. They’re all
like “Listen, pay attention.” it’s like you're…stricter and I think the kids know more not
to play them, rather then when it comes to the Caucasian teachers.

Lisa has a similar perspective about Black teachers, although she suggested that in middle school
she had a Black teacher who did not have classroom management skills. She recalled:

Mr. Lots, but he’s different … he wasn’t really a pushover. I think it’s more if you come
off like your student is your friend, they’re gonna act like it and they like slack off in
class and talk more.

In high school, however, Lisa explained, “My [Black] teachers that I’ve had so far haven’t been
letting the classroom run over them, but some teachers who were White that I’ve have let the
classroom run over them.” Some [Black teachers], Lauren suggested, know how to “flip the
switch.” She used Ms. Lawson as an example, saying,
Ms. Lawson is really cool … She doesn’t act like your friend, but she’s real cool. She’ll joke with you and all that other stuff. People can come to her and talk to her, but she’s still very strict.

There’s a difference: Urban and suburban experiences. Many of the students attending schools in the inner city share the feeling that schools did not care about their overall well-being. Camille believes that “the teachers be wantin’ you to fail, and they say, ‘Well, we just want the best for you.’ No, y’all don’t.” Camille’s position is that her teachers set students up for underachievement by not fully teaching the content; she clarified, saying, “Because they don’t teach us certain things. Michigan, okay, certain schools that um, inner Michigan, that has a majority of African Americans.” Camille shared her experience on the ACT as an example: “Nothin’ in that math class was on that test. It’s like they all set it up for failure.” Samantha also lamented, “The school system set us up for failure…. They only teach you up to a certain level.”

Similarly, Faith articulated how students are yearning to learn but are not provided the opportunity: “Kids here want somebody to really teach them.” Hope elaborated, saying, “There’s some boys in here that’s smart and that wants to learn and teachers like Mr. Davis they get frustrated with. That’s the reason why they’re out the door, doing what they do because we got half bleep teachers.” For Faith and Hope, the system’s lack of concern in their education is most evident this school year. Faith, Hope, and Charity are seniors, and they do not have a math class this year. Hope explained, “That’s a good thing because we have [our math] credits…. [But] the lady from downtown, she said we’re supposed to have math class. We [are] supposed to have a math class.” Faith further explained, “We got gym.” She paused, shaking her head. “We got gym three times a day.”
Interestingly enough, students in the suburban areas also perceive that there is a difference in the educational opportunities afforded to students attending schools in urban areas, particularly in mathematics. Amber explained,

I think it’s hard, like…if you came from like Howard City or one of the more, the more like inner city places, like, maybe seventh grade or later, then it’s hard…. I just think they go a lot slower in Howard City or something.

Amber argued that in mathematics, the problem is exacerbated for students as they move up through more advanced mathematics coursework; she said, “Since you don’t have the building blocks, it’s just really hard to keep up—I don't know. Anyone I know who’s ever like moved here like late, like they just don’t … They just don't get it.” In the suburban areas, the expectation is that all students have the foundational knowledge; hence there are limited opportunities for mathematics remediation, according to Amber and Calvin. Amber argued, “If you don’t get it … you can stay like after and get extra help, but like, if you don’t get it, you’re just not gonna get it.” Amber believes that it is nearly impossible for students to be successful at the high school level if they do not have a strong foundation, explaining, “Okay … say like you’re in Algebra 2 and … you weren’t good at Algebra, then you’re not gonna be good at Algebra 2, and if you weren’t good at Pre-Algebra you’re not gonna be good at Algebra.” Students who come from outside of the district are at severe disadvantage; she said, “[Students outside the district] weren’t even here for Pre-Algebra, so like, they’re not gonna be as good, so … they’re never gonna be as good at Algebra 2…. The lowest math they have in high school is Algebra [I].” Calvin agreed with Amber, saying, “Yeah, they’ve never caught up with like, the regular pattern. They were already behind”
I Don’t Trust Them

The amount of trust students have with their teachers, administrators, and the educational system overall appears to be predicated on their perceptions of teachers and administrators. All of the students are able to share an experience where they believe that teachers, administrators, or the educational system as a whole were not concerned about their well-being. In some cases, students believe the system sets them up for failure. Students’ lack of trust in teachers, administrators, and school as a whole is illuminated in various ways throughout the students’ experiences, including a lack of trust in teachers and administrators’ competence, integrity, respect, and personal care.

**Perception of competence.** Two of the participants expressed a lack of trust in their math teachers’ ability to provide adequate and effective instruction. Samantha, with frustration in her voice, described her math teachers as “ignorant and dumb ‘cause they should have worked on what they teach.” Samantha perceived her teachers’ lack of preparation as incompetence in the content of mathematics and instruction. She further explained, “I caught my teacher on YouTube trying to look up what he was teaching me the same day…. You can’t teach me something you don’t even know yourself.” Her perception of incompetence is further solidified through her experience on the standardized college entrance exam, the ACT. She remarked, “Nothin’ on that math section [of the practice book] was on that test. It’s like they all set it up for failure [when they gave us] the ACT.”

For Camille, the lack of competence extends beyond the classroom teacher to the administrators and school system. Camille believes part of the issue is that administrators do not select good teachers, saying, “They just pick teachers off the street. That’s what irritates me.” She also feels that teachers are not maximizing their skills in the classroom, and thus they are
purposely not providing inner-city Black students with the same learning opportunities as White students. Camille alleged that teachers whose student populations are predominantly Caucasian and Asian teach their students more content than they do inner-city Black students. She explained, “Other schools that have a majority of Caucasian and Asian … like Applecrest and … all them other schools…. They exceed Michigan’s expectations.” This perception further fuels her distrust of teachers, administrators, and school in general.

Another concern for both Camille and Samantha is their perception that math teachers do not simplify math concepts so that they are understandable. Samantha lamented, “‘Cause they’re old and they don’t want to explain nothing and when you ask a question they’re like well you’re just gonna have to figure it out yourself. Well you’re the teacher so you need to help somebody.” Camille recalled an incident when she attempted to ask for help:

This one teacher I had … he used to never explain nothing. He just wanted you to do it yourself, like, and if you told him you couldn’t do it, he’d be like, “Well, try.” And … then when you try he be like, “Oh, that's wrong.” And it just made me mad, cause I’m sittin’ here and I don’t ask nobody for help, so if I’m comin’ to you askin’ for help, well, you supposed to help me. You the teacher. And, he ain’t never help me, so it just made me mad, so I usually, just like yell … at him all the time.

Lack of integrity. Six of the participants reported a lack of integrity on the part of teachers and administrators. These respondents do not believe that their teachers and administrators demonstrate integrity. Lauren suggested that her inner city magnet school provides a false sense of high expectations to the community, particularly since the school admits to their programs students who do not meet the requirements. She explained,
They don’t understand… that so much hype has been built up about it. You can’t just have all this hype and then you believe in the hype, but they’re letting in anybody’s child come into the classroom. Does that make sense?...But then you have kids coming here from anywhere that might not just be able to work at a faster pace like you would expect them to.

Similarly, Lisa, who attends the same magnet school, believes there was a lack of integrity with her first semester math teacher, Ms. Smith, because of how she administers and grades tests. Students are told to prepare for a test, yet in the middle of the test students are allowed to use their notes. Lisa reflected:

Like when we were taking our test … and everyone kept complaining and then she just got tired. She said, “Well, you can just use your notes in the test,” and I was just like, I didn’t want them to just use the notes cause I [studied].

This behavior annoyed Lisa because she prepared for the test and feels that her time and knowledge were being disregarded. The problem only escalated once she received her grade on the test:

I got my test back. I got a 95 on it, but then none of them were wrong. So, she … rounds the grade so 95 was an A for her…. I said, “Did I get something wrong in the test?” She said, “No, you didn't get anything wrong,” and I was like, “Oh, why did I get 95 out of a 100?” And I got all like the bonus questions right and everything. She was like, “Well, okay, it’s good.” So she just gave me a 103 out of it.

Hope, Faith, and Charity also believe that their school and the school system lack integrity. These respondents attend an urban high school that recently merged with another high school. Prior to the merger, their school was considered to be a college preparatory high school.
At the time of the merger, the participants were told that their college preparatory program and curriculum would not change. However, according to Faith, “Everything got thrown in the garbage from our curriculum; they tried to keep the curriculum the same, but it didn’t work out the same. Basically the teachers—we starting getting phony teachers.” Faith expounded further, saying, “Like they don’t really teach us nothing.” Faith’s frustration made her dislike school and not want to attend school; she said, “I don't want to go to school … school is not what it used to be.”

Hope, Faith, and Charity spent their first two years taking accelerated coursework, with the expectation that they would participate in dual enrollment at a local community college during their senior year. Thus as seniors, they had finished most of their graduation requirements the previous year. However, as a result of the merger and staff changes, dual enrollment was no longer an option. Hope, Charity, and Faith feel they were betrayed. Hope explained, “We were suppose to have dual enrollment … [at] … Noman Community College….they came up here, signed our names on the list and everything … when [our counselor] left, we heard nothing else about dual enrollment.” Since dual enrollment was no longer an option for seniors, students’ schedules had to be rearranged and they were given the same class multiple times or ones that they had previously taken. Hope said that the administration said, “Oh, we just gonna put them back in classes and so, that’s when we start getting gym three and four times a day. We got old class [the] last two hours of the day, me and her.”

Hope recognizes that their schedules did not provide them with learning experiences that would prepare them for their future goals, and this is discouraging for them. These students are eager to learn but believe the system in place prevents them from reaching their highest potential. Hope shared, “We’re taking the whole year off from math and when we get to college, it’s not
gonna be good.” Camille feels that administrators ignore student concerns, so she does not express them. She reflected,

They don’t do nothin’ either. That’s why I ain’t never go to the administrators or counselors or nothin’. They just as irritating. If you go to the principal she’ll be like, yeah I’ll handle it, I’ll handle it. And then, it still don’t make no difference. They still do the same thing, and then they always rub it in our faces.

**Disrespectful teachers.** For other students, the lack of trust in the teacher is a result of a lack of mutual respect in the classroom. Bryk and Schneider (2002) described respect as an acknowledgement of the value that students bring to the classroom. A lack of mutual respect for Brandon was most evident in his experience with his eighth grade mathematics teacher; he said, “I didn’t really like her as a person ‘cause she was just like mean … you could tell she was like kind of stuck up. And she was like really snotty with some kids and yeah. I did bad.” Charity shared how the assignments she received from her ACT prep teacher were disrespectful, saying, “Like, he just gives us ridiculous assignments that are like so stupid cause he didn’t have nothing else to give us…. he gonna make us do a 500 slide historical background. What does that have to do with [the] ACT?”

Respect can also be viewed from the standpoint of providing learning opportunities that value students’ culture, community, and personal interests. For most of the participants, respectful tasks that incorporated their culture, community, and personal interest were not a part of their experience in the mathematics classroom. Amber reflected on her math teacher from the previous year:

My teacher last year, she’d like, put up the homework and like, sit down at her computer, and then we’d start notes, and she would just turn off the lights, and I’d be sitting there
trying to study, like literally holding my eyes open…. she would just, like start writing, like she wouldn’t even look at us to make sure we were still alive. Like, it was hard. Camille believed that Black students would “get” math if it were related to their lives in the community: “If y’all put us in [it], like if it was something about the street, Black people would get that.”

**They don’t care.** There is also a perception of a lack of personal care from teachers, and this causes a lack of trust of teachers. Calvin, who attends a suburban school, said, “I don’t have relationships with any of my teachers,” believing that, in general, teachers do not care. Calvin explained, saying, “They care about us, and like how we do in class, but not really outside of the classroom.” Calvin perceived that his teachers meet a minimum standard in assisting students in learning the content. Teachers do not seek out struggling students to provide assistance, according to Calvin. Thus he believed that his teachers are not proactive and helping students achieve, clarifying, “Like if you don’t want their help, they’re not gonna push to give you their help…. They’ll help us like if we asked for it, but not really.” For Calvin, it is easier to seek assistance from a friend than a teacher. Calvin shared, “If I am struggling, say like math or something, I’ll try to figure it out myself … [then] I’ll ask a friend to, and if I can’t do that, then I’ll go ask the teacher. That rarely happens.” Mason, who also is a product of a suburban school, shared similar sentiments in the focus group discussion, recalling his experience with his Algebra I teacher:

It was more of a—I guess you can say a low tolerance issue there, I would stay during lunch, I would stay after school, she helped explain how to pass the test and I continually failed tests; no matter how hard I tried, I would just keep getting E, D, E, D. It looked like
I was being lazy, but I continually say that I am trying, but it’s not working…. It was really feeling like why am I even here? I still don’t get it.

Mason’s struggle in the mathematics classroom is also a result of not feeling supported in the classroom. Similar to Calvin, Mason does not like to ask questions and is annoyed when teachers ask him questions that he suspects they know he does not know. He shared, “If … you’re asking me something I don’t know, I am not too comfortable … and I don’t want to give the wrong answer … Kids are mean. A lot doesn’t scare me … it’s the small things that get to you.” He gave the example of his experience in Geometry last year:

Like last year, it was really bad cause I didn’t understand. So, we were working through the whole equation, somewhere right in the middle, she … asked me how such and such occurred and I would just sit there and people would start laughing. Kind of … annoyed ‘cause you don’t know what’s going on, now they’re laughing.

**On the defensive in math.** Mason frequently felt attacked in the mathematics classroom by not only his peers but by his geometry teacher in particular. He said, “She would look at you like ‘What? How did you get that answer?’ And you just looked at her like ‘I don’t even know.’ That’s when I just put my head down; I don’t care anymore.” According to Lisa, her first semester algebra teacher engaged in comparable behaviors by “calling students out.” As an example, Lisa explained how tests were returned:

She likes to call people out like every time we take a test; she’ll say the scores of each person and like “yeah, so-and-so got the high grade,” like she’ll say I got 100 percent, “good job,” then she’ll slowly go down the list. “This person got a 38, better study, blah, blah …”
Camille believed that “the teachers be wanting … you to fail, and they say, ‘Well, we just want the best for you.’ No y’all don’t, because if y’all did y’all would give me the answer.” Camille’s lack of trust in her teacher’s intentions contributes to her annoyance with mathematics. Although she did not admit it directly, she assumes that teachers are trying to embarrass her when she does not know an answer. She said:

Because [the teacher] kept askin’ me, she said, “[Camille] do you not have an answer for this?” I’m like, “no,” and somethin’ just clicked, and she had [already] asked me, and I’m like “no,” and she asked me again. I’m like I’m “no” and if you talk to me one more time…

As a defense mechanism, she displays disruptive and offense behaviors in the classroom. Camille protects herself by attacking the teacher, in hopes that her behavior will also be an example for other teachers, saying, “All my teachers was White, and they were scared uh me, so I don’t—I ain’t get embarrassed, at all.” Camille’s feeling that all of the teachers are scared of her validates her disruptive behavior as a self-protection mechanism. On the other hand, as a means to prevent conflicts with her teachers, Camille does not ask questions in class; she said, “If I ask her a question, [and] you act like you don’t want to answer me then I am going to be mad, so I don’t ask questions.”

Samantha has similar disruptive encounters with her math teachers as a means to defend herself. She communicated that she feels that some teachers try to embarrass students. In response to a teacher’s attempt to embarrass her, Samantha engaged in disruptive classroom behaviors. She asserted, “They all act like they want to help you…[but they don’t].” Samantha shared her experience with her new math teacher as an example. Her first math teacher that school year gave everyone an A as long as they tried the work. A month into the school year, her
class received a new math teacher. The new teacher soon realized that although students had A’s on their report card, they did not know the content. His approach with Samantha was disheartening and embarrassing for her; she reflected:

At first we had a dumb math teacher, like, everything we did was [an] A…. So I didn’t know if I did good or I did bad. So, when we got a new math teacher … he tried to put me on the spotlight, and I don’t like [being] put on blast. I don’t like getting put on blast, at all.

Instead of being sympathetic to the lack of knowledge that Samantha has, the teacher “put me on the spotlight, ... I don't like getting put on blast, at all.” Being “put on blast,” for Samantha, was being told in front of the entire class that she did not know any of the material. Samantha shared, “He was like … You don't understand any of this. You’re getting straight F’s on your tests. The tests you took with him, you failed, and I don’t understand how you got an A.” Samantha viewed this response as a personal attack, and her response was one of self-preservation; she said, “So I cussed him out … I’m like well it’s not my fault that I had a teacher that didn’t teach me nothin’ and just gave me a[n] A on everything I had.”

Faith also shared the perception that most teachers did not care about her: “Teachers don’t really care, ‘cause they just want the check anyway.” For Faith, a teacher’s lack of care was evident based on that teacher’s interactions with students. She gave the example of her speech teacher: “She don’t care. That’s the type of teacher that don’t teach. She’ll fall asleep like ‘Are we talking to you?’ She’d be asleep on you.”

In contrast, several participants experienced high levels of mutual trust between their teachers, although not necessarily their mathematics teachers. Amber stated, “I don’t think I’ve ever been close with any of my math teachers … [but] I have pretty good relationships with …
my Spanish teacher.” Amber’s Spanish teacher is dependable and supportive. She reflected, “I can ask them to do things.” Faith, Hope, and Charity experienced a high level of mutual trust with their math teacher, Ms. Johnson.

The experiences of respondents attending urban schools provide a counter-narrative to the perception that all Black students have equal access to a good education. More importantly, the narratives of the participants in urban schools contradict the idea that teachers always put forth their best effort in teaching Black children. These narratives illustrate that there is a need for teachers to be proactive in addressing student needs. Being proactive requires teachers to understand who students are in order to establish a trusting relationship. The participants’ narratives provide a counter-narrative to the idea that Black students are unmotivated and do not care or want to learn. Students want to be respected, and they are yearning for teachers who have high expectations for their success.

**There’s No Connection: “Math is Impersonal”**

Most of the students presented a picture of a mathematics classroom that has limited or no interaction between the students and the teacher or among other students in the classroom. Prior to Amber’s senior year of high school, she claimed, “Math is impersonal.” She expounded, “It’s just kinda like typical. They do it. They show us how to do it. We do it…. there’s not really any time to kind of talk…. Math is like numbers. You aren’t talking about anything personal.” Calvin also had this experience in his pre-calculus course; he said, “[My teacher] doesn’t really talk to anybody in particular…. She sits at her computer every afternoon … when we come in…. When we leave the class, she’ll be like ‘Okay, have a good day’… that’s basically it.” In Calvin’s AP statistics class, there is slightly more engagement; however, it is at the end of the
hour. Calvin explained, “My stats teacher? He’s more outgoing. He’s more fun. Like he’ll tell jokes at the end of the class, but like the class in general is kind of boring.”

All of the students have experience in a traditional classroom environment. The traditional classroom structure consists of a warm-up and homework review at the beginning of class, a lecture, and the assignment of homework. In the traditional classroom, desks are usually in rows and columns, and assignments are largely completed independently. Amber said:

I feel like all math teachers are the same … It’s usually like a standard learning thing…

Like we practice with the teacher. Then we go do our homework, and the next day we learn something new with the teacher.

Calvin also stated that the interactions between the teacher and students are limited: “[In] Pre-Cal, …She checks the homework and like gives us our homework grade and she goes over the homework, lectures, and then gives us homework. That’s basically it every day.” In his statistics class, the teacher is more engaging; however, Calvin still finds the course boring. Consequently, Calvin did not feel that he had a personal connection with any of his high school teachers except for an English teacher; he said, “My English teacher, Mrs. O’Brian, is like middle age. She’s White, but she’s not really a good teacher. Like she teaches us, she’s kind to everyone. I think me and her have a good connection.”

Amber reflected that her experiences in math have been the same since elementary school, stating, “Yeah like maybe in elementary school we played with like, fraction blocks and stuff. But ever since like, maybe like fourth grade, it’s just like lectures.” Geometry was the only class where she felt there was a little more engagement, stating,
Geometry was a little more hands-on, I guess, … We would do stuff like with the shapes, and sometimes we were able to do like some coloring stuff. I don’t know. It was still a lot of lecturing, I feel like.

Based on these experiences, she reflected, “I feel like all the teachers teach the same, so I don’t think it has that much to do with the teacher. I just feel like some people get math, and some people don’t.” Calvin shared how the interactions between the teacher and students are limited in his pre-calculus classes, saying, “She checks the homework and like gives us our homework grade and she goes over the homework, lectures, and then gives us homework. That’s … every day. She doesn’t really talk to anybody.”

Teacher Care: Portraits of the Best Teachers

Teacher care is an evident theme throughout this study. Students’ responses provided a picture of both caring and uncaring teachers. The participants of this study were asked to describe their ideal or best teacher; a common sentiment among the students’ responses was the need for teachers to have a genuine interest in students and care about them.

Suburban student Brandon, for example, has a quiet and timid demeanor; he is a junior in high school and tends to ask questions only of teachers with whom he feels comfortable. During his tenure in high school, he has had two mathematics teachers in particular who have created a supportive classroom environment. Brandon vividly described how his tenth grade teacher, Ms. Gales, connected with him after his first quiz. He shared:

‘Cause she knew who I was, I don’t know how she would…she knew I was good in math like the first week. Like I didn’t do good on the quiz and she was like “I know you did good on the homework…” I guess … something triggered in my mind and I was like “she’s here to help” and so I did ask her questions, and same with ninth grade.
Brandon described his ninth grade teacher, Mr. Lawson, as “the best math teacher” he has had in high school. Brandon reflected, “He did more like activities … really makes sure everybody knows it.” Brandon also appreciated the pace of Mr. Lawson’s class, saying, “Like if the whole class didn’t get it he’ll do more days. Same as my teacher last year.” Brandon believes that positive relationships with teachers were a motivational factor to complete homework and perform well in the course: “If you have a good relationship with a teacher… you’ll be better in the class and you’ll have more motivation to do homework.”

Inner city students Hope, Charity, and Faith described their math teacher, Ms. Jones, in positive ways that also speak to the importance and influence of teacher care in the mathematics classroom. According to these students, Ms. Jones had expectations, classroom routines, and fun activities that made them want to learn more. Faith shared with excitement in her voice: “She even had recreational time aside with us for math. If we had a question, she would drop all games, time to do work. It was just that.” Ms. Jones was a teacher who set high expectations for her students and taught with fidelity. Faith recalled, “When I got in tenth-grade year, I started to like math; I had a new teacher, Ms. Jones, and she allowed me to understand math.” She further explained how Ms. Jones ensured that everyone mastered the content: “Like, if we didn’t get it, she would [review the information] until we got it…. Ms. Jones was a good teacher … that made me love math again…. I like math and I still do like math.” Hope concurred, saying,

She’s one of the best teachers you’ll ever meet…. I loved math, but like Ms. Jones’s class … okay,… it’s like I gotta work. I gotta go home and study. I gotta really, you know, put some effort in it and with Ms. Jones, she made me go home and do the study guides.

Charity told how Ms. Jones always seemed to be available for her students:
I used to call Ms. Jones…“Hey Ms. Jones, I really need to know how to do this”…at two o’clock in the morning….I needed that, it was a study guide. We got a test…. That’s how much math meant to me. For me to be like I got to do this.

Faith and Hope view Ms. Jones as “another mother,” stating that she had a genuine concern for their well-being. Faith reflected, “Yeah, and she cared…. I felt like I was her daughter.” Hope shared similar feelings, explaining how Ms. Jones still brings her to school: “She brings me to school every morning. She don’t even work here no more. She gives me breakfast. She is the best teacher ever.” The students’ perception of Ms. Jones was that she was more than a teacher; she was a caregiver.

More importantly, the participants suggested that Ms. Jones was well respected by students. “Out of everybody in there, she was one of the teachers that was most respected, even though she was young. She didn’t play no games,” Hope recalled. Faith supported Hope’s claims, saying, “She taught. That’s what kids here are hungry for, somebody to really teach them. She really taught…. Everybody respected that.” Faith further passionately explained the positive teacher-student relationship that Ms. Jones, and she shared:

This lady came from California and I was born in Michigan, but when she came in the school, in tenth-grade year, I felt like she was my mother. My momma knew how close Ms. Jones was to me, and she was very close and she actually did teach like Hope said, if you didn’t get it…she did not play.

Faith’s passionate description of Ms. Jones and their relationship was followed by her painful reflection on the disappointment that she felt when Ms. Jones left:
When she left, it hurt us, I think. It hurt us so bad. It hurts me a lot too cause she said—basically, it was—it wasn't like she—it’s not like she’s money hungry, but she had to do what she had to do for her house.

For these students, Ms. Jones was well respected because she gave her best, and she truly cared about students. Faith, Hope, and Charity argued that other teachers “hated” Ms. Jones, because of her work ethic. Hope expounded,

A lot of teachers hated her. Because people respected her, like everybody wanted that respect she had. But they couldn’t get that. For one, you don’t teach, [or] you half teach. How you expect to get some respect from somebody. Ain’t nobody gonna respect you.

You just in there “do this page 75, just sit down.” No, that’s not how you teach nobody.

Lisa’s portrayal of her second semester algebra teacher, Ms. Jackson, provided another perspective of teacher care. According to Lisa, Ms. Jackson was an improvement from her first semester teacher, Ms. Smith, saying, “I mean she interacts with the students more. She’s like friendlier and like, just nicer.” Lisa was impressed that although Ms. Jackson moves to a different classroom each hour, she takes time to greet her students, explaining, “Most of the teachers … don’t have a permanent room so … like she switches classrooms … [and] has to go to different floors. Sometimes, we come in before her … but she … greets us every time.” Ms. Jackson’s classroom environment is also more engaging and organized. In addition, her instruction is a combination of teacher- and student-led tasks. Lisa stated, “She is fun. We do activities and it’s not just sit down and do all this work. She makes it fun ‘cause she’s kind of funny.” The collaborative group activities are also more frequent in Ms. Jackson’s classroom. Lisa maintained, “We take notes, but then at certain times she makes us do activities, too.” Lisa further explained that the class has an activity at least once per week: “Last week, [for example]
we did like a bingo style thing where we had to get with a partner and you had to figure out these problems.” Ms. Jackson’s classroom is set up to allow students to work with at least one other person. Lisa described, “Our desk is two people … and so we’ll have partners so you can work with your partner if you want.”

In Amber’s case, teacher care is displayed by her current Algebra 2 teacher, Mr. Jacobs. In describing his class, she said, “It’s a lot different than any other math class I’ve been to. He is more willing to try out new things.” Amber depicted him as a “good teacher,” explaining how he takes an interest in his students: “He stands at the door, people are coming in, he’s like ‘Hey, how are you doing.’ He says good morning to everyone as they walk in.” Mr. Jacobs uses his conversations at the door to let students know that he is interested in their lives. Amber recalled, “Sometimes…he’s like ‘How was Powderpuff?’ cause he knows I do that. I was like ‘Oh … it was fine’… So, he’s cool … I think I talk to him the most. I like to talk to my teachers.”

According to Amber, Mr. Jacobs is purposeful in making sure that every student is engaged. She said, “I like him. I mean he still has to kind of lecture a little bit because that’s how you learn math. But like he looks around to make sure that everyone is still engaged.” Unlike her previous experiences in math class where Amber said she was “literally holding my eyes open” to stay awake, Mr. Jacobs’ class is extremely engaging:

No, people don’t really sleep because you know like, there’s a lot going on and you’re not just sitting there, you’re either talking or doing stuff and the notes aren’t long so it’s not like you’re dozing off or anything. I feel like [last year it was] just like put your head down and go to sleep.

Calvin, on the other hand, feels that teachers do not care. As a result of what he perceives as teacher complaints, he said:
They kinda say it out loud like tell us like “I am here from 5 o’clock and then I am leaving. Like no help today or no help this week and then, I don't know.” It’s that kind of stuff … like it’s just communicated. It’s not really by talk but like body language…I don’t know. I think if you ask for help, they’ll help you, but I don’t think they’ll seek out if you’re struggling.”

**Perceptions of the ideal teacher.** As experts on the experience of the high school mathematics classroom, the students provided words of advice to share with new teachers. A few participants described their middle school teachers as examples of their ideal teacher. Their advice primarily focused on classroom management and providing students rules and expectations. Faith advised:

> The first day, put your foot down. Because at a school like this … if you be too friendly, they will walk over you. Set up some rules and expectations, but actually follow through with them from like the first day … You can’t just be too friendly like—you can be nice but don't be like too friendly with them.

Hope agreed, saying, “I think like enforcing your rules and stuff … The bells ring, close the door. Somebody comes to the door and like I was just ‘Nope! Bye, bye, get a pass.’ That’s what Ms. Jones did.” Hope further explained how Ms. Jones’s routines helped to establish the daily expectations for students to participate in the learning:

> You come in, grab your calculator, grab your notebook. There will be a “do now” on the board, on the blackboard. You have to do that. You have five minutes to do that. When she comes, settle down and close that door, it’s time to take notes. When you take notes, you gotta pay attention to the notes cause she might give you some questions. Yes, ask
the questions you need. After she says “Okay, got it?” everybody can grab a worksheet, grab a calculator, sit down, do your work.

Charity reflected that there was always work to be completed in Ms. Jones’s class and argued that new teachers should have the same expectation for their students:

Ms. Jones? Her work lasts you through the whole 90 minutes. But everybody was focused on their work…. It won’t be like five questions and everybody talked…. I mean … people got done, but she would have two more worksheets front and back ready for you. But that helped like, helped you understand the topic ‘cause you keep going over and over and over again. That’s why I am saying like, if you want to be a teacher, I think you should give us more work.

According to Charity, Ms. Jones, was constantly reviewing previously learned concepts with students saying, “So, like the worksheet and stuff we had to, we had learned, then like a week later, she bring back the old stuff we had learned and then just help keep it fresh in your mind.”

Also provided students with study guides and “stations,” to help students review for their test. Faith described, “She gives us test in different stations and stations will get your right.”

According to Hope, Charity, Faith, and Essence, who attend the same high school, there is a culture of little or no homework for students at their school. Essence explained, “I think the only homework I’ve gotten so far this year is [Jamison], but like the homework he gives us you can get done with it in class…. Other than that … probably one assignment this year.” Hope concurred with Essence, saying, “My momma said, ‘You got some homework?’ I said, ‘Who, what is that?’” Charity’s words of advice were simple: “If you become a teacher, please give homework.”
Lisa suggested that the classroom management style of her middle school math teacher, Ms. Glide, made her “good teacher.” This was most evident in Lisa’s excitement and overall demeanor as she talked about Ms. Glide. “It’s kind of almost the same as what we do now. We would come in, take the ‘do now’ that was there, and then we would do it and turn it in. Then we would start on our notes.” The expectation for students’ behavior was clear from the beginning of the year in Ms. Glide’s class. Lisa reflected,

She did not really care if you took notes or not or if you paid attention ‘cause it was your grade that was on the line. She taught everything that you needed, but if you chose not to do it or [to] fall asleep, she didn’t really care because you’ll have a test. You’re responsible for the notes and then she would give you the test and if you didn’t know it, it was like “Oh, well!”

Ms. Glide did not allow students’ misbehavior to disrupt her from teaching. Lisa said,

If you fall asleep during class or you decide you’re going to have a conversation, she doesn’t even like interrupt you because she’ll continue teaching. She’ll just say, “Can you like just be quieter?” or “Don't interrupt others while they’re trying to learn while you fail,” and then she will continue on with it.

In some ways her description of Ms. Glide is similar to that of her first semester algebra teacher, Ms. Smith. When asked to describe the difference between Ms. Glide and Ms. Smith, Lisa responded, “Ms. Glide cared.” Lisa said that Ms. Glide would not lower her expectations for her students:

I think she did care, but it was really that she wanted you to do the work, like learn it and like to be focused during classes, too. I think she felt that her job was to teach you, not wake you up and keep you awake during class and babysit you.
Lisa also felt that Ms. Glide better prepared students for tests, stating, “She would give you a study guide and then … like a practice test of what would be on the test….you would do it to see how good you were doing it and … she’d go over it … I like how she taught.”

Classroom management is a common concern for Mason and Matthew, who were participants in a focus group discussion. Mason said, “Number one, control the class…. Please control your class.” Matthew agreed, saying, “Cause like, you know, high school kids, if they know you’re fresh out of college, they’re gonna try to test you a bit. I still test my teachers sometimes even though they’re older.” Matthews further expounded, “It’s not like a disrespect thing. It’s just to see if you can get away with it.” Matthew also suggested that teachers need to find ways to motivate students: “Like kinda motivate your students, [make] them want to learn.” Mason added, “Understand like kids motivation there you know … Like I said, when I am in football, I am tired. I want to pass your class, just understand that I am gonna be a little tired.” Mason also encouraged teachers to “recognize who’s like not on pace. Kids who aren’t where they should be and just take some time to, even if you have to like slow it down with the entire class so … they’ll … catch up with [other] kids.” Matthew and Mason want to participate in class; however, they may not always raise their hands. Mason argued, “A good teacher will notice a kid who isn’t raising their hand.” Matthew provided a caveat: “I guess kind of call on different students. Don’t go to the same kid who raises their hand every time.”

Brandon, on the other hand, identified the ideal teacher as one who provides regular feedback, saying, “Someone who goes over the homework and notes …in depth and … quiz corrections, …if we messed up we can …get points back and see… where we did wrong.”

**Conclusion.** The participants’ narratives illuminate the daily experiences of Black high school students. Although different, there are a variety of commonalities in the experiences of
students in urban districts compared to students in suburban areas. The differences between the experiences of urban and suburban Black students highlight the structural inequities that exist as a result of class. The stories shared by the students in this study illustrate their different perspectives about what it means to be Black. The common intentional behavior of the Black male participants is particularly interesting. The narratives also highlight the influence of teacher care, as well as agency of Black high school students. These key themes are explored in depth in the following chapter.
Chapter 6: Thematic Analysis of Students’ Experiences

“If every child is to have an opportunity for success, every student must have a true opportunity to learn” (Jackson, 2011 p. 1).

The ideology of meritocracy in American society assumes that all children, regardless of social class or race, have access to an education. More importantly, it presumes that schools provide a learning environment that nurtures students, sparks new interests, and expands the students’ vision of the world that they live in. The experiences shared by the participants in this study illuminates that not all students have equal access, particularly in the mathematics classroom. Several of their stories describe a teacher who fails to support them emotionally and academically. They describe the mathematics classrooms, specifically, as daily procedures of listening to a teacher sharing his or her knowledge of mathematics. Mathematics is viewed as a meaningless subject by the respondents because their instruction lacks meaningful connections to their real life experiences. On the other hand, some of the participants’ experiences provide a means for understanding how instructional practices can be improved. This chapter examines the pertinent themes of this study, including how race matters, teacher care, and the impersonal nature of mathematics instruction.

Race Matters: The Burden of Being Black

Ogbu and Simon’s (1998) cultural–ecological theory of minority school performance suggested that Black students’ academic performance is a function of their experiences within the classroom. Ogbu and Simon (1998) further asserted that Black students’ experiences in schools are comparable to the experiences of Black adults within the larger society. Hence Black students perform lower academically as a means to adjust to the larger social inequalities that plague the Black community.
The students’ experiences illustrate that being Black in some sense can be viewed as a liability in high school. Black students have to navigate a unique and, at times, difficult high school experience, simply because of the color of their skin. The participants’ experiences are classified into four focus areas: microaggressions, stereotype threat, stereotype management, and systematic inequalities.

Microaggressions. Most of the respondents agree that their teachers’ perceptions about them influence their interactions with teachers and administrators. Nearly all of the participants described a microaggression that took place within the school environment as a result of their racial classification. In the urban settings, Camille and Samantha endured direct attacks about their intelligence, families, and culture. In the suburban settings, the microaggressions were more covert. For example, Calvin experienced a microaggression by his teacher’s overt attention and surprise regarding his high performance in the upper-level mathematics courses. Calvin shared how he is sometimes mistaken by his peers for other Black male students who do not resemble him, just because he is Black. Mason was subjected to an assault each time his teacher publicly embarrassed him with her look of frustration when he answered a question incorrectly. Similarly, Matthew withstood an attack when his teachers failed to give him time to process the content and were frustrated by his questions.

These microaggressions create a stressful learning environment. Pierce (1995) asserted that racism causes stress on a targeted group or individual. Stress may result from feeling unsupported. Hence, when a marginalized group or individual is stressed as a result of racism, there is a perceived lack of support to remove dominance (Pierce, 1995). One of the consequences of racism is that targeted individuals become defensive, strategically thinking of
ways to avoid being attacked. The stress of racism becomes a distraction for targeted individuals because they are focused on observing and scrutinizing potential attacks (Pierce, 1995).

All of the participants who experienced a microaggression described defensive behaviors to protect themselves from the perceived attacks. For Camille and Samantha, their source of protection is through verbal confrontations of the teacher and/or disengagement from the learning environment. Samantha is leery of all White people based on her experience with teachers in her school. Faith, Hope, and Charity discussed an internal frustration with teachers who do not care. As a result, they lack confidence and trust in their teachers’ intentions. They voiced their frustrations to their parents, who feel they have little power to change the system. Similarly, Calvin, Brandon, Mason, and Matthew all lack confidence in their teachers’ intentions within the mathematics classroom. Calvin and Brandon resolve this lack of confidence by not asking questions in class. Calvin uses his classmates as an alternative resource, while Brandon hopes that someone will ask the question that he is thinking. Mason and Matthew tend to simply disengage from the learning environment by putting their head down or falling asleep.

**Stereotype threat and stereotype management.** Interestingly, all of the male participants discussed the importance of avoiding attention in their interactions with school staff. Mason, Matthew, Brandon, and Calvin purposely evade being characterized as disruptive or disrespectful in school. Mason and Matthew, in particular, avoid being in large crowds with their Black peers, because it is viewed by teachers and administrators as a sign of trouble. They further explained that they evade Black male students who are being loud, cursing, and making negative remarks about women. Brandon makes sure his pants are not sagging and does not wear hoodies in order to avoid the perception of trouble with administrators.
Each of the male participants’ experiences displays what is referred to as a stereotype threat. This is the potential for an individual’s action to be aligned to a negative stereotype. It describes the possibility that one’s identity is associated with a stereotypical response or situation (McGee & Martin, 2011; Steele, 2011). In an effort to avoid the stereotype threat that exists within the school environment, the Black males in this study are strategic and purposeful about their social interactions with their Black peers as well as their physical appearance and classroom behaviors. The male respondents’ intentional actions to avoid fitting into a stereotype are described by McGee & Martin (2011) as stereotype management. Stereotype management has been associated with improved academic success in mathematics and engineering coursework at the college level (McGee & Martin, 2011; McGee, 2013).

Calvin is engaged in the mathematics classroom but does not seek out additional help from his teachers. He prefers to challenge the stigma of being a Black male through his high performance in the class. For Calvin, refusing to ask teachers questions can be viewed as stereotype management. The strategies that high-achieving students employ in order to counteract biases about their academic abilities characterize stereotype management (McGee, 2013; McGee & Martin, 2011). Calvin’s teachers recognize him as being different from the traditional Black student. From Calvin’s perspective, asking too many questions or expressing a lack of understanding provides his teachers with the opportunity to challenge his mathematical skills.

Calvin has mostly White friends because there are not many Black students in his higher-level classes. In addition, Calvin has the perception that Black students are not as engaged in their academics; hence, he is not friends with them. Calvin has taken on a raceless persona. A raceless persona is the act of Black students distancing themselves from their Black peers to
avoid negative perceptions of themselves (Fordam, 1988). According to Fordham (1988), Black students who are successful in school often are conflicted about what it means to “act Black” compared to “acting White.” Fordham (1988) asserts that Black students who are successful in school seek ways to become raceless, not identifying with any particular group.

Fordham’s (1988) theory of raceless persona can also be applied to Black students who are not academically successful but seek to elude disciplinary problems. Mason, for example, does not have an abundance of Black friends, and he also struggles academically. He is personally aware of how being a Black student in a predominantly White school can lead to excessive disciplinary problems. In middle school, conflicts with White teachers and excessive disciplinary referrals were a consistent problem for Mason. As a high school sophomore, he has become strategic with interactions with teachers and his peers to circumvent trouble. For Mason, adopting a raceless persona is an integral part of staying out of trouble.

On the other hand, Steele (2011) argued that stereotype threat or the stigma associated with stereotypes results in decreased academic performance, particularly in mathematics. For Mason, Matthew, and Brandon, fear of being perceived as not smart results in limiting their class participation. Mason is extremely self-conscious about his math abilities and of how his teacher and peers perceive him. As a result, Mason participates only when called upon by the teacher, and he will disengage when he does not feel support from the teacher or his peers. Matthew, on the other hand, prefers to disengage altogether when he feels that teachers are stigmatizing him. Brandon, like Mason, strategically determines teachers’ feelings and perceptions about him at the beginning of the year. Based on his perception, he determines whether he asks questions as well as his level of participation in the class.
**Black is…White is….** Most of the students in this study did not express an overwhelming pride in being Black; on the contrary, they often associated being Black with negative stereotypes. Several of the participants described their perceptions of what it means to be Black or White. Camille and Samantha, in particular, relate being Black with negative classroom behaviors. Disruptive classroom behaviors and confrontations with teachers are the norm for Black students, according to Samantha. Black students who do not exhibit these behaviors, and who separate themselves from negative behaviors, are considered to be “acting White.” Camille and Samantha are irritated by these students because they feel that they look down on their “real” Black peers.

Although from a different vantage point, being Black is still associated with negative connotations with regard to behavior and academics. Calvin and Amber described how Black students tend to be in the lower level mathematics courses. Calvin, Mason, Matthew, and Brandon, all of whom attend schools in suburban areas, remarked that Black students do not take school seriously.

**Theories of racial identity.** The Cross theory of nigrescence suggests that the basic premise of the model is grounded in five distinct stages: pre-encounter, encounter, immersion-emersion, internalization, and internalization-commitment (Cross, 1995; Vandiver, Fhagen-Smith, Cokley, Cross, & Worrell, 2001). The pre-encounter phase describes individuals who attempt to assimilate and/or deny their Blackness. In this phase, White is viewed as better than Black, and thus there is self-hatred. None of the participants in the current study could be categorized within this stage. The next stage is the immersion-emersion, where an individual emerges into a pro-Black philosophy and rejection of Whiteness. Camille and Samantha display some characteristics that model this phase. Both are proud of their Blackness, and they reject
their self-defined characteristics of Whiteness. Both associate mathematics instruction with Whiteness and are disconnected from the instructional environment. The next stage is internalization. In this stage, there is an appreciation for being Black and a mutual respect of Whites and other cultures (Vandiver et al., 2001). This stage is most apparent in Brandon, the only participant who specifically discussed his pride in being Black. He is comfortable with being Black and does not feel the need to prove himself to his peers to feel accepted. Brandon has a mixture of Black and White friends, suggesting that he also values other cultures.

Cross’s model, however, does not make provisions for the nuances associated with individual experiences. There are several participants who do not accurately fit within the Cross Model. For example, Amber, who has grown up in predominantly White neighborhoods and attended predominantly White schools, does not view race as an issue within the context of school. Amber is comfortable with being one of a few Black children within a class, given this has been her experience since kindergarten. Based on the interviews, it is difficult to determine whether Amber is in the pre-emersion or the internalization stage. Likewise, Calvin has attended predominantly White schools. However, he is aware of the inequalities and differences that Black students experience within an all-White environment. Calvin spoke to the need for changes among the Black community, but he fails to actively engage in developing friendships with his Black peers.

Nasir, McLaughlin, and Jones (2009) analyzed the racial and academic identity of Black urban high school students through a socio-cultural lens. They asserted that Black children’s identity in urban settings could be divided into two categories: street savvy and school-oriented/socially conscious. These two identities are constructed through Black children’s experiences at school, within their community, and through their internalization of the historical and media
portrayals of Black people. The street savvy identity is described as thug/gangster identity. Students with this identity do not connect to school. The school-oriented/socially conscious identity refers to a student who is connected to the community and school. In addition, these students understand the cultural and historical legacy of Black people and the community. They identify with having a positive impact on society. Lisa and Lauren can be described as having a school-oriented/socially conscious identity. Both of these participants are focused and committed to high achievement in school. They know how to self-advocate within the school environment. However, there are no data that speak directly to their involvement in the community.

*School is not the same for us.* The identity of Black imposes a different high school experience, regardless of whether the student attends an urban or suburban school. Camille perceived that schools with White students in suburban areas have better educational opportunities; this is discouraging for her. Her performance on the ACT is further confirmation of the different learning opportunities available to her. Davidson (1996) suggested that classifications of racial and class identities could have negative effects on schooling. The structure of schools in some ways promotes disengagement from the learning process. Students know and understand when they are being treated differently, and they therefore disengage. Low expectations and tracking are devices within the structure of schools that promote disengagement (Davidson, 1996).

Disengagement is visible when students fail to participate in class, lower their expectations for themselves, or attempt to hide and not bring attention to themselves within the classroom (Davidson, 1996). Several of the respondents in this study display these behaviors within the mathematics classroom. Brandon, Calvin, and Mason all described attempts to remain hidden within the math classroom. They avoid asking questions so that they are not embarrassed.
Brandon assumes that a lower level math class is more appropriate for his math abilities. In the higher-level class, his lack of confidence in himself, in addition to the lack of support from the teacher, results in him silencing himself. Calvin knows that he is seen and perceived differently by his math teacher as a result of his race. Hence he tries to simply blend into the classroom and not draw attention to himself. Mason assumes that he will not understand math, so he puts his head down and tries to fade out of the classroom discussion. These experiences of difference inhibit Black students’ opportunities to learn.

**Racial identity and agency in the classroom.** Research has demonstrated that race is a determining factor for teachers’ expectations and approaches to instruction (Ladson-Billings & Tate, 1995; Delpit, 2012). The racial classification of Black opens the door to negative stereotypes, low expectations, and different treatment being imposed on Black students. The classroom environment can be perceived as a place where students have limited agency or power to counteract negative stereotypes or racial injustices. Yet Bandura (2002) argued that regardless of the context, every individual displays agency within a situation. How do Black students demonstrate agency within the classroom environment? How do these racialized experiences effect Black students’ self-efficacy?

*Agency* is defined as the power to change one’s behavior or circumstances (Bandura, 2002). Students’ reactions to the classroom environment represent their agency within that environment. In this study, teachers’ negative actions within the classroom elicited students’ negative responses. Students’ negative responses have the potential for short- and long-term consequences. The short-term responses are consequences of the system, such as removal from the classroom or a failing grade. On the other hand, the long-term response is the impact negative action has on students’ self-worth.
The students’ agency within this study can be categorized as adult-oriented or peer-oriented. Either way, the participants’ primary goal is to maintain their self-worth. Peer-oriented agency is characterized as behaviors that are rewarded by their peers. Camille and Samantha are willing to engage in confrontations with teachers in an effort to preserve their own self-worth and positive reactions from their peers. Their confrontations are justifiable reactions to teachers’ racially motivated and inappropriate comments or behaviors. Nonetheless, they face the consequence of being removed from the classroom or suspended. Camille and Samantha have a collective agency amongst their peers who have similar frustrations. Camille argues that she sets the tone for other students’ behaviors in the classroom: “Every classroom that I’m in, I run … I have control over it. If I feel that I don’t wanna do somethin’, I don’t do it, and everybody follows behind me.” Her misbehavior in the classroom results in the negative behaviors of her classmates, leading to multiple classroom disruptions for the teacher.

Other participants in this study engaged in an adult-oriented agency. An adult-oriented agency described students’ behaviors that are geared toward pleasing the teacher. The protest against mistreatment or biases is non-confrontational. Often the experiences are ignored by the students. Calvin, for instance, argues that he does not care about teachers’ perceptions of him. He maintains high achievement, regardless of teachers’ actions within the classroom. Mason and Matthew both quietly disengage from the learning process as a means of preserving their self-worth. For Mason, the teacher’s personal attacks are a direct assault on his self-worth. Matthew, on the other hand, does not associate his low performance with his self-worth. He has engaged in academic disidentification. This allows an individual to not evaluate one’s self-worth based on academic performance (Osborne, 1997; Steele, 1992; Steele, Spencer, & Aronson, 2002).
Therefore, an individual engaging in academic disidentification does not view schooling or teacher’s perceptions about him or her as important (Steele et al., 2002).

Disengagement from the learning process is the beginning phase of what becomes a chronic issue of academic disidentification for students (Steele et al., 2002). Steele (1992) argued that academic disidentification has the potential to spread as a collective agency among students, creating a culture that devalues academic achievement. Faith suggested that students’ disengagement from school is a demonstration against teachers who fail to teach. She explained, “There’s some boys in here that’s smart and that wants to learn…. They get frustrated with [teachers]. That’s the reason why they’re out the door, doing what they do because we got half bleep teachers.” If disidentification is a part of the school culture, students who do not disidentify with academics are stigmatized by their peers (Steele, 1992). Camille’s description of the “preppy girls” is an example of this stigmatization.

**Set up for failure.** Most of the respondents who attend urban schools imply that they are receiving an education that is below standard or not as rigorous as their suburban counterparts. Camille, Samantha, Faith, and Hope are particularly poignant, arguing that students in their neighborhoods are intentionally denied the opportunity to learn. A comparison of the suburban and the urban students’ experiences supports the participants’ claims, specifically related to access to advanced mathematics courses, highly qualified mathematics teachers, consistent instruction, and funding.

A comparison of the mathematics course offerings at urban and suburban schools indicates that urban students have limited access to advanced mathematics courses. The highest mathematics course offered at the urban charter school, Brickstone Academy, is College Algebra. At the urban magnet school, Bentler Academy, the highest mathematics course offered
is AP calculus. On the other hand, suburban public schools such as Mayberry offer a variety of higher-level mathematics courses including AP calculus, AP computer science, and linear algebra. Mathematics electives such as statistics, linear algebra, or AP computer science are not an option for students attending urban schools. Suburban students like Calvin are also allowed to take multiple mathematics courses. Yet Faith, Hope, and Charity, as high school seniors at an urban public school, have taken all of the available mathematics courses at their school. Thus, they are forced to take multiple physical education classes or repeat courses to fill their schedules. Faith, Hope, and Charity are keenly aware of the negative impact that not having a math class their senior year will have on their first year in college.

According to Amber and Calvin, inner city students who transfer to their suburban schools struggle immensely in mathematics, suggesting that the mathematics courses in the inner city are not as rigorous as courses in suburban areas. A review of the standardized test scores supports their argument. Faith, Hope, and Charity had all taken and received high school credit for elementary algebra, advanced algebra, geometry, and pre-calculus. The mathematics portion of the ACT exam covers elementary algebra, advanced algebra, geometry, trigonometry, and statistics and probability—all content areas that students should have mastered by the end of their eleventh grade year (ACT, 2016). Yet they all have composite ACT scores between 14 and 15, a five-point difference from the state average. On the contrary, Amber, who attends the affluent Mayberry High School, received a composite ACT score of a 23, has never taken a pre-calculus class, and is repeating advanced algebra.

Mathematics is the gateway to influence and power within our technology-driven industrial society (Moses & Cobb, 2001; Schoenfeld, 2002). Mastery of mathematics allows students access to higher education and technology literacy (Schoenfeld, 2002). Limiting Black
urban students’ access to advanced mathematics does not provide them with an equal opportunity to participate in our technology-driven society. As a result, Black families in the inner city will have less access to economic and political power within our society.

The difference between urban and suburban schools is also apparent in relation to the instruction that the students receive. Urban schools struggle with high teacher turnover and finding teachers who will commit to working the entire the year. This results in urban schools having less access to highly qualified (HQ) teachers. HQ teachers, according to the state of Michigan, are teachers who have a bachelor’s degree and a current teaching certificate in the subject and grade of their current teaching assignment. In addition, HQ teachers meet one of the following requirements: they have a major in the subject area, they have passed the state certification exam, they have earned National Board Certification, or they meet one of the highly objective uniform state standards of evaluation (Michigan Department of Education, 2007).

Faith, Charity, and Hope’s math teacher, Ms. Jones, is an example of a teacher who is not highly qualified. Although Ms. Jones is well received by students, she lacks the education and instructional skills to ensure that students receive a high-quality education. Ms. Jones is a TFA teacher; thus, she does not have any formal training in education. She has a bachelor’s degree, but she lacks knowledge relative to best practices in education. Ms. Jones’s classroom management and rapport are commendable. Nevertheless, participants describe her classroom as one where there is an abundance of worksheets. Given the participants’ unsatisfactory scores on the mathematics portion of the ACT, Ms. Jones’s effectiveness is questionable. Contrary to what national and state education agendas assume, knowing the content of mathematics does not mean that an individual knows how to teach. Teaching is not an innate skill (Ball, 2010); rather, it is a
skill that is learned and developed. Students who do not have the opportunity to have highly qualified teachers are therefore at a severe disadvantage.

Another prevalent issue for students in urban schools is the lack of a consistent mathematics teacher throughout the entire school year. Lisa, Lauren, and Samantha, all students in urban schools, have experienced mid-year transitions in their mathematics teachers. None of the students in suburban schools had this experience. The transition of the teachers also impedes learning. An integral part of learning is the relationship between teachers and students; each time a new teacher enters, relationships have to be developed. Transitioning to a new teacher can be traumatic for students and negatively influences the learning environment.

Black students in suburban districts experience microaggressions within the classroom. For Calvin, being pulled aside and complemented on his high achievement because he is Black is perceived as a microaggression. The teacher’s low expectations and deficit thinking of Black students is evident to Calvin and makes him uncomfortable. Calvin does not want to be stereotyped as an underachiever; hence, he does not ask his teacher questions. Matthew and Mason have similar experiences. They both struggled in math; however, Mason would rather disengage than be embarrassed by his teacher and peers. His teacher’s lack of concern and support in mathematics is another example of microaggression. Teachers are supposed to be a resource for students to learn material; if students are not willing to engage or feel uncomfortable with a teacher, another opportunity gap develops.

Another issue that is prevalent with the Black suburban males in this study is the threat of being stereotyped. The male participants are keenly aware that they are viewed as troublemakers. Yet all of the male students engage in a form of stereotype management in order to avoid fitting
into the stereotype. Thus, each is intentional about his interactions with his Black peers. Part of their daily school experience is negotiating how not to display stereotypically behaviors.

**The strain.** The stressful environments that are created as a result of stereotypes and microaggressions are emotional draining, even if students are academically successful (McGee, 2011). Moreover, stereotype management has the potential to negatively impact Black students’ perception of self (Fries-Britt & Turner, 2001; McGee, 2011) as well as, their racial identity.

According to McGee (2011) stereotype management refers to the tactics that high achieving college students specifically, engaged in to achieve academic success. High achieving college students that are attempting to disprove a stereotype, results in them denying themselves and taking on a persona that contradicts the perceived stereotype. Moore, Madison-Colmore, and Smith (2003) in their study of Black male engineering students described these behaviors as prove-them-wrong-syndrome. The prove-them-wrong-syndrome depicts the behaviors and personality traits that students adopted in an effort to prove that Blacks students were not inferior to their White counterparts. Although the Black students in their study achieved academic success, they were negative affected both emotionally and psychologically. In essence, they were accepting the stereotype that they are not “good enough” or deficient in comparison to the dominant culture. Students’ attempts to disprove stereotypes,” negatively influenced their own unique self-identities (McGee, 2011).

Much of the research on stereotype management and stereotype threat focuses on college students. How much more difficult are stressful racialized environments for high school students that may lack the maturity to appropriately handle these environments? Their stereotype management strategies might not necessarily result in high achievement. The finding of this study suggests that Black high school students that experience stressful classroom environments
have the potential to engage in stereotype management, regardless if they are high or low achievers.

All of the students within the current study engaged in intentional actions to mitigate the negative stereotypes and microaggressions that occurred within the classroom. Some students, like Camille and Samantha, purposely engaged in behaviors that are stereotyped as Black behaviors. They participated in these behaviors, in order to be accepted as Black by their peers. Their peers provide support and acceptance that teachers and administrators did not provide. Acceptance from peers became a primary concern, instead of academic achievement. Although their negative behaviors did not result in high achievement, they did positively influence their acceptance from their peers and self-worth.

Although some of the participants claim that they are unaffected by teachers microaggressions and biases, all of the participants except for one student had a negative perception of what it means to be identified as Black. Thus suggesting that stressful racialized environments may also perpetuate a negative racial identity for Black students. Students’ exposure to negative stereotypes both from their peers and teachers, influences their own racial identity, or their definition of Blackness. Further study is needed to determine how microaggressions and racialized environments influence high school students’ racial identity.

**Teacher Care**

“Teachers turn schoolhouses into school homes, where the 3 C’s (care, concern, and connection) are as important as the 3 R’s” (Roberts & Irvine, 2009, p. 143).

Some argue that teacher care is a challenge to define. However, Walker (1993) defined care as simply providing individual attention to the social, academic, and psychological needs of students. Noddings (1988) suggested that teachers with an ethic of care teach from a place of
love or obligation. The focus for teachers with an ethic of care is developing productive and moral citizens. These teachers model care through encouragement, mutual respect, and consideration. Furthermore, teachers with an ethic of care empathize with students and are an advocate for students. Moreover, they understand the importance of establishing a relationship and trust with their students (Noddings, 1988).

**Establishing personal relationships.** In this study, participants describe positive experiences in classrooms where the teacher consistently displayed the 3 C’s. The theoretical description of teacher care is aligned to the participant’s perception of teacher care. Brandon, in his description of one of his best math teachers, explained how she took the time to recognize that his performance on a quiz did not match his homework. Brandon also felt care when a teacher stopped and took the time to revisit a lesson when the whole class failed to understand a concept. Matthew and Mason also described teacher care as teachers knowing the students whom they teach. Matthew further suggests that teachers need to know what motivates students as well as the challenges that students face. The participants value teachers who recognize that every student works at a different pace.

The research on students’ perceptions of teacher care supports the findings from this study. In 2000, Ron Ferguson, an economist, examined potential causal factors for the achievement gap at the secondary level at a suburban high school (Sparks, 2003). This study identified several differences in the perception of school between students of color and White students. One of the differences was the importance of teacher encouragement. According to this study, the majority of Black students explained that they put forth the most effort in classes where the teacher encouraged them. Encouragement was viewed as teachers taking the time to explain concepts as well as receiving positive affirmations from teachers. Teachers who were
viewed as encouraging did not create a classroom environment of power and control but rather of support. As a result of students’ perceptions of their teachers, the assignments or demands of teachers were viewed as harsh or supportive (Sparks, 2003; Ferguson, 2004).

Another study conducted by the Institute for Education in Transformation at the Claremont Graduate School in the early ‘90s also found that teacher-student relationships have a significant influence on students’ academic performance (Poplin & Weeres, 1994). This study found that there were differences in teachers’ and students’ views of care (Poplin & Weeres, 1994). Students’ definition of care tended to align with specific activities or interactions with teachers. For example, teachers who interacted with students, recognized achievements, were honest, and made connections with students and their parents were viewed as caring (Poplin & Weeres, 1994).

Teacher care was illustrated for Amber simply by her teacher inquiring about her life outside of the classroom. Amber believes that teachers need to value personal relationships with students because it serves as a motivational tool for students to perform well. Brandon had similar feelings and explained that he is more willing to seek assistance from teachers with whom he has a personal relationship. Teachers who take an interest in students create an environment where students are comfortable asking questions, making mistakes, and taking the risk in learning new knowledge. Caring teachers understand that in order for students to learn the content, it is necessary to develop meaningful interpersonal relationships with students. Lisa’s experience in math with her new math teacher shows the importance and influence of teachers interacting with students in a positive manner. Positive interactions affirm that teachers really do care and are interested in their students’ success.
Students want teachers who are willing to advocate and protect them. They are seeking teachers who notice gaps in their academic lives as well as their home lives. Too often teens are faced with difficult situations in and out of the classroom environment. They are in need of teachers who are willing to support and guide them through these situations. Ms. Jones is an example of both an advocate and protector. For one, Faith, Hope, and Charity all believe that she wanted them to succeed. Second, she was available to assist them, at school or home. Ms. Jones’s teaching responsibilities extended well beyond the classroom.

**Relationships Matter.** The data from this study illustrate the importance of relationships in the educational experiences of students. Buber (1923/1970) suggested that relationships cannot be one-sided; they require two individuals to be committed to the development of the relationship. Learning takes place within context of the relationship between teachers and students (Hall, 2014). If teachers or students are not willing to take the risk of developing positive relationships, learning is impeded. Camille and Samantha’s experiences within the mathematics classroom support the idea that learning is limited as a result of negative teacher–student relationships. Amber and Lisa’s experiences in the mathematics classroom also support the importance of positive teacher interactions.

Hall (2014) argues that the school environment is one where students construct their view about themselves and the world around them. Thus, the relationships and interactions that students have with teachers significantly influences how they critically examine themselves and the world around them. Hall (2014) referred to these interactions within the school setting as the “educational encounters” (Hall, 2014, p. 1). Educational encounters have the potential to empower or disempower; they have the potential to provide hope or validate a sense of hopelessness (Hall, 2014). Mason’s experiences in the mathematics classroom are
disempowering and negatively influencing his self-concept and self-esteem. On the contrary, Faith, Charity, and Hope’s teacher, Ms. Jones, empowers them to extend themselves within the mathematics classroom. The mathematics classroom, for them, is a place that encourages and provides hope. Faith, Charity, and Hope’s sense of empowerment and hope is not a result of the content of mathematics; rather, it is the result of their interactions with Ms. Jones, the teacher.

**Culturally responsive pedagogy.** Teacher care is an integral part of culturally responsive pedagogy (CRP). CRP as a framework requires teachers to know their students from various perspectives, including personally and culturally (Delpit, 2012; Gay, 2002; Ladson-Billings, 2009; Roberts, 2010). CRP is recognizing how students are influenced by their home life and community and using these influences to create a classroom that is supportive while, at the same time, extending students’ learning (Delpit, 2012; Gay, 2002; Ladson-Billings, 2009; Roberts, 2010). More importantly, this instructional approach focuses on using students’ assets instead of their deficits in the classroom (Boykins, 2011; Ladson-Billings, 2009; Gay, 2002). Teachers who engage in CRP have a vision of their students’ success and are on a mission to help them achieve that success.

Teacher care is essential in CRP because it transfigures the classroom from a place of insecurity to one of safety and security (Roberts & Irvine, 2009). CRP changes a classroom into a community of learners, where each child feels at home. Students in these classrooms are held to high expectations and are supported in meeting these expectations (Howard, 2001, 2003). As a result of this home environment, culturally competent teachers display characteristics of what Collins (1988) terms “other mothering” or warm demanders (Vasquez, 1988).

**Another mother.** The idea of a teacher or staff member serving as “another mother,” as Faith describes Ms. Jones, is also known as *other mothering*. Teachers who exhibit other
mothering characteristics have a personal dedication and commitment to their students. These teachers are, in a sense, adoptive parents for their students (Case, 1997). Other mothers in the classroom view teaching as a calling (Delpit, 2012). The act of other mothering requires teachers to nurture students socially, emotionally, and physically. The nurturing, however, often extends outside of the realm of the classroom (Case, 1997). Ms. Jones provided transportation to school, breakfast, and was available to students well after school hours for academic and emotional support.

Other mothers also have high expectations for their students and hold students accountable in a stern but loving manner (Case, 1997; Delpit, 2012). These teachers expect that students will meet and exceed their expectations, and they accept nothing less (Delpit, 2012). Faith, Hope, and Charity’s description of Ms. Jones illustrates that she had both of these characteristics. Students in Ms. Jones’s class regularly had challenging activities that required them to put forth their best effort. In addition, she held students to high standards with regard to their behavior. Other mothering is a characteristic that is most often associated with African-Americans teachers. However, the interactions between Ms. Jones and her students illustrates that this characteristic can also be demonstrated by other racial groups.

The role of trust. “A sense of trust, confidence, and psychological safety … allows students to take risks, admit errors, ask for help, and experience failure along the way to high levels of learning” (Deplit, 2012, p. 84). Trust is another essential part of teacher care. Trust between teachers and students is a necessary component for learning (Adams & Forsyth, 2013; Bryk & Schneider, 2002; Hoy & Tschannen-Moran, 1999). Trust allows teachers to gain students’ cooperation in the learning process (Hoy & Tschannen-Moran, 1999). Lack of trust in a teacher results in students’ engaging in self-protective behaviors, including disruptive behaviors
or disengagement (Gregory & Ripski, 2008; Klem & Connell, 2004). The data of this study suggest that it is important to consider the role of trust in examining the experiences of Black high school students. Teachers have the responsibility of changing these perceptions and creating an environment where students are comfortable with participating in the learning.

Several of the respondents often enter the mathematics classroom apprehensively due to previous negative experiences. In order to increase the mathematics achievement of Black high school students it is necessary to critically examine the learning environment of the mathematics classroom. Maslow (1945) asserted that human motivation is a function of a hierarchy of needs; the first of these needs is physical satisfaction. The second primary need is that of safety. For some of the respondents in this study, the mathematics classroom is not safe. It is a class where they are consistently forced to be on the defensive. The classroom experiences consist of students seeking ways to avoid being called out by teachers or laughed at by their peers. The mathematics classroom is a place that perpetuates negative feelings including frustration, anger, fear, and worthlessness within students. For Mason, the mathematics classroom causes a feeling of worthlessness from being laughed at by his peers, while the teacher looks at him with frustration because he did not correctly answer a question. The mathematics class for Camille and Samantha leads to feelings of frustration, anger, and suspicion of their teacher’s motives. Samantha’s frustration is a result of her teacher’s inability to explain the content so that she can understand it. In addition, she is angered by teachers who, she perceived, intentionally attempted to embarrass her.

Tschannen-Moran and Hoy (2000) suggested that distrust from either the teacher or student can result in either party being suspicious of the other’s actions. Hence, a simple question from a teacher to engage students in learning may be perceived as a personal attack. Bryk and
Schneider (2003) also concluded that a lack of trust could result in minor problems developing into larger conflicts. For this reason, a lack of trust in a teacher’s intentions and instructional approaches can promote students engaging in disruptive behaviors to protect themselves from embarrassment. Camille’s verbal altercation with her math teacher, after he asked her the same question multiple times, is an illustration of this. The teacher may have been trying to simply engage her in the learning activities; however, because she did not trust the teacher, she perceived his actions as a personal attack.

Trust in the classroom creates a space where students and teachers are willing to take risks (Bryk & Schneider, 2003). Learning opportunities in the classroom are an outcome of student engagement and interactions with their teacher, peers, and the content. Several of the participants do not believe that teachers are concerned about their best interests. This lack of safety demotivates students and results in a lack of trust between the teacher and student. Hence, students are not willing to take the risk of participating in the learning environment, leading to another opportunity gap. In this learning environment, students do not feel comfortable actively participating or asking questions of the teacher. This is illustrated through Brandon’s experiences in his Algebra 2 course, where he is unwilling to take the risk of asking questions in class. This is also evident in Calvin’s experiences in the mathematics classroom. Calvin feels more comfortable seeking help from various other resources rather than asking for assistance from his teacher.

It is also important to recognize that it takes time for trust to develop. Students do not trust teachers because they have the title of teacher but because they are invested in students’ success. Bryk and Schneider (2002) argued that the criteria of discernment for building trust are perception of competence, integrity, respect, and personal care. Samantha feels that her teachers
are not competent because they are unable to effectively explain difficult concepts and because of their lack of planning. Similarly, Camille believes that her math teachers are incompetent, as a result of her experience on the ACT exam. She also thinks that teachers purposely do not teach students in urban areas in the same manner that they would in suburban areas. Faith, Hope, and Charity’s experiences within their high school promotes distrust of the school system overall. They believe that administrators and teachers do not do what they say they are going to do. As high school seniors, they do not have a math class, although they know they should. Talking to central administration clarifies the requirement but provides no solution to their problem. They also should be taking college level courses this year; however, again the bureaucracy of public education prevents this dream from being realized. Several of participants’ experiences in the mathematics classroom illustrate that teachers do not value the knowledge, skills, and experiences that students bring to the classroom.

Mathematics Is Impersonal

For many students in this study, mathematics is viewed as irrelevant, boring, and isolating. Their teachers’ instructional approaches tended to focus only developing students’ understanding of the process of mathematics and not the application of math in real life contexts. More importantly, some of the students perceived mathematics as an abstract concept that had no connection to their lives. Math was boring. In order to understand how instructional practices can be improved, it is important to examine the students’ experiences in the mathematics classroom from each of these perspectives. The following pages examine the students’ experiences in the math classroom from three different perspectives: boring, irrelevant, and isolating.

The National Council of Teachers for Mathematics (NCTM, 2014) argues that effective teachers of mathematics assist students in developing mathematical understanding by facilitating
productive mathematical discussions that allow students to analyze and compare the responses of their peers. It is through these discussions that students are able to develop and extend their current understanding of mathematical concepts (Stein, 2007).

The data support the theory that a lack of student engagement and discussions in the classroom results in students feeling disrespected. Faith and Hope feel disrespected by the meaningless assignments given by their physics teacher. According to Fallis and Opotow (2003), students in urban settings chose to miss class because they perceived the teacher’s instructional approach as disrespectful. Moreover, students felt that either the instruction did not relate to their lives or that their needs in the classroom were ignored. Furthermore, the study suggested that students disengaged when they perceived that a teacher was not willing to engage in meaningful instruction with students. Camille argues that mathematics would be understandable if it were related to their daily lives. Amber’s description of her teacher the previous year is also an example of disrespectful teaching. The teacher lectured daily without regard for students’ disengagement from the class. Mora (2011) examined the engagement of middle students as a result of their instruction and curriculum and found that math was the least engaging in cases where students worked silently on worksheets or took notes for lectures. All of the participants in this study have had experiences with the traditional mathematics classroom protocol. The protocol consists of a doing a warm-up assignment, reviewing homework, listening to a lecture and taking notes, and working independently on homework due the following day. The instructional protocol ignores students’ interests and learning styles.

Amber was the only participant who described a classroom environment that required exploration of new topics and mathematical discussions among students. Faith, Hope, Charity, and Lisa described interactive activities and games within the mathematics classroom. The
participants’ portrayals of the mathematics classroom are noticeably different when they are allowed to interact with the teacher and peers. Amber suggested that she learns more in the class when she investigates new topics, instead of the traditional lecture. Lisa was excited about her new teacher and the teacher’s interactions with the class. Faith, Hope, and Charity suggested that mathematics was their favorite class, and they were motivated to perform well in the course. Mathematics classrooms that the participants enjoyed were those that provided activities that were interesting and allowed them to engage in conversations with their peers.

**Lack of connection.** The participants’ experiences also suggest that mathematics instruction seems to focus on the teaching mathematical procedures without considering its application to students’ personal lives. Hence, students feel that mathematics has no connection to their lives. Since Calvin is a student athlete, a connection to his actual basketball statistics would have provided a real life application, yet his teacher failed to make this connection. *Impersonal* also refers to a lack of connection to students’ lives from a cultural perspective. Students like Camille are yearning for mathematics teachers to present information in a context they can relate to. The lack of relevance to students’ lives provides the opportunity for disengagement. Barbalet (1999) described this experience as boredom. Boredom, as defined by Barbalet (1999), is “an absence of meaning in an activity or circumstance” (p. 1). She further stated that the mathematics classroom fails to engage students’ interest and inquiry and hence has no meaning to students’ daily lives. As a result, most of the students did not understand the purpose of mathematics in a real-life context, other than its being a graduation requirement.

Likewise, Calvin characterized his AP statistics course as boring, although his teacher did try to make the class fun. He said, “My stats [teacher], he’s more outgoing. He’s more fun. Like he’ll tell jokes at the end of the class, but like the class, in general, is kind of boring.”
focus group participant, explained how he had difficulty staying awake in math class: “Um, sometimes I like sleep in [math] class. Not pay attention, but I still got … the notes and the materials and I would stay after school and still try to get the extra bit.”

**Conclusion**

The students’ narratives illustrate that race and the perception of racism significantly influence students’ actions within the classroom. Students engage in protective factors through disruptive behavior or disengagement as a means of protecting their own self-concepts. Additionally, students seek teachers who hold them to high expectations and display care. Students’ perception of teacher care is another predictor of students’ engagement in the learning process. Moreover, students are not interested in mathematics because teachers do not connect the content to their lives. The following chapter further examines the potential implications of this study as well as opportunities for further research.
Chapter 7: Discussion and Implications for Further Research

“[It is necessary] to critically examine the relationships between race, racism, Whiteness, and teaching and learning” (Carter Andrews, 2012, p. 38).

A critical examination of the relationship between race, racism, instruction, as well as, socioeconomics and student achievement is a complex and lofty task for educators and policymakers, yet it is essential. Although this study does not allow for overarching generalizations about the experiences of all Black high school students, it does provide an alternative viewpoint of the high school experience for Black students, a point of view that needs to be considered. This study provides a window into how Black students interact with their peers and teachers in high school and the outcomes associated with these interactions.

The intersectionality of race and class within the high school setting is apparent within this study. Students attending schools in more affluent areas, had more access to social capital, resulting in more educational opportunities. Students like Amber and Calvin, not only had access to a higher lever mathematics curriculum, they also had access to an African American parent network that supported them. The parent network provided additional social capital, allowing them to obtain tutoring services, emotional and social support, as well as tools for how to navigate the schooling terrain of a predominately White environment. Suburban Black students also acquired social capital, because of their interactions with people from different cultures. Their interactions with their peers from various ethnicities, allowed them to develop relationships and build trust with diverse groups of individuals, thereby expanding their social network. Also, Black suburban students enhanced their knowledge of the acceptable norms of White society, through their daily interactions with their White peers. These interfaces provided them with an advantage over their Black peers in urban areas, whose access to different racial
and ethnic groups is limited, as a result of the racial isolation within urban schools. Income level influence students’ social networks that students can access, and therefore, income level also affects students’ academic outcomes.

The key component of critical race theory (CRT) is that race and racism are mainstreamed into every institution of our society. The effect of race and racism was prevalent, in both predominately Black schools, as well predominately White schools. Race and racism were consistent factors in both urban and suburban schools, but they were unmasked differently based on the school environment. The students' stories suggest that racism is displayed more blatantly in urban schools. Students in urban schools more often felt personally attacked by teachers, and less supported in the classroom.

The respondents' in suburban schools, however, shared how their parents actively advocate for an equitable learning environment for their children. Parents in urban settings may not have the same tools to be able to advocate for on their children's behalf effectively. Similarly, Black parents in urban areas may also be intimidated by the schooling environment, particularly if they struggled in school.

In suburban schools, the unveiling of racism is in the over acknowledgment of Black students’ high performance or the excessive placement of Black students in the lower mathematics course. It is also evident in Black students’ perception of being viewed as troublemakers by administrators and teachers. In suburban school, there is a tendency to create a color-blind environment, which fails to acknowledge the value that children of color bring to the classroom. In creating a color-blind environment, Black students are forced to deny their unique identity, assimilating or attempting to blend in with their White peers.

The participants’ narratives also give a counter-narrative to the notion that America is the
land of equal opportunity, given the stark differences between students in urban and suburban areas. Also, it provides a counter-narrative to the depiction of Black urban teens as deviant or “bad” students. The narratives of the participants suggest that students’ disruptive behavior is at times a direct response to teachers’ actions. The respondents’ stories indicate that students are motivated to perform well when their teachers display care and concern for their well-being. Teachers like Ms. Jones become another mother, setting high expectations while supporting students along the way. Students’ behavior is also reflective of a failed educational system that consistently does not meet the needs of students. Moreover, the stories of the respondents provide a lens into Black teens characterize Blackness. Black teens’ view of what it means to be “Black” influences how they handle microaggressions and stereotypes within the classroom environment and their perceptions of their peers.

**Burden of Being Black**

Black students face a daily burden within the school environment, whether they attend a suburban or urban school. However, the weight of this burden differs based on the geographical location of their school. The respondents’ narratives support previous research that argued that one’s access to education is a dependent on his or her school’s zip code. Attending a low-income urban high school limits a student’s access to higher-level mathematics and rigorous coursework (Ferguson, 2004; Kozol, 1991; Martin, 2012). Also, at many urban schools, students perceive that the education system intentionally fails to prepare them for college success. Moreover, urban students face with more blatantly offensive classroom and school environments. Students in suburban settings, on the other hand, have more access to higher-level coursework, specifically in mathematics. Although more covert, suburban students also have the burden of dealing with microaggressions from their teachers and their peers. This study provides additional research on
the tense and stressful learning environments that Black students face.

**It’s not the same.** If Black students do not have the same opportunities to learn the material, and if they have to combat a more stressful learning environment than their White peers, is it fair to suggest there is an achievement gap? Is it possible that, if Black students were not forced to navigate a schooling environment plagued by low expectations, deficit thinking, and racial stereotypes, they would perform at the same level as their White counterparts? The achievement gap reinforces the notion that Black children are beneath their White counterparts and further perpetuates deficit thinking and low expectations for Black students. The achievement gap fails to consider the circumstances that influence students’ opportunities to learn. To accurately compare the achievement performance of racial groups, students must have similar opportunities to learn and learning environments. The Black-White achievement gap is, therefore, an erroneous portrayal of Black students’ academic performance.

Data on the Black-White achievement gap has been collected since the early 1900s (Fishback & Baskin, 1991). The question is the following: What is the primary goal of identifying the Black-White achievement gap? If the purpose of identifying the gap is to help society understand that racial groups perform differently, to provide alternative instructional strategies to increase the success of all, we have failed. The achievement gap data have accomplished little in providing poor Black students an equal opportunity to learn. If the goal is to perpetuate deficit thinking about Black students and their academic abilities, then we have succeeded. The achievement gap data are useless if we are not willing to recognize and adjust the different learning environments that students are exposed to.

Black students in urban and suburban areas are plagued with a variety of struggles that are a result of their race. Low expectations, lack of teacher care, and microaggressions are
constant in the experiences of Black students. The task of avoiding and dealing with microaggressions is a daily experience. In order to suggest that there is a difference in the academic performance of Black and White students, it is necessary to consider the school factors that contribute to their performance. It is necessary for educators to take a closer look at the learning environments before suggesting there are achievement gaps. Are there gaps? Yes, there are gaps in Blacks students’ access to rigorous mathematics. There are gaps in Black students’ access to constant highly qualified teachers. There are gaps in students’ access to culturally competent teachers. There are gaps in access to learning environments that value difference.

This study builds on the work of Milner’s (2012) opportunity gap framework; it is a moral imperative for schools to analyze the ways in which opportunity gaps exist critically. It is necessary for schools to have honest discussions with teachers and administrators about race, racism, and classroom biases to foster learning environments that embrace all students. The discussions of race and racism also need to take place with students, families, and the community.

**The Discussion of Black Is…White Is…**

Interwoven within the urban or suburban high school experience is the racial identity of Black students. Black children in urban settings are vilified, portrayed as uncontrollable, rude, and disruptive. The experiences of the Black urban students in this study illuminate the fact that students are, at times, faced with teachers who openly degrade them as individuals and as a collective group. The teachers described by several of the students had low expectations for their academic success. Furthermore, they have teachers who do not know how to unpack the content so that students can understand it. Additionally, teachers do not make the content relatable to the students’ daily lives, so that it is meaningful for them. In response to teachers’ blatant disrespect,
lack of care, and instructional skills, students fight back by disengaging from learning and displaying disruptive behaviors.

Urban Black students are in a constant struggle to be respected by their peers and teachers. Black students in suburban areas also have to negotiate acceptance from both their peers and teachers carefully. For some it is easier to ignore the racial differences and pretend that they do not influence their daily experiences, while other Black students find it easier to become invisible, not asking questions in class and limiting participation within the classroom environment. Low expectations are again the norm for Black students. Thus, Black high achievers are noticed by their teachers and peers as being an exception to the stereotypical Black student. Black males in suburban areas are vilified to be trouble-makers; thus, Black male students have to avoid excess attention to prevent disciplinary action strategically.

Open to a different way. Mathematics teachers, in particular, have to consider different instructional approaches that will help students master the content and engage them in the learning. Desk arranged in columns and rows, and 30-40 minute lectures where students take notes and are not actively involved in the learning, is not meeting the needs of students. Hence, we have to seek out different ways to provide students with meaningful instruction. As educators, we have to consider what is the primary goal of our instruction is. Is it simply to provide information? Or is it to help students master the information? We also have to consider the role that we play in shaping students’ views about mathematics. Students have a dislike for mathematics, often because they do not recognize its value to their daily lives. Also, they do not feel a connection to their teachers and peers within the classroom. As Amber stated, “Math is impersonal.” Students want and need to have a link to a subject for it to have value in their
minds. We as mathematics educators must be conscious of this and consider how to make the course relevant to students’ daily lives.

**Student Agency—The Bad Student**

It is also imperative that teachers and administrators critically examine the students’ adverse actions in the classroom. As this study illustrates, at times students’ behaviors are in response to teachers’ and classmates’ negative behavior towards them. Teachers must create a supportive environment for all students for any learning to take place. Hence, we must hold ourselves to a high level of control and be sensitive to students’ individual circumstances. Embarrassing students by attacking their home environments, race, or academic performance is unacceptable. Moreover, these actions destroy trust and disengage students from the learning process. Administrators also have a responsibility to appropriately address students’ and parents’ concerns regarding teachers’ inappropriate behavior as well. The narratives of the experiences of the inner city students, in particular, provide a counter-narrative to the idea of “bad” students. Many times students’ negative behavior was an intentional response to a teacher’s rude and inappropriate attack. The negative behavior of students was a means for students to display their sense of agency. Moreover, it was a means for students protect their self-worth. Perpetual attacks on students and their peers result in students developing their sense of collective agency, resulting in a peer-oriented collective agency. This peer-orientated collective agency provides support and validation that kids seek. As teachers, perhaps we should reflect on how our actions or inactions create a negative culture of learning. How do our behaviors facilitate students’ disengagement? Do we have relationships with students? Do we recognize their struggles in and outside of the classroom and how they influence students’ opportunity to learn?
Social Funding and Its Influence on Educational Opportunities

The influences of social capital and race on students’ opportunity to learn mathematics were evident in the experiences shared by the respondents. As discussed in the literature review, poverty dramatically limits an individual’s social capital. Students in urban areas did not identify an individual who would or could actively advocate on their behalf. Faith and Charity shared that parents have complained about teachers and the conditions of their school, but their complaints are ignored, and nothing changed. Inner-city Black students did not perceive that their parents were empowered to demand changes to improve their opportunities to learn. The lack of power that Black parents in urban district have is an illustration of their lack of social capital within the network of education.

A comparison of Black students’ experiences in suburban and urban schools also illuminates glaring disparities in opportunities. Suburban schools tend to have lower class sizes, reduced rates of teacher turnover, and consistently highly qualified teachers. There also tends to be more financial support for schools in suburban areas. In 1994, the state of Michigan passed Proposal A, with the hope of equalizing school funding for all schools in the state. Proposal A changed the funding of public schools from one primarily supported by local communities to one funded mainly by the state. The legislation now limits the amount of money that local communities can contribute to school funding, except for funds related to maintaining or enhancing buildings. State funding, in theory, covers all of the instructional cost of educating Michigan students. According to Zimmer and Jones (2005), state funding covers less than 5% of the debt that district accumulate. Funds are distributed based on pupil counts during the fall and spring. The funding does not account for additional funds for special education or bilingual education needs.
Proposal A also allowed for the development of public school academies, also known as charter schools. Charter schools are viewed as a means to provide more accountability, parental choice, and increased student achievement (MAPSA, 2011), particularly for students in low-income school districts. As a result of charter schools, student enrollment in public school districts decreased across the state. The decreasing enrollment led to reduced state funding, resulting in some school districts becoming financially unstable (Arsen, DeLuca, Ni, & Bates, 2015).

In 2011 Public Act 4 (PA 4), the Local Government and School District Accountability Act, passed. PA 4 provides the governor with the authority to take over school districts with negative fund balances (Arsen et al., 2015; Bowman, 2012). Schools taken over by the state have a governor-appointed emergency manager (EM) who oversees all of the district’s daily financial and instructional operations and expenditures (Arsen et al., 2015; Bowman, 2012). At the EM’s discretion, union contracts are renegotiated, the district is restructured, and academic programs are reevaluated. Under this legislation, local school boards have no authority (Bowman, 2012). Two years later, in 2013, Public Act 96 was implemented. This law provides the governor with the power to dismantle a school district if it is deemed that maintaining the district in financial stability is no longer feasible (Arsen et al., 2015). The most recent law, Public Act 109-114 (PA 109-114), passed in 2015. This law requires districts to show that they are financially stable for two school years; schools that cannot show financial stability are in danger of a state takeover. Since the implementation of PA 4 in 2012, more than 50 districts have had a negative fund balance; however, only three school districts have been taken over by the state, and two districts have been dismantled (Arsen et al., 2015). All five of the school districts are in urban centers with student populations that are predominantly Black (Arsen et al., 2015).
Although there is more equity among Michigan districts about funding, there are still some school districts that receive additional funds (Michigan Department of Education, 2016; Arsen et al., 2015). However, since funding does not account for the higher costs related to special education and bilingual students, urban schools still have less money (Arsen et al., 2015). Student enrollment is the sole determinant of state funding. Since the implementation of Proposal A, the enrollment in public schools in low-income areas has decreased. The decline in enrollment is a function of the implementation of charter schools and schools of choice within the state. Urban districts, therefore, are forced to manage with significantly fewer funds (Arsen et al., 2015).

Less funding results in higher class sizes, fewer resources, and uncertain work environments, where teachers are steadily looking for more stable working conditions. High teacher turnover is, therefore, the norm. All of the participants of this study who attend a public urban high school are in a school district that has an EM. The EM has cut academic programs and combined schools, including Rise Up @ Lincoln High. The educational implications of these cuts are apparent in Faith, Charity, and Hope’s description of their learning environments. Teachers are no longer vested in students’ academic achievement. Central office administrators, building administrators, and counselors focus on maintaining the core operations of the school instead of ensuring academic achievement.

Analyzing Michigan school reform using a critical race theory lens. In analyzing Michigan school reform policies over the past decade through a CRT lens, several of the tenets of CRT are illuminated. The first tenet is that racism is an institutionalized mainstay within American society. Although there were approximately 50 schools with a negative fund balance at the implementation of PA 4, all of the schools that were dissolved or taken over are Black urban
schools. Since the state began oversight of these schools, none of them has shown dramatic improvements in academic achievement (MI School Data, 2015). The three school districts under state authority primarily serve Black students; hence, these children are provided with learning environments with limited resources, higher class sizes, and high teacher turnover rates. As a result, Black inner city students’ opportunities to learn are impeded. Black students in Michigan urban areas do not have equal access to education. The recent school reforms in Michigan have further empowered White privilege within the state.

The second tenet of CRT is that laws are interest-convergent—in other words, legislation that is supposed to improve the lives of Black people have an inherent benefit for White people (Bell, 1992). Proposal A was presented as a law that would provide equity in the school funding of public schools. However, without accounting for students with special needs or bilingual students, the funding remains unequal, and poor Black districts have limited resources to increase their fund balances. The state of Michigan has also increased the number of charter schools in the inner city, developing competition for students in inner city schools. Thus, instead of pooling resources collectively, money for schools is disbursed to various schools. The result is a lower quality education for Black children.

The structure of schools for Black students in urban areas, in particular, is a set-up for failure. Based on the respondents’ experiences, students in urban schools are not given equitable opportunities to learn.


**Recommendations**

To appropriately address the Black-White achievement gap, it is necessary for society to recognize that not all students are provided with the same opportunity to learn. It is imperative that we as a society understand the “burden of being Black” and how that burden is reflected within the classroom environment. Moreover, it is essential for schools to acknowledge the role of race and racism within our society and its potential influence on classroom environments. This acknowledgment requires frank conversations about race and racism among educators, parents, students, community members, and policymakers.

Educators must critically examine the school and classroom environments through the lens of race and racism. Teachers have to scrutinize their adaptive unconsciousness or the beliefs and biases that they bring the classroom environment (Teel & Obidah, 2008). Hence, there is a need for additional professional development for teachers to help them to recognize their bias and develop a reflective practice to change and enhance their instructional practice.

Professional development on the influence of project-based learning and culturally responsive pedagogy is also essential for teachers. Most of the students in this study did not understand how mathematics connected to their lives. Mathematics was viewed as a set of procedures and thus was impersonal. Teachers are tasked with making math meaningful to students. For math teachers to make connections and meaning to students’ lives, they have to know their students. Thus, it is first important that teachers know how to build relationships with Black students. Teachers cannot make assumptions students and their families. Building relationships with students require teachers to learn about their students and their families. Mathematics teachers specifically need training on how to teach mathematics in a culturally responsive manner.
The students’ stories of the math classroom also highlight a need for teachers to be trained on how to unpack the meaning behind the various procedures in mathematics appropriately. Too often math teachers have a good understanding of the processes associated with mathematics, but they do not know how to break down those procedures so that students can understand the material. Moreover, students often learn the procedures for completing a problem and do not have a conceptual understanding of the process. As a result in students having a limited knowledge of the content. This limited understanding becomes apparent in their low performance on standardized assessments. It also results in students being disconnected from mathematics, because the material lacks meaning within their reality.

Most the participants’ descriptions of an ideal teacher, met a standard level of a teacher’s professional responsibility. Black students want teachers who will set high expectations, but who will also help them to achieve these expectations. Their frustration with the school is that too often they feel that they are not supported within the classroom. Black students, in particular, do not want to be plagued by stereotypes about their behavior and abilities. They should not have to be hypersensitive about their behavior, dress, or classwork not fitting a particular stereotype. The respondents’ narratives also illustrate the need for mathematics teachers to establish personal relationships within the learning environment. Students want teachers to respect and value who they are and the knowledge that they bring to the classroom. They want teachers to display a genuine sense of care about their well-being. Black students feel that mathematics is impersonal, in part because teachers to not engage students in the learning. The teacher is viewed as the sole source of knowledge, and students are not allowed to contribute. As a result, students disengage and find no value to in the learning. Teachers have to find ways to learn about each of their
students on a personal level, as well as the community. By learning which students are, teachers can identify specific aspects of their lives that are connected to mathematics.

**Empowering students.** Students need to be provided with the opportunity to have their voices heard. Peer support groups are one way that youth can assist each other in navigating racialized learning environments. Cowie and Wallace (2000) argue that peer support groups, in general, can offer emotional support, conflict resolution, and a listening ear for students. Student lead support groups provide an effective means for students to express their concerns, in addition to identifying productive strategies to manage difficulties within the classroom. It also is a tool to empower students (Cowie & Wallace, 2000), to become advocates for themselves and their peers.

Students also need to be provided the opportunity to serve as mediators between students and teachers. This mediation could be in the form of a panel discussion of students and school staff members. By allowing students to participate in the mediation process, students are permitted to have a voice in the resolution of classroom issues. Students provide a different view for understanding the issue within the classroom, that adults may not have.

Similarly, there is also a need for Black students to have the opportunity to discuss their concerns with directly with administrators. Administrators have to recognize the value of Black students’ voices about their learning environment and to take appropriate action to ensure that a school is a welcoming place for all students. It is necessary that school employees recognize that their primary goal is to unlock students’ potential and to help them discover the world from a different perspective. As educators we also have to teach students to advocate for themselves and others in the face of injustice; this only is accomplished by engaging them in the process.
Students are the experts on the perceptions of the classroom reality. As educators, we need to listen and value their opinions and to change our approaches to best meet students’ needs.

There is also a need for Black students to have an advocate within schools. This advocate would be someone Black students can talk with to discuss their concerns with teachers and staff. The primary goal of the advocate is to help Black students manage microaggressions within the classroom environment. The advocate would also have the responsibility of meeting with teachers and staff to mitigate conflict between Black students and educators. The advocate would empower Black students and provide a productive alternative for addressing the racism within the classroom environment.

Structural changes are an integral part of abolishing the “achievement gap.” American classrooms are largely under-resourced. Teachers are in general are not valued within our society. As a result, teachers are often underpaid, and plague with classroom environments. Many teachers are required to purchase materials for their classrooms, including posters, pencils, paper, and other necessary instructional resources, without any reimbursement from their schools.

Urban schools, in particular, are often plagued by large classroom sizes and limited instructional resources. Teachers are in urban schools are often underpaid, yet they are often faced with more significant challenges. Students often enter the classroom with a variety of emotional and social issues that must be appropriately addressed, before a lesson being taught. High student achievement is expected, yet there are limited tools provided to help teachers achieve this goal. Moreover, teachers are provided with little or no compensation for a job well done. As a result, urban schools tend to have high teacher turnover rates.
The recommendations presented are key to creating an equal playing field to measure an achievement gap. Additionally, these recommendations have the potential to increase academic performance of Black students. Below is a summary of the recommendations:

- Schools need to have an open dialogue about the impact of race and racism within the school environment with all stakeholders (students, parents, community members, teachers, and policymakers).
- Educators need to critically examine their experiences and biases and how those biases are evident in the classroom.
- Black students need to have access to an advocate who will help them navigate the racialized environments of schools.
- Black Student Peer Support Groups
- Black students also need to have the opportunity to have their voices heard by administrators regularly.
- Mathematics teachers need to develop personal relationships with their Black students intentionally.
- Professional development for mathematics teachers focused on cultural responsive mathematics pedagogy
- In Michigan, a review of the school funding model is also needed to increase the academic performance of all students.

**Conclusion.** The goal of this study was to understand the lived worlds of Black high school students in the mathematics classroom. The interviews and focus group discussions illuminate the challenging experiences that Black students have to travel through, for an education. The school is not always a welcoming and supportive place for all students. This
study also displays the positive influence that teachers can have on students when they show genuine care and concern for students’ well-being.

As a high school mathematics teacher, I have personally witnessed the importance of establishing a connection with students in the mathematics classroom. Students want to know that you care more about them individually than the content that is being taught. Additionally, like several of the students in this study discussed, educators have to identify strategies to make mathematics more interactive and engaging for students. High school students, like elementary school students, need more hands-on activities that make math more relatable.

**Further research.** There is a need for further research into the experiences of Black high school students. This study was limited by the low number of participants; hence, the study should be repeated to expand the perspective of Black students’ experiences within the mathematics classroom. A comparative study of the experiences of Black high school students to those of White high school students addresses a secondary limitation of this study. There is also a need for further examination of the experiences of Black male high school students, whose experiences appear unique from their female counterparts. It is also necessary to examine teacher preparation programs for secondary mathematics. Manipulatives and hands-on activities are often used in the elementary classroom. The question then is: are there teaching strategies from the elementary teacher programs that many be useful for secondary mathematics classroom?


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Appendix A

Student Consent Agreement

UHSRC # 140705

Brief Information
I am a doctoral student in the Educational Studies Doctoral Program at Eastern Michigan University. My dissertation is an interview and observation-based qualitative research study in which I explore teachers’ and African American students’ perceptions of the mathematics classroom. The study involves a focus group discussion and two interviews. Participation in the study is completely voluntary and you will be assured of complete confidentiality if you choose to participate.

Benefits of the Project
This research project will allow me to satisfy the requirements for the completing the doctorate program at Eastern Michigan University. In addition it will provide me with the opportunity to enhance my research skills and reflect on my own instructional practices. The benefits to you as participant may be an opportunity to assist mathematics teachers in improving their practice. There are no foreseeable risks to participating in the project.

Dissemination of Results
Findings from the research project will be published in the Eastern Michigan University Library. If you would like to see the final report, a copy will be sent to you as well. The findings may be written up for presentation at the Graduate Research Fair at Eastern Michigan University, or used in later professional presentations at Conferences or submitted for publication. Any dissemination of findings will be anonymous and complete confidentiality will be ensured.

If you would like to participate in the research study, please read and sign the consent form on the following page:

I agree to participate in a focus group discussion and two interviews conducted by Jennifer Banks as part of a research study examining the experiences of African American students within the mathematics classroom. I understand that the focus group discussion and interview(s) will last approximately 60 minutes and will focus on students’ interactions and experiences within the mathematics classroom.

I understand that my participation in the focus group and interview(s) is completely voluntary; I may withdraw and discontinue participation at any time with no negative consequences, no penalty, nor loss of benefits. I further understand that my confidentiality will be protected at all times and that a fictitious name will be assigned to me after the observations are completed, and that any identifying characteristics about me or my family will be deleted. The notes from the observation will be assigned a numerical code and kept in a locked filing cabinet in – at Eastern Michigan University, 314N College of Education, Ypsilanti MI 48197 and in a password protected computer file. I further understand that if I decide at any point after the observation(s) or interview(s) that I do not wish to participate, the notes will be destroyed and no material will be used from the observation.

I agree to allow these confidential research findings from my observation(s) and interview(s) to be anonymously disseminated with my confidentiality fully protected at all times, in Eastern Michigan University presentations and/or disseminated in future publications, conferences, and professional settings.
Student Respondent’s Name: ________________________________________________

Signature: ________________________________   Date: __________________

For further questions or concerns, please contact:
Jennifer Banks
Doctoral Student in Educational Studies
2120 Woodrow Wilson
West Bloomfield, MI 48324
(248) 701-7835
jbanks6@emich.edu

OR contact the Course Professor
Dr. Ethan Lowenstein
Doctoral Program in Educational Studies
314N College of Education
Eastern Michigan University
Ypsilanti MI 48197
Tel: (734) 487-3260
ethan.lowenstein@emich.edu
Parental Consent Agreement

UHSRC # 140705

Brief Information
I am a doctoral student in the Educational Studies Doctoral Program at Eastern Michigan University. My dissertation is an interview and observation-based qualitative research study in which I explore teachers’ and African American students’ perceptions of the mathematics classroom. The study involves a focus group discussion and two interviews of high school students. Students’ participation in the study is completely voluntary and you will be assured of complete confidentiality if you choose to participate.

Benefits of the Project
This research project will allow me to satisfy the requirements for the completing the doctorate program at Eastern Michigan University. In addition it will provide me with the opportunity to enhance my research skills and reflect on my own instructional practices. The benefits to you as participant may be an opportunity to assist mathematics teachers in improving their practice. There are no foreseeable risks to participating in the project.

Dissemination of Results
Findings from the research project will be published in the Eastern Michigan University Library. If you would like to see the final report, a copy will be sent to you as well. The findings may be written up for presentation at the Graduate Research Fair at Eastern Michigan University, or used in later professional presentations at Conferences or submitted for publication. Any dissemination of findings will be anonymous and complete confidentiality will be ensured.

If you would allow your child to participate in the research study, please read and sign the consent form on the following page:

I agree to allow my child ____________________ to participate in a focus group discussion and two interviews conducted by Jennifer Banks as part of a research study examining the experiences of African American students within the mathematics classroom. I understand that the focus group discussion and interview(s) will last approximately 60 minutes and will focus on students’ interactions and experiences within the mathematics classroom.

I understand that my child’s participation in the focus group and interview(s) is completely voluntary; I or my child may withdraw and discontinue participation at any time with no negative consequences, no penalty, nor loss of benefits. I further understand that my confidentiality will be protected at all times and that a fictitious name will be assigned to my child after the focus group and interviews are completed, and that any identifying characteristics about my child or my family will be deleted. The notes from the focus group and interviews will be assigned a numerical code and kept in a locked filing cabinet in – at Eastern Michigan University, 314N College of Education, Ypsilanti MI 48197 and in a password protected computer file. I further understand that if I decide at any point after the focus group and interview(s) that I do not wish for my child to participate, the notes will be destroyed and no material will be used from the observation.

I agree to allow these confidential research findings from my child’s participation in the focus group and interview(s) to be anonymously disseminated with my confidentiality fully protected at all times, in Eastern Michigan University presentations and/or disseminated in future publications, conferences, and professional settings.
Child’s Name:_________________________________________________________

Parent’s Name: ______________________________________________________

Parental Signature: ___________________________________________ Date: ____________

For further questions or concerns, please contact:
Jennifer Banks
Doctoral Student in Educational Studies
2120 Woodrow Wilson
West Bloomfield, MI 48324
(248) 701-7835
jbanks6@emich.edu

OR contact the Course Professor
Dr. Ethan Lowenstein
Doctoral Program in Educational Studies
314N College of Education
Eastern Michigan University
Ypsilanti MI 48197
Tel: (734) 487-3260
ethan.lowenstein@emich.edu
Confidentiality Agreement

MUTUAL NON-DISCLOSURE AGREEMENT

This Agreement is made and entered into as of the last date signed below (the “Effective Date”) by and between, a Key2Success corporation having its principal place of business at Coral Springs, FL. and Jennifer Banks,

WHEREAS Jennifer Banks and the Second Party (the “Parties”) have an interest in participating in discussions wherein either Party might share information with the other that the disclosing Party considers to be proprietary and confidential to itself (“Confidential Information”); and

WHEREAS the Parties agree that Confidential Information of a Party might include, but not be limited to that Party’s: (1) interview recordings (2) participants’ names; (3) participants’ location or (4) participants’ school or other related information.

NOW, THEREFORE, the Parties agree as follows:

1. Either Party may disclose Confidential Information to the other Party in confidence provided that the disclosing Party identifies such information as proprietary and confidential either by marking it, in the case of written materials, or, in the case of information that is disclosed orally or written materials that are not marked, by notifying the other Party of the proprietary and confidential nature of the information, such notification to be done orally, by e-mail or written correspondence, or via other means of communication as might be appropriate.

2. When informed of the proprietary and confidential nature of Confidential Information that has been disclosed by the other Party, the receiving Party (“Recipient”) shall, refrain from disclosing such Confidential Information to any contractor or other third party without prior, written approval from the disclosing Party and shall protect such Confidential Information from inadvertent disclosure to a third party using the same care and diligence that the Recipient uses to protect its own proprietary and confidential information, but in no case less than reasonable care. The Recipient shall ensure that each of its employees, officers, directors, or agents who has access to Confidential Information disclosed under this Agreement is informed of its proprietary and confidential nature and is required to abide by the terms of this Agreement. The Recipient of Confidential Information disclosed under this Agreement shall promptly notify the disclosing Party of any disclosure of such Confidential Information in violation of this Agreement or of any subpoena or other legal process requiring production or disclosure of said Confidential Information.

3. All Confidential Information disclosed under this Agreement shall be and remain the property of the disclosing Party and nothing contained in this Agreement shall be construed as granting or conferring any rights to such Confidential Information on the other Party. The Recipient shall honor any request from the disclosing Party to promptly
return or destroy all copies of Confidential Information disclosed under this Agreement and all notes related to such Confidential Information. The Parties agree that the disclosing Party will suffer irreparable injury if its Confidential Information is made public, released to a third party, or otherwise disclosed in breach of this Agreement and that the disclosing Party shall be entitled to obtain injunctive relief against a threatened breach or continuation of any such breach and, in the event of such breach, an award of actual and exemplary damages from any court of competent jurisdiction.

4. The terms of this Agreement shall not be construed to limit either Party’s right to develop independently or acquire products without use of the other Party’s Confidential Information. The disclosing party acknowledges that the Recipient may currently or in the future be developing information internally, or receiving information from other parties, that is similar to the Confidential Information. Nothing in this Agreement will prohibit the Recipient from developing or having developed for it products, concepts, systems or techniques that are similar to or compete with the products, concepts, systems or techniques contemplated by or embodied in the Confidential Information provided that the Recipient does not violate any of its obligations under this Agreement in connection with such development.

5. Notwithstanding the above, the Parties agree that information shall not be deemed Confidential Information and the Recipient shall have no obligation to hold in confidence such information, where such information:

(a) Is already known to the Recipient, having been disclosed to the Recipient by a third party without such third party having an obligation of confidentiality to the disclosing Party; or

(b) Is or becomes publicly known through no wrongful act of the Recipient, its employees, officers, directors, or agents; or

(c) Is independently developed by the Recipient without reference to any Confidential Information disclosed hereunder; or

(d) Is approved for release (and only to the extent so approved) by the disclosing Party; or

(e) Is disclosed pursuant to the lawful requirement of a court or governmental agency or where required by operation of law.

6. Nothing in this Agreement shall be construed to constitute an agency, partnership, joint venture, or other similar relationship between the Parties.

7. Neither Party will, without prior approval of the other Party, make any public announcement of or otherwise disclose the existence or the terms of this Agreement.

8. This Agreement contains the entire agreement between the Parties and in no way creates an obligation for either Party to disclose information to the other Party or to enter into any other agreement.

9. This Agreement shall remain in effect unless otherwise terminated by either Party giving notice to the other of its desire to terminate this Agreement. The requirement to protect Confidential Information disclosed under this Agreement shall survive termination of this Agreement.
IN WITNESS WHEREOF:

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Appendix B

Recruitment Letter
UHSRC # 140705

Dear High School Student,

My name is Jennifer Banks, a doctoral student at Eastern Michigan University College of Teacher Education. I am writing to request your participation in my dissertation research project. I am conducting a study on the experiences of African American students within mathematics classroom. This project is under the supervision of Ethan Lowenstein, PhD (734) 487-3260.

Approximately 12 high school students may participate in the study. Your responses will add to the body of knowledge on mathematics education. If you agree to be in this study, you will be asked to participate in two interviews and a focus group discussion. The interview questions will focus on your general experiences with high school mathematics. The focus group will be a discussion with a group of your peers. The focus group and each of the interviews will take approximately 60 minutes.

However, you are free to refuse to respond to any question presented. If you choose to withdraw before completing the study, all information will be destroyed. This study is confidential. All information provided will be secured on a flash drive with a password protect database. Also, data will not directly link to you, as each participant will be assigned a random number to ensure anonymity.

After completing the focus group and interviews, participants are eligible to enter a raffle for a chance to win one of three Visa gift cards. If you decide that you wish to participate in the raffle, your name will be selected from a random drawing of names. There is a loss of anonymity for those who participate in the raffle. The raffle will be conducted on November 7, 2014 at 10:00 am. The 1st prize is $50, 2nd prize is $30, and 3rd prize is $20. Winners will be notified via e-mail on the day of the raffle. Prizes will be mailed to the address of winners’ choice.

If you have questions about the project you may contact Jennifer Banks by phone (248) 701-7835, and/or e-mail jbanks6@emich.edu. You may also contact the dissertation chair, Ethan Lowenstein, PhD at Eastern Michigan University.
This research protocol and informed consent document has been reviewed and approved by Eastern Michigan University Human Subjects Review Committee (UHSRC) for use from July 15, 2014 – July 15, 2015. If you have questions about the approval process, please contact the UHSRC at human.subject@emich.edu or call 734-487-0042.
Appendix C

IRB Approval Letter

EASTERN MICHIGAN UNIVERSITY

Education First

July 17, 2014 UHSRC Initial Application Determination: EXPEDITED APPROVAL

To: Jennifer Banks
Eastern Michigan University

Re: UHSRC # 140705
Category: Approved Expedited Research Project
Approval Date: July 17, 2014
Expiration Date: July 15, 2015

Title: An Examination of the Experiences of African American High School Students in the Mathematics Classroom

The Eastern Michigan University Human Subjects Review Committee (UHSRC) has completed their review of your project. I am pleased to advise you that your expedited research has been approved in accordance with federal regulations.

Renewals: Expedited protocols need to be renewed annually. If the project is continuing, please submit the Human Subjects Continuation Form prior to the approval expiration. If the project is completed, please submit the Human Subjects Study Completion Form (both forms are found on the UHSRC website).

Revisions: Expedited protocols do require revisions. If changes are made to a protocol, please submit a Human Subjects Minor Modification Form or new Human Subjects Approval Request Form (if major changes) for review (see UHSRC website for forms).

Problems: If issues should arise during the conduct of the research, such as unanticipated problems, adverse events, or any problem that may increase the risk to human subjects and change the category of review, notify the UHSRC office within 24 hours. Any complaints from participants regarding the risk and benefits of the project must be reported to the UHSRC.

Follow-up: If your expedited research project is not completed and closed after three years, the UHSRC office will require a new Human Subjects Approval Request Form prior to approving a continuation beyond three years.

Please use the UHSRC number listed above on any forms submitted that relate to this project, or on any correspondence with the UHSRC office.
Good luck in your research. If we can be of further assistance, please contact us at 734-487-0042 or via e-mail at gs_human_subjects@emich.edu. Thank you for your cooperation.

Sincerely, Dr. Jennifer Kellman Fritz
Faculty Co-Chair
University Human Subjects Review Committee

Eastern Michigan University
University Human Subjects Review Committee
200 Boone Hall Ypsilanti, Michigan 48197
Phone: 734.487.0042 Fax: 734.487.0050
E-mail: human.subjects@emich.edu
www.ord.emich.edu (see Federal Compliance)

The EMU UHSRC complies with the Title 45 Code of Federal Regulations part 46 (45 CFR 46) under FWA0000050.
Appendix D

Definition of Terms

**Black**—refers to an individual with Black ancestry in Africa. Also referred to as African American.

**High school students**—Students who are enrolled in grades 9–12.

**Suburban area**—is used to describe areas outside of the urban areas.

**Urban area**—define a city with a population of at least 50,000 (U.S. Census, 2013) that tends to have high rates of poverty and crime (Peng, Wang, & Walber, 1992). Also referred to as inner city.

**White**—refers to an individual with ancestry in Europe, North Africa, or the Middle East. Also referred to as European American.