UNIVERSITY OF REDLANDS

Achievement Gap in Math at K-12 among Minority Students in the U.S.

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Dedication

I dedicate this study to my beautiful daughter [REDACTED] and my handsome son [REDACTED] [REDACTED] for their continued encouragement. I love you both. To my late father, [REDACTED] [REDACTED] who wanted me to follow his steps and become M.D. To my late mother, [REDACTED] [REDACTED], who wanted me to get any type of Doctoral degree to keep the family traditions.

Additionally, I like to dedicate this study to my brothers [REDACTED] [REDACTED] and sisters [REDACTED].

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Abstract

This study focused on the continued mathematical achievement gap among minority students at the K-12 level in the United States (U.S.) public schools. Research has found that factors beyond curriculum and instruction impact student achievement. Schools have been struggling with the achievement gap among minority students in the U.S. In addition to issues with schools, there are issues with students that affect the achievement gap in math. Some of these issues are socioeconomic status, a lack of connection to the school environment, apathetic behavior, and other academic challenges. Flores (2007) stated that students in the U.S. continue to make significant academic achievement over the last 45 years. However, the ethnic and racial achievement gap remains, since not all the students advance and develop at similar rates. Liu and Xie (2014) claimed that closing the achievement gap remains significant because it has a direct effect on the students in addition to society. McGee (2004) argued that there are various explanations for the achievement gaps in middle schools, including shortages in trained, knowledgeable, and skilled math teachers and a lack of motivation in mathematics among students. In the U.S., education remains a fundamental privilege; it is viewed as an essential equalizer that must afford every person opportunity and access. However, many students of color have yet to achieve this dream. There remains a substantial educational disparity that has evolved. Thus, bridging the achievement gap remains important and a priority in the current education system (Smith, 2015).

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Chapter I. Introduction

In the U.S., education remains a privilege and has been viewed as the greatest equalizer that must be offered to every child to provide opportunities in life. However, studies indicate that for many minority students, this dream remains out of reach. There remains a high educational disparity in the U.S., and bridging the achievement gap remains a fundamental issue in the education system. U.S. public schools are viewed as learning facilities that must provide education to every child in the U.S., regardless of their ethnicity, national origin, and race. However, socioeconomic status and other demographic elements continue to determine educational success for children (Reardon et al., 2015).

Identifying strategies to promote education for marginalized populations remains a critical objective of education research. The mathematics achievement gap between high income and low-income students remain separated by approximately two-thirds of a standard deviation, starting at the beginning of kindergarten and continuing through the high school years. As a result, researchers and other concerned stakeholders have advocated for high-quality instructions in math before entry to school, intending to minimizing the gap at the start of and during K-12 schooling (Reardon & Galindo, 2009).

The most significant element for a high-quality educational setting is responsive and knowledgeable adults. This is mostly for classroom-based interventions used to bridge the racial achievement gap, because specific instructions remain more critical for certain ethnic populations than for others. However, researchers have not yet explored these particular classroom factors in order to gain insight about whether students in similar classes react differently to the same practices. The issue remains a critical element because promotion of marginalized group achievement remains scarce, (Schenke et al., 2017).

Kamm (2018) stated that discovering research-based resolutions for bridging the achievement gap remains a challenge. The demographic shift of the students in public schools continues to accelerate the issue. Atkinson (2010) claims that the racial and ethnic achievement gap in the U.S. defines the disparities existing in education between different ethnic and racial groups. The achievement gap remains evident in Hispanic and Black student outcomes, which include high school dropout rates, lower scores on standardized tests, and lower grades. Berry et al. (2009) highlights that students in the U.S. have made significant academic achievements over the last 45 years; however, the ethnic and racial achievement gap remains, since not all the students advance and develop at similar rates. Gavin et al. (2009) states that bridging the gap remains significant because it possesses a direct effect on the students.

The issue of the achievement gap has gained popularity after the introduction of the No Child Left Behind Act in the year 2001. The No Child Left Behind Act requires the educational institutions, state education systems, and school districts to meet yearly targets for improvement in identified academic sections including science, reading, and mathematics. The Act focuses not only on the entire population but on some determined groups, including those students with limited English proficiency or LEP, special education students, and students who are economically disadvantaged, as well as White, Hispanic and Black populations. School districts were viewed as accountable for the rate of achievement of the groups (Ladson-Billings & Tate, 2006).

In my research, I explored the achievement gap in math at K-12 between minority students in the U.S. and the Asian students. I discovered that the achievement gap in math remains in the U.S. among minority students and in this paper, I offer some recommendations for bridging the gap.

I focused this study on the continued mathematical achievement gap between minority students and majority White students in the U.S. Because education remains a fundamental privilege, it is viewed as an equalizer in our society. I examined factors influencing this persistent achievement gap. Studies have shown that the wealthiest 10% of the school districts in the U.S. use approximately ten times more funds than the poorest 10%. Many low-income students remain in the least funded schools, with many of the students positioned in rural regions and central cities and funded at a lower level than White suburban districts. In my research, I examined variables influencing the achievement gap, including per-student funding, school SES, and curricular influences.

Research Questions

For this study, I utilized the Pierre Bourdieu's Social and Cultural Capital Theory, David Berliner's *Poverty and Potential: Out-of-School Factors and Social Success*, to better understand the current situation.

I used the following research questions to guide this study:

1. What is the trend for addressing the achievement gap among U.S. K-12 students?
2. What is the trend for addressing the achievement gap in urban, rural, and suburban school districts?
3. What is the trend for addressing the achievement gap in mathematics between genders?

Background of the Problem

According to Reardon (2011), the achievement gap is defined as the persistent and observed disparity of measures in education between groups of students' performances, including the factors of gender, ethnicity, race, and socioeconomic status. The gap is observed in various measures, including grade point average, standardized test scores, college enrollment, dropout rates, and completion rates. The achievement gap between higher and lower-income students exists in different countries and has been researched extensively in the U.S. and other countries.

Schenke et al. (2017) highlights that despite the efforts to ensure equality in the U.S., educational institutions continue to experience inequality. Few acknowledge that the education system in the U.S. remains one of the most biased in the industrialized globe, and students obtain various educational opportunities depending on their social status. In contrast to Asian and European countries that fund educational institutions equally and centrally, the richest 10% of the school districts in the U.S. use approximately ten times more than the poorest 10%. Many low-income students remain in the least funded schools, with most positioned in rural regions and central cities and funded at a lower level than the suburb districts.

Rothstein (2005) noted that schools with many of the disadvantaged marginalized students possess limited resources compared to those serving the advantaged White students. Furthermore, schools with high percentages of minority students also receive limited instructional resources compared to others in similar districts. Additionally, policies connected to school funding, tracking, and resource allocation leave marginalized students with lower quality books, computers, laboratories, and curriculum materials, less experienced educators, and larger classroom sizes, which result in the achievement gap. Since education remains the key to life success and survival, the school dropout effects remain worse for minority students than for

White students. Lack of education is further connected to welfare dependency as well as crime because the economy makes it difficult for uneducated and unskilled people to earn decent salaries, as discussed by Ferguson (2007).

Reardon, Robinson-Cimpian, et al. (2015) claim that in the U.S., there is a persistent gap dividing students along racial lines: Hispanic and Black students score lower, on average, than White students in reading and mathematics, and they complete college and high school at lower rates. Students from high-income households seem to outperform those from low-income families. Reardon, Fahle, et al. (2018) estimated the female-male test score gap in English and math for almost ten thousand U.S. school districts utilizing the state accountability data from third-grade to eighth-grade students in 2008 to 2009 through 2015 to the 2016. They discovered that the average U.S. school districts did not possess a gender achievement gap in mathematics. However, there is a gap of approximately 0.23 standard deviation in English language arts for females. The English language arts and math remain different among the district educational institutions where some districts had additional male favoring gaps while others had female favoring gaps. The math gap seemed to favor boys in high-income school districts as well as districts with higher gender disparities in occupations, education, and adult income.

In the U.S., studies in the cause of achievement goals between middle-income White students and low-income minority students have been conducted since a 1966 report publication known as the Coleman Report or the “Equality of Educational Opportunity,” commissioned by the Department of Education. The Coleman report investigated inequality in the U.S., including the distinctions between educational institutions attended by Black and White students. Coleman gathered data from four thousand schools, more than half a million students, and sixty-six thousand educators. The mammoth 749-page report uncovered a significant achievement gap

dividing the White and the Black students and observed that family background played a considerable role in the achievement gap. The researchers claimed that inequalities imposed by the children's peer environment, neighborhood, and home affect their adulthood at the end of the school, as explained by Walton Family Foundation (2017). The research stated that both community, home, and in-school factors affect the students' achievement gaps and contribute to the achievement gap. David Berliner claimed that the community and home factors affect the achievement gap more because of the increased time spent by the students in their communities and at home compared to the time spent in schools and out-of-school elements. These factors impact students living in poverty differently than students from middle-income households (Reardon & Galindo, 2009).

The U.S. Department of Education (2002) states that the achievement gap issue obtained widespread attention after the introduction of the NCLB (No Child Left Behind) in 2001, which dictated that school districts meet yearly improvement targets for certain academic sections including science, reading, and mathematics. The NCLB targeted the entire student population, including students in special education, Hispanic students, and students in limited English proficiency schools. According to Hassan and Mahmoud (2011), the achievement gap is categorized into leadership, time, belief, and preparation gap. The role of education leaders and principals in schools is critical to students' results, and educational institutions governed by effective leaders and principals remain more effective in bridging the achievement gap. Principals must remain successful leaders for the institutions they serve. They must have adequate leadership skills and acts that support the teachers and diverse students' needs (Hassan & Mahmoud, 2011).

An effective school principal acts as an instructional leader to reach students' achievement and school climate. The principals are required to develop schools that remain responsive and flexible to the needs of diverse students, and one method of achieving this goal is social justice leadership. Social justice leadership practices concentrate on challenging the inequalities in their educational institutions and eliminating them. It remains the responsibility of the principals to monitor the structural inequities in their institutions, accounting for factors such as disability, sexual orientation, gender, class, and race. The principals must determine and implement the most appropriate practices and instructional behavior in the classroom and balance empirical and theory practices to develop institutions that facilitate effective learning (Rothstein, 2005). Many minority students continue to lag in academic achievement. Thus, this problem remains a critical focus within academia. Some scholars claim that longer school years, or longer school days, might resolve the issue. Further, these scholars argue that if students were offered additional teaching time, that intervention would close the gap. The pursuit to close the achievement gap relies on the level at which the community, educators, parents, and students believe that the issue can be addressed and resolved. However, until a significant outcome becomes evident, this belief may be difficult to realize and maintain.

Children move through multiple stages of development before they enter K-12 school, which encompass physical development, mathematical thinking, social and individual skills, language skills, and appreciation of art. Children with less educated parents and low-income families possess a higher likelihood of having a lower level of school readiness. Furthermore, school readiness depends on other elements such as the cultural identity, physical health, home environment, social and emotional health, as well as the economic situation of the child, all of which affect educational achievement (Hassan & Mahmoud, 2011). Hispanic and Black children

possess a higher likelihood of residing in low-income and segregated areas and attending schools with a majority of low-income Hispanic and Black students compared to White children. The achievement gap between social classes and racial groups seems to originate from racial segregation and concentration of students in different geographic areas based on socioeconomic status (Rothstein, 2005).

Teacher and school quality are two important determinants of academic success which contribute to the achievement gap. High-quality schools and high-quality educators can bridge the gap; attending a high-quality educational institution can alter life trajectories for the better (Reardon, 2011). Minority students from low-income households are exposed to more pollution, which can contribute to early learning deficits. Furthermore, parents with high incomes tend to spend additional time with their children and read to them more than children from low-income families. Data from Walton Family Foundation (2017) indicates that 90% of White children aged three to five years are read to three or more times in a week by family members, compared to 70% of Black children and 71% of Hispanic children. These differences have long-term effects on children's learning, as explained by the Walton Family Foundation (2017).

Reardon (2017) highlights that President Lyndon Johnson proposed the ESEA (Elementary and Secondary Education Act) to offer equal access in education and develop a higher standard education system by 1965. ESEA was later reauthorized by President George Bush in 2001 and introduced as NCLB (No Child Left Behind), which dictated that school districts had to adhere to various measures to enhance achievement among students and hold the schools more accountable. Some of the measures introduced by NCLB include annual testing of students in grades three to eight in mathematics by the year 2005 and 2006 and testing in reading by 2007 and 2008. The tests had to align with the academic standards in the State, and then

results were compared. Several fourth and eighth-graders from every state were sampled annually and engaged in the NAEP (National Assessment of Educational Progress testing program in mathematics and reading (Reardon & Galindo, 2009).

Rojas-LeBouef and Slate (2011) argued that in the U.S., the math achievement levels remain behind compared to other developed countries. In the U.S., the most affected students include those from poverty areas and high minority populated regions. Almost every high-poverty student enters kindergarten with basic knowledge in math, but many of them enter middle school unprepared to succeed in college-prep mathematics courses in high school. Bomberg and Theokas (2013) found that there is a difference of 30% to 50% scoring among White students and minority students at the eighth grade National Assessment of Education Progress Exam (NAEPE). Buenrostro (2016) argues that there are various explanations for the achievement gaps in middle schools, including shortages of skilled and trained math teachers and under-motivated students. Feliciano (2005) claims that every explanation had brought its reforms to deal with the issue. Smith (2015) states that in the last few years, a higher accountability system and learning standards have been implemented for the students and the schools, including modifying middle schools (K-8) to develop an individualized learning environment by developing smaller learning communities in middle schools with high populations. Others suggested research-based curriculum in math and maintaining a more powerful corps of mathematics teachers in middle school. However, despite the efforts, there has not been a notable reduction in middle school math achievement gaps between the advantaged and disadvantaged students.

Balfanz and Byrnes (2006) highlight that some of the explanations for the trend include: (1) inexpensive and easy reforms that impact the learning. (2) increased requirements for

graduation for the district standard. (3) greater stakes testing has been employed in middle schools with high levels of poverty attended by minority groups. Constantine and Sue (2006) point out that the difficult and expensive reforms have not been adopted in schools with minority students. These reforms would affect classroom practice, including more supported, powerful instruction programs, trained and skilled teachers, and enhanced learning climate. Balfanz and Byrnes (2006) claim that another explanation for the trend may be the origin of the achievement gaps in math, especially among the minority and poor students in middle school. Some datasets allow the researchers to follow the minority students at the classroom level. Feliciano (2005) and Balfanz and Byrnes (2006) state that almost all the explanations and theories of achievement gap rely on the school district level, cross-section, and correlations. The insights depend on the average and mean levels of team performance on classroom or individual level achievements, development patterns which suggest the need for a closer evaluation of the elements that constrain and enable the bridging of the achievement gap in math. Bomberg and Theokas (2013) and Balfanz and Byrnes (2006) highlight that despite the efforts made to bridge the achievement gap, it continues to increase with time—disparities remain evident between students from minority groups and White students.

In his cultural and social capital theory, Bourdieu considers “cultural capital” to be the center in which education contributes to the production of social hierarchy. Bourdieu investigates the post Second World War period, which was marked by expanding educational opportunities, to remove social bias and found out that despite Western countries’ efforts, the biases in wealth, income, and status still exist. The education system does not eliminate bias. Instead, education reproduces bias, as explored by Tweed & Lehman (2002). Instead of equalizing, the education system reproduces the bias distribution of inherited cultural distinction (Tweed & Lehman,

2002). In connection to the cultural and social capital theory by Pierre Bourdieu, Tsai and Shavit (2007) argue that cultural capital is viewed by Bourdieu as the most innovative element and remains central to the theory's analysis in the method in which the education system contributes to the social hierarchy procedure.

Chapter II. Literature Review

Achievement Gap Overview

The achievement gap is the academic performance differences between distinct student groups. However, the gap mostly describes the disparities in performance between students of color and White students. The disparity remains visible in different outcome measures, including course choices, overall grades, dropout rates, college completion, and standardized test scores. The Department of Education challenged school administrators with the task of bridging the achievement gap by the year 2014 (Reardon, 2011).

Schools do not depend solely on their highest performing students' achievement to identify failure or success. The issue of bridging the gap remains a problem that most school districts and principals are unclear about in the United States. Many high school principals experience the challenge of minimizing the rate of high school dropouts among minority students due to external elements that cannot be controlled by educators (Amerson, 2014).

According to Jay (2003), U.S. minority populations accounted for 28% of the total population in the year 2000, but that is projected to reach 50% in the year 2050. 37% of school-aged children can be described as non-White students and projections show that minority students will account for half of the entire school-aged population by the year 2050. The majority discourse utilizes cultural deficit to label marginalized population as inferior to the middle and upper-class Whites norms and mark them as at-risk students of color. I utilize the cultural deficit framework to explain the academic achievement gap between low-income students of color and middle and upper-class White students as measured by the national standardized test scores (Ladson-Billings, 2000).

Reardon and Galindo (2009) performed a comparison between non-Hispanic and Hispanic students and discovered that Hispanic students possess lower math and reading knowledge in kindergarten. Students without English as their main language had the lowest reading and math skills at the entry-level to the kindergarten compared to White students. However, the Hispanic students did demonstrate high achievement gain in their initial years in school. Many scholars have associated the Hispanic and White achievement gap to English proficiency, socioeconomic status, and school quality family socioeconomic status.

Chatterji (2005) concentrates on the math achievement gap in various sub-groups of kindergarten and first-grade students. This study found that when finishing kindergarten, high-poverty students, Black students, and Hispanic students had a significant math achievement gap. However, when finishing the first-grade, the Black students accomplished a considerable math achievement gap compared to the Hispanic students. Some of the elements associated with the gap include at-home reading time by parents, class size, and size of the school, all of which had negative influence on the high poverty students' score. Ford (2010) conducted a study on how students from various social classes, languages, races, and communities face disparities in the quality of learning experiences. The systemic problems impacted the quality of education obtained by the students from racial minorities and socioeconomically disadvantaged households.

National Center for Education Statistics (2018), in their report entitled "Status and Trends in the Education of Racial and Ethnic Groups 2017" in showing that the Black students minimized from 15% to 14% while the Whites minimized from 62% to 52%. Asians increased from 3% to 5%, Asians grew from 15% to 25%, while the others rose from 2% to 4%. According to the NCES (2018), the racial backgrounds of children below eighteen years old

living in poverty were: Black children at 37%, Hispanic children at 32%, Asian children at 12%, and White children at 12%.

The National Center for Education Statistics (2018) showed the achievement gap in fourth grade among the Black and White students reduced from 32% in 1990 to 24% in 2015, while the Hispanic and White gap stood at 18% from 1990 to 2015. Furthermore, the eighth grade Black and White gap stood at 32% from 1990 to 2015, and the Hispanic and White gap stood at 22% from 1990 to 2015. Additionally, Asian students had a score of 45% in math, Whites had 18%, Hispanics had 10%, and Blacks had only 6%.

The NCES (2018) stated that the average math score for eighth grade students stood at 260 for Black students, 292 for White students, and 270 for the Hispanic students in 2015 (lower compared to the scores in 2013). The math score in 2015 for fourth-grade students remained the same as the scores in 2013 for students in different racial groups. The California Department of Education (2017) highlights that Math and English results had a significant achievement gap between Blacks, Latino, Whites, and Asian students. The Asian and Latino achievement gap was 49%, and Latino and White students' achievement gap stood at 30%.

The Out-of-School Factors

Out-of-school factors greatly affect the school achievement, and they remain unequally distributed in society. Instead, the negative impacts of many out-of-school factors remain concentrated in educational institutions that serve minority and low-income families and children, increasing the impossibility of bridging the achievement gap. The National Education Association claimed in 2018 that the out-of-school elements linked to poverty remain the major cause of the achievement gap among children from low-income families and minority populations. These out-of-school factors include English language under-development, attention

disorders, defiant behaviors, and excessive absenteeism. Educational institutions in the United States are highly segregated by income, race, and ethnicity, and problems linked to poverty happen in schools connected to disadvantaged and minority society. These educational institutions experience more challenges compared to the schools attended by students from high-income families. National Education Association (2018) also claimed that when making efforts to improve student education outcome in schools, transforming the out-of-school elements that have a negative influence on many students in the U.S. can be effective.

Berliner (2009) highlights that efforts to address the problem at the school level fail to address the comprehensive factors that inhibit learning success. Ferguson et al. (2007) state that out-of-school elements create obstacles for educational institutions, as they lie beyond the school systems' control and influence. Most of out-of-school programs try to address the achievement gap via summer learning, preschool, and after school interventions. Out-of-school factors include:

- a. birth weight and non-genetic effects
- b. Medicare and schooling
- c. food insecurity and schooling
- d. pollutants and schooling
- e. family connections, stress and schooling
- f. neighborhood norms and schooling
- g. extended learning achievement and opportunities

Birth Weight and Non-Genetic Prenatal Impacts

Bhutta et al. (2002) claim that Black children are twice as likely as white children to be born with a low birth weight and 270% more likely to produce a child with a very low birth

weight. Children with low birth weights have lower APGAR scores (Appearance, Pulse, Grimace, Activity, and Respiration). A low Apgar score can predict various issues, including neurological damage and behavioral as well as cognitive challenges due to oxygen deficit and hemorrhaging impacting the brain function, especially the memory (Shenkin et al., 2004). Public schools fail to assist kids with special needs, and learning institutions with higher concentrations of students from lower socioeconomic households and racial minorities have higher numbers of low birth weight children, making their education all the more challenging (Berliner, 2009).

Some of the issues associated with poverty and the environment include cocaine, tobacco, and alcohol use—the rates of which remain higher in low-income neighborhoods. Drug and alcohol use during pregnancy has been associated with various fetal complications. Cocaine, cigarettes, and alcohol tend to minimize the perimeter of the fetus's head and their total brain volume. The higher the number of exposures to various substances, the higher the brain volume loss, as explained by Berliner (2009). Maternal obesity also impacts prenatal health and is associated with lower income populations and less educated females. Maternal obesity can result in adverse pregnancy effects, including growth retardation and congenital disabilities. Women from low-income households experience higher rates of anxiety and stress, leading to low birth weight children (Martin & Dombrowski, 2008).

Medical Care and Schooling

Statistics demonstrate that people who earn approximately \$75,000.00 annually account for 7.8% of uninsured individuals in the U.S., while people who earn \$50,000.00 to \$75,000.00 account for 14.5%, and people who earn \$25,000.00 to \$50,000.00 annually account for 21% (DeNavas-Walt et al., 2008). Minority populations have the highest numbers of uninsured individuals, while the White population has the highest number of those insured. There is strong

evidence for lack of insurance within ethnic and racial minority populations and low-income families. Thus, there is a correlative impact on these population's mental and physical health. The issue affects students' academic achievement because having medical insurance enhances academic achievement by minimizing absenteeism. There is a lack of medical care assistance within rural and low-income communities, which is correlated to lower academic achievement, as explored by Berliner (2009).

Food Insecurity and Schooling

Berliner (2009) states that food insecurity remains an urban issue as well as a rural issue. For instance, an educator at a New York rural school discovered that one of her students in the fourth grade seemed distracted at the beginning of the week. However, the student seemed well-mannered by Tuesday, and the teacher found that hunger was the cause of the student's behavior. The student received enough food by subsidized school lunches and breakfasts, as well as after-school snacks. However, during weekends, he did not have adequate food at home. Some schools have discovered that nutritional deficits impacted test scores in the NCLB era. As a result, they offer extra-rich foods, especially calorie-loaded, during test days to provide students with energy; research demonstrated that the schools that offered extra-rich food to students before tests achieved 4% to 7% improvements on students' test scores. However, despite the fact that students can perform poorly due to inadequate nutrition, not all schools have provided a better alternative diet to students. Physicians, nutritionists, and psychologists contend that there is powerful evidence that nutrition is connected with school achievement and behavior. It is likely that inadequate nutrition will influence children's entire school experience (Center on Hunger and Poverty, Heller School for Social Policy and Management, Brandeis University 2002). When students attend their school insufficiently nourished, the limited energy is conserved in their

bodies, and the energy is maintained for important functions of their organs. If any energy remains, the energy is used for development, and so learning and social activities become the body's last priority. Therefore, the under-nourished students experience impaired learning abilities and more appear less interested in learning (Berliner, 2009).

Pollutants and Schooling

Berliner (2009) found that mercury may not be a key issue for most U.S. schools. However, it remains significant for the communities close to municipal waste incinerators, medical waste, and coal-fired power factories, which many low-income families are. Pollutants, including mercury, therefore have a greater impact on the behavior and health of low-income people. Therefore, the impacts of the toxic agents will disproportionately affect schools with more minority children. Additionally, schools with more children from wealthy households will experience an issue of trying to educate the children affected by toxins, especially mercury contamination, who have behavioral and cognitive issues. Lead, pesticides, and other harmful chemicals also impact the behavior of children from low-income families, which impacts their schooling. Air quality also impacts low-income students and their families at a higher rate than high-income households. Therefore, educating children from schools in inner-cities with minority populations remains more challenging than those in suburban schools from high-income families, as observed by Berliner (2009).

Family Stress, Relations, and Schooling

According to the American Bar Association (n.d.) in the U.S., some type of adverse family violence happens yearly in 10% to 20% of families with variations by class and race. Family violence is more often directed towards women than men, and it happens more often in low-income households compared to high-income and middle-class families. Research

demonstrates that 50% to 60% of females who obtain public benefits have faced physical abuse by a close partner at one point in their lives. Furthermore, more than 30% of females on public benefits claim that they've experienced abuse in their recent relationships, and most of them state that they had experienced sexual abuse and physical abuse in their childhood (American Bar Association, n.d.).

Additionally, ethnic and racial violence vary amongst men and women. A survey conducted in Texas among men and women discovered that 64% of women had experienced at least one type of domestic violence in their life. At least 32% of the women had experienced serious abuse, and 18% of the Hispanic women were forced into sexual acts (American Bar Association, n.d.). Furthermore, Black women faced violence from their partners at a rate of 34%, more than that of White women and women of other races combined (American Bar Association, n.d.).

Domestic violence negatively impacts the ability of parents and guardians to nurture their children's development, and the children remain withdrawn emotionally. The impacts remain more in parents with limited emotional availability to their children who cannot provide the basic need for them. Children from households that experience violence exhibit emotional and social problems in school. They further demonstrate high rates of decreased academic performance, social competence, anxiety, depression, and aggressive acts, as discussed by Graham-Bermann & Seng (2005). Children experiencing violence exhibit signs related to traumatic stress disorder, and they exhibit enhanced signs of nightmares, bedwetting, headaches, flu, asthma, and allergies compared to those children who do not experience violence (Graham-Bermann & Seng, 2005). Childhood violence due to family violence, poverty, rejection, and parental depression have psychological impacts, while those from secure and loving families have healthier emotional

statuses. Poverty without violence also results in a negative effect on a child's schooling and family life. Poverty increases the probability of adverse crime by the children, and they show psychosomatic issues and those linked to depression and anxiety because their biological system is impacted by poverty (Dearing, 2008).

Neighborhood Norms and Schooling

Sastry & Pebley (2008) stated that religion, ethnicity, race, and income impact individuals based on neighborhood of residence. Neighborhoods possess various attributes, and a student's zip code has indirect and direct as well as negative and positive impacts on their achievement. Sometimes, a school can impact its neighborhood attributes and can enhance the performance of the students indirectly and directly. A literacy realization study in sixteen schools with students from 437 neighborhoods demonstrated the strength of the neighborhood as an independent element in the achievement of students. The study scaled the neighborhoods to reflect socio-demographic attributes such as rate of unemployment, permanently disabled people, and single-parent households, the rate of youth unemployment, overcrowding, and low-income earners. The research showed that school impacts on achievement remain rare and strong. The neighborhood deprivation label marked a significant negative impact on educational accomplishment. It remains indisputable that neighborhoods possess considerable effects on achievements by weakening the parental impacts connected with enhanced student achievement.

Catsambis & Beveridge (2001) claim that when neighborhood environments prove challenging, many parents have their decent household values undermined by youth cultures in the neighborhood that remain dysfunctional or oppositional. Schools with students from dysfunctional neighborhoods experience more difficulties in nurturing the student's achievement compared to schools with students from wealthier neighborhoods. Neighborhoods further play a

critical role in children's verbal achievement. For instance, it remains common to discover that verbal achievement of inner-city and low-income children remains low compared to the achievement of students from suburban and wealthier schools. Some of the factors linked to verbal achievement include schools from overcrowded, less qualified, underfunded, and low-income neighborhoods (Sastry & Pebley, 2008).

Some of the hypotheses connected to how neighborhood of residence affects students' verbal achievement include neighborhoods with high crime rates, low parenting elements and efficacy, restricted linguistic competencies of the members in the neighborhood with low-income households—and severely inhibited public communication patterns due to widespread fear of violence—distrust, and isolated physical environments. Public speech patterns remain a type of social capital which is not available to low-income students. Therefore, the whole communication infrastructure of unsafe and impoverished communities has a strong negative impact on the verbal achievement of young people in the community (Catsambis & Beveridge, 2001).

Extended Learning Achievement and Opportunities

According to Berliner (2009), not all out-of-school factors have negative impacts on students, and some programs can enhance youth education. They provide extended learning opportunities, but operate differently from other educational programs, and are therefore grouped as the out-of-school factors impacting the achievement. Additionally, education does not happen in schools only. There are various opportunities for education outside of learning institutions, where some students learn more than others because the opportunities are not available among various income groups. Furthermore, poor students and their households, who are not be

encouraged to participate in the out-of-school education opportunities, may not learn as much as those who receive encouragement.

Analysis of Education Justice and Social Justice

Minority students are more likely to have negative educational experiences than White students, and this can be attributed to the achievement gap. These minority students are associated with various adversities, including dropping out of school, getting lower grades, lacking necessary resources, and remaining underrepresented. Ledesma and Calderon (2015) argue that in our education system, the prevalence of racism and the relevance of ethnicity to educational outcomes remains obvious. It remains vital in gaining insight into the inequality in education in its infancy stage. According to Allen (2017), critical race theory offers various tools to assist educators in using social justice activism to develop an environment which ensures that every student receives an equal opportunity to get a quality education. Le et al. (2009) claim that critical race theory has placed superintendents and principals of public schools under pressure to increase the achievement level of the student in their schools and the districts. McEwan-Adkins (2009) states that the No Child Left Behind Act of 2001 dictated reporting of scores disaggregated by participation in the special education, proficiency in English language, socioeconomic status, and race. Riley (2014) notes that the policy was meant to prevent the test gap from occurring between minorities and White students as well as wealthy and low-income students. However, minority students show weak literacy skills, and studies indicate that leadership for the social justice concept remains more inclusive.

HB 2722 Advisory Committee (2008) claimed that in the United States, narrowing the achievement gap between the minority and non-minority students remains the critical objective in our education system by enhancing the academic achievement of minority students via various

educational policies and laws. Hsin and Xie (2014) state that one of the policies, the No Child Left-Behind Act of 2001, began the transformation to performance. However, despite the efforts, the achievement gap in mathematics among the minority groups remains.

According to Autin et al. (2015), in Western countries, including the United States, educational institutions are considered to be drivers of social justice. Education contributes to assigning people to social positions and academic positions that align with their motivation and attitudes despite their social belonging, family wealth, and background by offering equal opportunities. Furthermore, educational institutions are viewed as a vehicle for a meritocratic society. They sort people into different programs and social positions depending on merit and act as an education function that further improves the quality of education for everyone.

Statistical trends indicate that social class equity has not been achieved (Autin et al., 2015). Grogan (2017) claims that social justice requires equality in every aspect that impacts individuals in society and a community. Social justice activism involves fighting for every person's right for access to the available opportunities despite their ethnic and racial background, gender, age, and class. Students in the United States are economically, geographically, racially, ethnically, and culturally diverse. Byun and Park (2012) state that students are taught about the democratic value of justice and the belief that the United States offers similar benefits and opportunities to all the citizens. However, Stinson (2006) noted that there are still disparities because some schools are meant for the rich and others for lower income populations. The socioeconomic status of a household tends to determine the type of school the children will attend. Furthermore, socioeconomic status can determine selection of extracurricular activities, field trips, and the fees for advanced placement, among others. According to the U.S. Department of Education (2002), in 1988, students from lower income households had a lower

probability of accessing college at 6.9% and of that 50% probability of attending college.

Students from higher income households had a 51% probability of attending college.

The repercussions of failing to discuss the achievement of students is connected to the moral, sociopolitical, economic, and historical debt owed minority students through educational pedagogy and policies (Milner, 2013). It remains important for educators to assess the curriculum, pedagogy, and learning via the education system.

Cultural Capital Theory

McDonough & Nunez (2007) point out that the concept of cultural capital by Pierre Bourdieu remains common among educational scholars in the United States and Europe. Bourdieu considered education to be a cultural conflict where social discrimination is reproduced via different types of capital inside and outside the educational system. Chen (2012) highlights that Bourdieu provided four genetic kinds of capital to explain the social reproduction and educational outcome, including symbolic capital, social capital, cultural capital, and economic capital. Bourdieu claims that individuals optimize their standing through accumulating and utilizing the four types of capital. The capital value remains specific to the field where people maneuver and compete, and the field is described as the rule of the game that symbolizes competition and struggles within various social realms.

McDonough & Nunez (2007) argue that social actors work towards their strategies, but not as conscious optimizers of the means to accomplish the objectives. In the education field, parents from various social classes aim to do what is the best for their children despite their distinctions in their education levels, income levels, personal disposition, and interpersonal networks. The distinctions in certain capitals lead to different educational strategies and practices, which can challenge or reinforce the current order.

Sullivan (2001) states that Bourdieu viewed economic capital as the origin of other types of capital and considered other forms of capital as transformed types of economic capital. Other types of capital can be changed to economic capital, and economic capital can be utilized in pursuit of other types of capital. Social capital remains a real resource connected to the strong network of some institutionalized relationships of mutual recognition and acquaintance. Social capital can be deployed and accumulated individually and collectively for symbolic or tangible gains. Additionally, social capital denotes the dominant class power, and symbolic capital requires a power that demands obedience, respect, and recognition with legitimacy. Symbolic capital includes culturally valued characteristics that remain material but are not acknowledged as such (McDonough & Nunez, 2007).

McDonough & Nunez (2007) claim that cultural capital remains the most innovative element of social capital and is the focus of Bourdieu's evaluation of how the educational system contributes to the social stratification process. Bourdieu examined the post-second World War public legislations of extending educational opportunities to eliminate social inequalities and discovered that despite enhancements in Western democracies, inequalities in status, income, and wealth still exist. The education systems fail to act as an equalizer, and instead reproduce the bias distribution of cultural distinctions and remains the institution for transmission of social inequalities in current society (Lareau & Weininger, 2004).

Sullivan (2001) describes cultural capital as a tool for the symbolic accumulation of wealth, which is socially viewed as worthy of seeking and requires the entire property for the entire society. Cultural capital is found in institutionalized, materialized, and exemplified States, and the origin of the State is found in the family setting of early childhood, where skills, values, and manner are cultivated, developing the long-term mind and body disposition. Lareau &

Weininger (2004) note that realized cultural capital remains connected to the habitus concept that defines the socialized subjectivity and aims at incorporation or internalizing the externality and substantiates or externalizing the internality, resulting in the reproduction of classes and people. Objectivity defines the physical possession of cultural products such as machines, instruments, pictures, dictionaries, and books, while the institutionalized States define professional and academic credentials and certificates.

McDonough & Nunez (2007) claim that cultural capital in the international theoretical framework remains an open academic standard, a basis for social connection, a class characteristic, and a power resource which remains essential as a basis or indicator of class position. The capital concept has allowed scholars to perceive culture as a resource that offers access to scarce rewards, transmitted from one generation to the next, and is vulnerable to monopolization. Furthermore, the theory can deepen people's understanding of mechanisms and procedures connected to class reproduction outside and inside the educational system. Sullivan (2001) argued that the cultural explanation by Bourdieu concerning the bias education achievement remains different from the version of blaming-the-victim arguments of culture-of-poverty. The theory concentrates on the procedures and mechanisms where people adapt to scarce opportunities and demonstrates how structural shortcomings can be integrated into a stable disposition via intergenerational socialization, resulting reproduction of existing social structures.

Lareau & Weininger (2004) point out that according to Bourdieu's theory, cultural capital contains familiarity with the culture in the society, especially the capacity to gain insight on the use of educated language. Cultural capital possession remains different from social class. However, the education system presumes cultural capital possession, making it challenging for

lower-income students to achieve success in the education system. The theory claims that the education system presumes cultural capital possession that few students have (Lareau & Weininger, 2004). This creates an inefficiency in teaching because the students cannot understand their teachers at the outset.

Despite the lower-income students remaining disadvantaged in education credentials, the results of the competition are viewed as legitimate. The theory also asserts that special inequalities remain legitimated by the credentials in the education system held by the people in the dominant positions. Cultural capital assists middle and upper-class students to obtain higher credentials in education compared to the lower-class students, allowing high-income earners to maintain their class position (Lauglo, 2000).

McDonough & Nunez (2007) state that habitus is transmitted in homes and accomplishes a set of values and attitudes associated with a dominant class. The main element in dominant habitus is a positive attitude towards education. Coleman (1988) defines three elements of social capital, including information channels, norms, and social control, expectations, and obligations in social relationships. It can be considered a means to an end. For example, it can act as a way for a parent to enhance their school success for their children. Additionally, Lareau & Weininger (2004) argue that social capital derived from visiting the school can take various forms of information such as enrichment practices—skills such as parenting tips—access to resources, such as study aids, and social control sources—such as educational values—which can assist a parent in promoting school achievement for their children.

Social capital also includes networks or social relationships that offer access to resources and should be maintained; consequently, acts as a way to obtain a socially desirable end. Bourdieu concentrates on inequalities in the number of capital people possess or can have. Some

of the sources of bias in accessing resources and relationships of interest include the fit between the culture of the society and individual culture and utilizes the word field and habitus to define fit (Lauglo, 2000).

Hanushek (2016) states that the development of an education system that provides an equal educational opportunity for all groups, and especially for racial minorities, has not been achieved. Achievement gaps remain nearly as large as they were when Coleman and his team put pen to paper (Hanushek, 2016). The campaign for a broader, bolder approach to education hints at the standard interpretation of the Coleman findings when it asserts that “poverty, which has long been the biggest obstacle to educational achievement, is more important than ever” (Hanushek, 2016). According to Dickinson (2016), The Coleman Report helped introduce the scientific study of major areas of U.S. life and government policy and put the focus on whether we were getting anything out of these efforts (Hanushek, 2016). The Coleman Report research concluded that the most important predictor of a child’s performance in school was not the school building or resources, but rather the school’s ability to create a family-like environment. As Coleman explained it in 1972, “all factors considered, the most important variable, in or out of school, in a child’s performance remains his family’s education background” (Dickinson, 2016). The social and economic composition of the student body was another important acknowledgment in The Coleman Report. The Coleman Report research results indicate that a child’s performance, especially a working-class child’s performance, is greatly benefited by going to school with children who come from different backgrounds (Dickinson, 2016). Coleman said, “If you integrate children of different backgrounds and socioeconomics, children perform better” (Dickinson, 2016). This report was released half a century after the landmark “Equality of Educational Opportunity Report (EEOR) came out in July 1966. It remains known as one of the

most influential education studies in American history, defying conventional wisdom, because its findings revealed that a student's background and family mattered more for their success than the quality of their school (Pearce, 2016).

Social Capital

Social capital has various entities with two factors in common. First, they contain some concepts of social structures. Second, they facilitate the actions within the structure. Social capital remains productive, making the requirements of specific ends possible that would be impossible without social capital. Social capital that remains valuable in facilitating some actions may result in harming others. One significant form of social capital is the information potential in social relations. Information is critical because it offers a foundation for action. However, obtaining information is expensive and requires attention, which is not readily available. Information that can be obtained is by social relations maintained for other reasons. An effective norm contains a strong but fragile social capital (Coleman, 1998).

A norm within a collectivity that contains a significant type of social capital requires a norm that should forgo self-interest and serve in the interest of the social collectivity. Such a norm emphasized by social support, honor, status, amongst others, includes social capital that creates young countries which dissipates as they age. Further, these norms empower families by guiding them to remain selfless in the interest of their families. These norms also facilitate the creation of nascent social movements through dedicated small teams, which mutually reward members and inward-looking members, leading individuals to work for the good of the public. In some cases, the norm remains internalized, and in other cases, it remains primarily supported by external rewards selfless acts and for disapproval of selfish actions. The norm, therefore, remains critical in overcoming the issues of the public good that are available in the collectivities.

Successful norms can contribute to a special type of social capital. However, the social capital facilitates specific actions and constrains other actions. A society with influential and successful norms concerning the behavior of young people can keep them from enjoying a good time. All social structures and social relations facilitate some type of social capital, and specific social structures remain significant for the facilitation of some types of social capital (Coleman, 1998).

The closure of social networks is the property of social relations on which effective norms depend. Norms are introduced to limit the adverse external effects of encouraging the positive effects. However, in various social structures where the conditions exist, norms remain unnecessary. Closure of the social structure remains vital for the availability of successful norms in addition to other kinds of social capital. A social structure without closure can be attracted successfully by the individual to whom it is owed the obligation. In a social structure, the closure of networks develops trustworthiness. Once companies or agencies operate together for one purpose, they can help others, thereby developing social capital for use. Max Gluckman (1940) highlights that the appropriable social organizations and closure networks offer social capital through multiplex and simplex relations. People are connected in various contexts, including as parents, employees, and neighbors, among others, while in simplex relations, individuals are connected by a single relation (Coleman, 1998).

Social Capital in the Family

Family background is viewed as a single entity, differentiating from schooling itself in its impacts on different elements of school achievement. Family background is separable into three distinct components, including social capital, human capital, and financial capital. The household wealth or income is utilized to measure the financial capital, and it provides the physical resources that can assist in achievement, including financial resources that help to resolve

barriers specific to a child's home life such as lack of access to learning materials and a stable home for learning. Human capital is tested by the education of the parents and offers the potential for an appropriate cognitive environment for a child that assists them in learning (Coleman, 1998).

For instance, in a public-school district in the United States where the families of children bought textbooks, the school administration found that some Asian immigrant households bought two books, one for the child and the other for the parent to study to assist their children in performing well. Therefore, social capital remains very important in a family for the success of the children in schools and the intellectual development of the children. The human capital of their parents impacts the children. However, human capital may be irrelevant if a parent does not remain a part of the children's development. For example, if the parent applies the human capital outside the home, such as in their workplace, then it remains irrelevant to the child's education development (Coleman, 1998).

Social capital within a household, which provides a child access to the grown-up human capital, relies on the attention provided to the children by an adult and the physical availability of the adults in a family setting. The structural deficiency within a family includes the physical absence of an adult in the life of a child, and it is more prominent in single-parent families or families in which both parents are not available. Furthermore, the presence of the parents is not enough. They must have an adequate relationship with their children to ensure social capital within the family. The impacts of the inadequate or lack of social capital in a household remains a resource for the children's education within that family (Coleman, 1998).

For instance, a study revealed that a lack of social capital in a household could result in school dropout. However, social capital in the community compensates for the household

absence. The complementarity of social capital and human capital in the family for the development of a child demonstrates that the statistical analysis that assesses the impacts of quantities must account for a specific form. Interaction between social capital—including the expectations of a parent for their children's education, number of siblings, and two parents in a household—and human capital, including the education of the parents, must be present (Coleman, 1998).

Social Capital Outside a Household

Social capital has value to the development of a young individual inside and outside the family, such as in the community. The impact of social capital outside a household on educational results becomes evident when assessing outcomes for children whose parents remain different in a particular source of social capital. Families that shift often result in the breakup of social capital every time they shift. For human capital, an individual who invests the resources and time in establishing and developing the social capital gets its advantages in the form of gaining insight in the surrounding globe, more satisfying and higher job status, and higher-paying jobs, among other benefits associated with schooling (Coleman, 1998).

Social Capital and Public Goods Aspects

The quality of public goods in social capital translates to a distinct position concerning purposive actions compared to other types of capital. It remains a significant resource for people and may profoundly influence their capacity to act and their perceived life quality and capacity. However, because individuals experience action, benefits associated with social capital into being, it is not their interest to bring it into being resulting in most social capital forms being developed or damaged as by-products of other practices. The social capital disappears or rises without the willingness of any individual and remains less acknowledged and considered in

social action. There are significant implications of the public good in social capital that play roles during children's development. In the past, big households and communities were present. However, currently, powerful communities and families remain limited, and this trend is expected to continue in the future (Coleman, 1998).

However, the solution to the issue is supplying the public good or social capita for the benefits of youth through the substitution of formal agencies for spontaneous and voluntary social organizations that, in the past, acted as a source of social capital for youth. Norms are developed intentionally as a way of minimizing externalities, and their benefits are felt by the people developing them. However, the ability to maintain and develop depends on social structure properties, including the closure network over which a single person does not possess control, but can be impacted by the actions of another person. They include the properties that fail to enter into a persons' decision that influence them (Coleman, 1998).

Jonathan Kozol and Achievement Gap

The U.S. Supreme Court case *Brown v Board of Education* remains one of the most significant legal decisions of the 20th century, and the case claimed that it was unconstitutional to segregate students on a racial basis in public educational institutions. The case aimed to challenge social and racial inequality that established an inferior curriculum and classrooms for most children in the U.S. In "The Shale of the Nation: the restoration of Apartheid Schooling in America," Kozol investigates the new racial segregation in U.S. schools fifty years after *Brown vs. Board of Education* by visiting more than sixty public schools and interviewing administrators, teachers, and children on education status (Kozol, 2005).

Kozol investigates the inequalities in the educational system in the U.S. and among the educational institutions in poor inner-cities as well as in the suburbs. Kozol observed that the

poor-inner-city schools remain underfunded, understaffed, and underequipped. Kozol visited various schools between 1998 to 1990, including Camden, New Jersey; East St. Louis, Missouri; Chicago's South Side; New York's South Bronx; San Antonio, Texas, and Washington D.C. Kozol observed that educational institutions with the highest and the lowest per capita spending on students ranged from \$3000.00 U.S. dollars in New Jersey to \$15,000.00 U.S. dollars in Long Island in New York (Kozol, 1991; 2005).

The author discovered that educational institutions that were segregated thirty years ago remain segregated today, while other educational institutions that were integrated—by force of law or voluntarily—remain integrated. The book *STILL SEPARATE, STILL UNEQUAL, American Educational Apartheid*, by Jonathan Kozol, defines the public-school reality of inequality faced by Hispanic and African-American students within the current public education system (Kozol, 2005).

In the 2002-2003 academic year in Chicago, 87% of the public educational institution enrollment included Black and Hispanic students, and less than 10% of students were from the White population. Furthermore, in New York City, almost 75% of the students who enrolled in the year 2002-2003 were Hispanic and Black students, in Baltimore the number stood at 89%, and in Detroit, the number of the Black or Hispanics who enrolled in the year 2002-2003 stood at 96%. The number of Black or Hispanic students who enrolled in the year 2002-2003 stood at 84% in Los Angeles while in Cleveland and Philadelphia the number was 79%, and St. Louis was at 82% (Kozol, 2005).

Jonathan Kozol defined the striking distinctions between public educational institutions with students of color in urban settings and the schools in the suburbs, which spend twice the amount of money per student for their populations with fewer special needs compared to those in

the public schools in urban settings. For instance, in MacKenzie High School in Detroit, the school teaches word processing without the word processors because the educational institution cannot afford to purchase a word processor. The East St. Louis Senior High School has biology laboratories, but no available dissecting kits and laboratory tables. However, the nearby suburban educational institutions have computers, and the students access the computer hookup to Dow Jones to learn science laboratories and stock transactions (Kozol, 2005).

Some schools, such as the Peterson in New Jersey, cannot not afford to hire qualified educators to provide foreign language courses to the high school students while in other schools such as Princeton, learning foreign languages starts in elementary schools. In urban school districts, educational institutions with a higher concentration of minority and low-income students' access limited instructional resources compared to others. Furthermore, the tracking systems further exacerbate the inequalities by discriminating against most minority and low-income students within the schools (Kozol, 2005). The policies affect low-income and minority students because they access limited and lower quality computers, laboratories, curriculum materials, and books. Additionally, low-income and minority students access less experienced and qualified educators, larger classroom sizes, and limited access to a high-quality curriculum. The educational institutions with the most minority and low-income students fail to offer science and mathematics courses required for college attendance and offer lower quality education in classes (Kozol, 1991; 2005).

Kozol claimed that most schools in the United States remain segregated and fail to flourish as expected. He claimed that there remains a significant amount of inequality in funding among the suburbs and the poor, city educational institutions. Underfunding the schools that need money contributes to the achievement gap in schools, and the students fail to display their

talents and reach their potential. Kozol stated that school funding inequalities develop a tiered educational system defined as apartheid schooling (Kozol, 1991; 2005). Financially stable educational institutions invest discretionary funds in mediation hearing and counselors, among other mechanisms that maintain the safety of the schools to ensure inclusion instead of exclusion and punishment (Kozol, 2005). In contrast, financially unstable schools lack adequate funding for inclusion programs, which result in policing strategies, including metal detectors, surveillance cameras, and on-campus policing, which the state and federal government can subsidize. Therefore, inequality in educational institution funding can result in disparate school security activities leading to the reproduction of community and youth inequality.

Kozol admits that minority and low-income students have a lower likelihood of accessing important learning materials and resources compared to the White students. In most schools with large populations of minority students, the students experience larger classroom sizes, and it is estimated that they remain twice as large as the schools with most White students and reach three thousand students or more in most towns (Kozol, 2005). Class sizes on average stand at 15% larger, have a curriculum and learning materials of lower quality, and educators remained less experienced and qualified in training, certification, and education levels as compared to suburban institutions. In integrated educational institutions continue to remain segregated in the lower-track classes with larger class sizes, lower quality curriculum, and less qualified teachers (Kozol, 2005).

Studies indicate that the preparation of teachers makes a significant difference in the learning of the students. The quality of the curriculum and the teachers' expertise remain interconnected because qualified or expert educators are important in a challenging curriculum. Most expert educators teach the most demanding courses to the advantaged students while less

experienced teachers are assigned to the lower track students, who then receive lower-quality learning with less demanding resources and materials. Children in schools with limited funding, less qualified teachers, limited materials, resources, and low curriculum experience are unequal in the eyes of the State (Kozol, 2005).

Jean Anyon and the Achievement Gap

Jean Anyon (1981) stated that students from higher social class backgrounds are exposed to managerial, medical, and legal knowledge, while the students from working classes are provided a more practical curriculum. Social class distinctions in post-secondary education remain conservative in a modern society, which is a critical concept of the reproduction in the unequal class system. Jean Anyon (1981) evaluated school knowledge data in a case study of five elementary educational institutions in contrasting social class environment in two school districts in New Jersey. The author collected the distribution and the nature of school knowledge in an investigation of student assessment, pedagogy, and curriculum practices in five elementary schools that remained differentiated by social class (Anyon, 1981). The technique utilized to collect the data included classroom observation, formal and informal interviews with district administrators, principals, teachers, and the students in addition to the evaluation of the curriculum and learning materials in every classroom and educational institutions. Jean Anyon (1981) observed that the fifth-graders of various economic backgrounds were already prepared to occupy on the social ladder. Some schools remain on the vocational training track while other schools prepare their students to become future business leaders, lawyers, and doctors (Anyon, 1981).

From the data, curriculum materials and topics had similarities, but dramatic distinctions in the curriculum in use and the curriculum in the educational institutions. For instance, all the

schools' utilized similar mathematics textbooks, as well as a series geared towards elementary language arts, for which the courses of study included writing exercises, grammar, sentence structure, and types and punctuation. The educational institutions utilized distinct science and social studies materials and books, but there existed various curriculum similarities among the materials and books used in the different schools. For instance, all the social studies books showed the main ideas of American social studies and an overly stated and positive value of the political freedom and democracy in the U.S. (Anyon, 1981).

Furthermore, the natural science textbooks and materials for the program in the districts remained similar and concentrated on empirical investigations as the foundation of scientific understanding, use of experiments and observation processes, and the scientific method. Despite the similarities in the curriculum, the significant difference remained evident in the knowledge in the schools. The research showed that even in elementary schools, there is a fairly standardized curriculum, and it remains possible to have social stratification of knowledge. The distinctions identified among the schools showed that instead of remaining reproductive or simply conserving, the school bodies possess contradictions with profound social change implications. The non-productive and reproductive school knowledge possibilities include the theoretical meaning of the data and will remain delineated after presenting the data (Anyon, 1981).

An evaluation by Jean Anyon (1981) concentrated on the non-reproductive and reproductive knowledge aspects of every social class setting. "Reproductive knowledge" is defined as the school knowledge aspect that contributes to the perpetuation and legitimation practices, privileges, and ideologies constitutive of the current political and economic structures directly. "Non-reproductive knowledge" is defined as the knowledge that facilitates the fundamental change of privileges, practices, and practices depending on the ideas, services, and

objects distributed, owned, produced, and publicly assessed. There are two concepts of the school knowledge in working-class schools that remain reproductive. They include the fact that students in the educational institutions did not learn their history—the American working-class history—and its conflict situation with strong political and business groups such as its history of struggle and dissent for economic dignity (Anyon, 1981).

Students are not taught the importance of valuing the interests they share with other workers. They are exposed to limited social information that seems to offer limited or no critical insight on the globe or their situation in the globe, resulting in reproductive repercussions. Furthermore, another creative concept of school knowledge in the working-class educational institutions the acceptance of classroom focus on mechanical behavior instead of sustained conception. This remains critical in the division of labor reproduction in society, at work between those who manage and plan, and to the growing percentage of the workforce that work on jobs requiring regulations of other people, plans, and politics.

Working-class children are not equipped with cultural capital skills and knowledge at manipulating ideologies and symbols in their interests. The school knowledge aspects contribute to the reproduction of a team in the community without marketable skills and knowledge. There are key contradictions in the school knowledge in the working-class educational institutions, and a socially transformative situation may emerge. In the schools, teacher control of students remains a high priority. Teachers have a limited number of attempts to win the minds and the heart of the students. The children in the research acknowledged that they had already rejected equality and patriotism ideologies. The absence of traditional ideologies and traditional bodies makes the children vulnerable to optional ideas, and they remain more open to the ideas that tend to support social change (Anyon, 1981).

The research indicated that some children remained engaged in the struggle against the exploitive team, including the administrators and the teachers in the respective educational institutions and the imposition of a foreign curriculum. The study further discovered that in the middle school, the students were not taught the dissent or history of employees or taught to unify around the common interests they should share as wage earners where most middle-class jobs remain increasingly mechanical, clerical and industrial. However, there remained differentiating attributes of knowledge in the middle-class educational institutions that remain significant due to the social class position of the households (Anyon, 1981).

Traditional academic knowledge is not perceived to have exchange value in the workplace or marketplace, according to educational institutions in working class neighborhoods; it therefore fails to reach “commodity status.” In contrast, in the present middle-class educational institutions’ social class position, the students and the educators view knowledge as having a market value, and they believe that if students accumulate information, facts, and generalization, the students can exchange them for white-collar jobs or college entrance (Anyon, 1981).

The differing curriculum, evaluation of students, and pedagogical practices influence the behavioral and cognitive differences in every social setting and contribute to the development of specific relationships to symbolic and physical capital, authority, and work process. Furthermore, social class influences the school experience, and the differences contribute not only to the children’s development in every social class of specific, economically significant connections, but assist in societal system reproduction. It demonstrates the theoretical meaning of unequal social relations and social repercussions of classroom practice (Anyon, 1981).

Literature Review Summary

The findings indicated that the perceptions and the attitudes of the teachers towards the minority group can contribute to the achievement gap because they remain less confident about the performance of the minority students. Hispanic and Black students are more likely to reside in low-income and segregated areas and attend educational institutions with a majority of low-income Hispanics and Black students compared to White students. The achievement gap between social class and racial groups seems to originate from racial segregation, social class, and concentration of students by race and socioeconomic group in various groups (Rothstein, 2005). Reardon et al. (2015) state that most suburban schools have adequate teachers and resources that enable the students to learn compared to urban schools, which may have limited resources and funding, therefore contributing to the achievement gap.

Race and ethnicity also determine the performance because minority students are more likely to originate from poor neighborhoods, low-income families, and attend schools with limited resources. Socioeconomic status also contributes to the achievement gap because the students from high-income households tend to outperform those from low-income families, which mostly consist of the minority groups. The reasons for the differences in the performance include the availability of adequate resources, educated parents, and neighborhoods with adequate facilities, among others. The community, home, and in-school factors affect the students' performance and contribute to the achievement gap.

According to Anyon (1981), curriculum materials and topics had similarities; however, they had a difference in the curriculum in use and the curriculum in the schools. Despite the similarities in the curriculum, there remain considerable distinctions evident in the knowledge in the educational institutions. The study demonstrated that even in the context of elementary

schools, it was evident that a fairly standardized-curriculum existed, and it is possible to possess social stratification knowledge. The differences determined among the schools indicated that instead of remaining reproductive, the school bodies had contradictions with profound social transformation implications (Anyon, 1981).

Anyon (1981) further discovered that social class influences school experience, and the distinctions contribute not only to the children's development in each social class but also assist in societal system reproduction. It shows the theoretical meaning of unequal social connections and the social consequences of classroom practice. The results align with the research, which indicated that the achievement gap in mathematics remains in the United States despite the implementation of the No Child Left Behind Act in the year 2001.

Kozol (2005) discovered that most schools with minority students remain underfunded, leading to students' failure in academics and failure to achieve their potential as well as showcase their talents. In the United States, most schools remain segregated and do not excel due to underfunding. Kozol (2005) noted that underfunding remains evident in public educational institutions and educational institutions with students from low-income neighborhoods. African-American and Hispanic students face inequality in schools. The schools with majority White students get more funding, high-quality learning materials, experienced teachers, and quality education compared to urban schools with majority and minority students from low-income backgrounds (Kozol, 2005).

African-American and Hispanic students still get low scores in mathematics and English language due to their limited access to qualified teachers, quality education, adequate and quality educational learning materials, and their schools' limited funding. Furthermore, a lack of educated parents to guide the students and lack of adequate time to concentrate on the child's

education by the parents can contribute to lower scores. Out-of-school elements further contribute to the achievement gap among minority students (Allen, 2017). Kozol (2005) claims that schools with minority students are unable to access the required resources and learning materials, and their classroom sizes remain larger. The low-income and minority students are impacted most by the current education policies because they access limited and lower quality labs, computers, books, and curriculum materials (Kozol, 2005).

Furthermore, the low-income and minority students have limited access to the most experienced and qualified teachers, high-quality curriculum, and smaller classrooms compared to the White students. Additionally, most minorities and low-income students do not take the mathematics and science courses needed for college attendance. Subsequently, minority students receive lower quality education in their classrooms compared to White students, as discussed by Kozol (2005). As a result, minority students receive lower scores than the Asian-American and the White students, which demonstrate that Hispanic and African-American students still receive lower scores in math despite the adaption of the No Child Left Behind Act in the year 2001.

Chapter III. Methodology

Introduction

The forthcoming section will concentrate on the research design, research questions, data collection, and data analysis that I utilized in this study. The primary objective of the study was to identify factors influencing the achievement gap in math at K-12 among minority students in the United States.

Research Objective

The research objective was to examine factors affecting student achievement. The examination included analysis of demographic variables (Race, Class, and Gender) and also school-level variables that impact achievement: urban-city, school SES, percent minority population in schools, and school climate. The study used data published over the last 20 years to examine the trends in increasing or decreasing the achievement gap. The purpose of the research was to analyze the trend in the achievement gap in math among K-12 minority students in California. The study used the statewide California Smarter Balanced results for tests undertaken by students in the Spring of 2019. The tests remain part of the California Assessment of Student Performance and Progress (CASPP). I utilized descriptive methods to analyze the trends and to analyze archival data from EdSource and the National Assessment of Educational Progress (NAEP). I utilized this study to define the population attributes or phenomena under research. The study highlighted the connections between variables (Creswell, 2013).

Data Collection

In this study I analyzed the archival data from EdSource, the National Assessment of Educational Progress (NAEP), and the National Center for Education Statistics (NCES). The study began with descriptive statistics to examine the trend in the achievement gap since 2000. I

relied on descriptive analyses to examine the differences by race, class, gender over that period. Finally, I will examine school-level variables to explore their influence on academic achievements. The dependent variable was the standardized test score in the study, while the independent variables include schools, income, race, and ethnicity.

The research used archival data from the National Assessment of Educational Progress (NAEP) and EdSource. The National Assessment of Educational Progress stands for children's equal access to quality education and the belief that interested and informed public remain essential to strengthen the schools in California for the benefit of the children, the state economy, and civic life. EdSource engages all Californians in the significant educational challenges to enhance learning effectiveness by offering accurate, useful, and timely information to education stakeholders and the public. It also raises awareness of the leading education initiatives implemented in California and nationally and provides successful models and techniques to enhance student results and determine areas that need reform and repair (EdSource, 2019).

Research Questions

The study concentrated on the following research questions to discover why there is an achievement gap in math at K-12 among minority students in the U.S.:

1. What is the trend for addressing the achievement gap among U.S. K-12 students?
2. What is the trend for addressing the achievement gap in urban, rural, and suburban school districts?
3. What is the trend for addressing the achievement gap in mathematics between the genders?

Chapter IV. Data Analysis and Findings

Achievement of education in middle grades acts as a powerful indicator of success for students in post-secondary and secondary education. However, the achievement in the middle school education is associated with various attributes that remain dynamic and complex, and some of the components include the background of the students, institutional elements, student and teacher characteristics and curriculum, teaching process including out of class activities, and in-class activities and acquisition which require the achievement of the students. Various studies have tried to address the mathematics achievement gap at various levels and the student factors, family factors, and school factors. Some have discovered the impact of single elements such as gender and class size on the achievement gap. Others have studied the effects of race and ethnicity, family background, learning environment, gender, and type of schools on the mathematics achievement gap. In the following section, I will discuss the data analysis and the findings of the study. I will begin by laying out the data in the tables below.

Table A1

National Center for Education Statistics (2019). Nations Report Card.

Year	Jurisdiction	White	Black	Hispanic	Asian/Pacific Islander
		Average scale score	Average scale score	Average scale score	Average scale score
2017	National	292	260	268	310
	California	293	255	262	311
2015	National	291	260	269	305
	California	291	260	263	303
2013	National	293	263	271	306
	California	291	258	263	305
2011	National	293	262	269	302
	California	290	254	260	298
2009	National	292	260	266	300
	California	289	250	256	294
2007	National	290	259	264	296
	California	287	253	256	293
2005	National	288	254	261	294
	California	284	248	254	293
2003	National	287	252	258	289

Year	Jurisdiction	White	Black	Hispanic	Asian/Pacific Islander
		Average scale score	Average scale score	Average scale score	Average scale score
	California	283	246	250	287
2000	National	283	243	252	287
	California	277	235	242	283
2000	National	284	245	252	286
	California	278	241	245	282
1996	National	280	241	250	†
	California	277	244	245	278
1992	National	276	236	247	290
	California	275	233	239	277

Note. National Assessment of Educational Progress.

Table A2

National Center for Education Statistics (2019). Nations Report Card.

Year	Jurisdiction	Male	Female
		Average scale score	Average scale score
2017	National	282	282
	California	277	277
2015	National	281	281
	California	275	276
2013	National	284	283
	California	277	275
2011	National	283	282
	California	273	273
2009	National	283	281
	California	272	268
2007	National	281	279
	California	270	270
2005	National	278	277
	California	269	268
2003	National	277	275
	California	268	266
2001	National	273	271

Year	Jurisdiction	Male	Female
		Average scale score	Average scale score
	California	259	260
2000 ¹	National	276	273
	California	262	262
1996	National	270	268
	California	—	—
1994	National	270	271
	California	264	261
1992	National	266	267
	California	260	262
1990	National	262	261
	California	258	255

Note. National Assessment of Educational Progress.

Table A3

National Center for Education Statistics (2019). Nations Report Card.

Year	Jurisdiction	Did not finish high school	Graduated high school	Some education after high school	Graduated college	Unknown
		Average scale score	Average scale score	Average scale score	Average scale score	Average scale score
2017	National	265	266	281	294	263
	California	262	260	274	294	259
2015	National	265	268	282	293	263
	California	261	263	278	293	259
2013	National	267	270	285	295	266
	California	260	266	279	292	259
2011	National	265	271	285	294	265
	California	254	261	281	290	257
2009	National	265	270	283	294	264
	California	258	261	278	287	254

Year	Jurisdiction	Did not finish high school	Graduated high school	Some education after high school	Graduated college	Unknown
		Average scale score	Average scale score	Average scale score	Average scale score	Average scale score
2007	National	263	270	283	291	263
	California	255	262	277	286	254
2005	National	259	267	280	289	260
	California	252	258	274	284	252
2003	National	256	267	280	287	258
	California	246	255	275	282	250
2000	National	253	260	277	285	253
	California	242	249	269	279	236
2000	National	255	263	279	286	255
	California	244	251	270	281	239
1996	National	250	258	276	280	251

Year	Jurisdiction	Did not finish high school	Graduated high school	Some education after high school	Graduated college	Unknown
		Average scale score	Average scale score	Average scale score	Average scale score	Average scale score
	California	—	—	—	—	—
1994	National	254	260	279	281	253
	California	246	251	271	278	244
1992	National	249	257	270	279	251
	California	242	252	266	276	241
1990	National	241	255	267	274	240
	California	241	246	262	271	238

Note. National Assessment of Educational Progress.

Table A4

National Center for Education Statistics (2019). Nations Report Card.

			Average scale score	Average scale score	Average scale score	Average scale score
Did not finish high school	2017	National	265	249	266	291
		California	‡	‡	262	‡
	2015	National	268	251	266	295
		California	‡	‡	262	‡
	2013	National	270	252	268	288
		California	‡	‡	261	‡
	2011	National	272	249	266	285
		California	‡	‡	253	‡
	2009	National	271	251	265	294

		Average scale score	Average scale score	Average scale score	Average scale score
California		‡	‡	258	‡
2007	National	271	252	262	280
	California	‡	‡	254	‡
2005	National	267	244	260	275
	California	‡	‡	255	‡
2003	National	265	242	253	268
	California	‡	‡	243	‡
2000	National	262	‡	251	‡
	California	‡	‡	236	‡
2000	National	266	‡	248	‡
	California	‡	‡	‡	‡

		Average scale score	Average scale score	Average scale score	Average scale score
1996	National	256	‡	239	‡
	California	—	—	—	—
1996	National	261	‡	‡	‡
	California	‡	‡	‡	‡
1992	National	263	‡	240	‡
	California	‡	‡	238	‡
1990	National	246	‡	‡	‡
	California	‡	‡	241	‡

Note. National Assessment of Educational Progress

Table A5

National Center for Education Statistics (2019). Nations Report Card.

Graduated high school	2017	National	274	249	264	285
		California	‡	‡	258	‡
	2015	National	275	246	265	287
		California	‡	‡	253	‡
	2013	National	278	251	267	296
		California	275	‡	258	‡
	2011	National	279	251	266	275
		California	273	‡	254	‡
	2009	National	280	252	266	286
		California	271	‡	258	‡
	2007	National	280	250	263	279
		California	274	‡	255	‡
	2005	National	277	246	260	283

	California	270	241	252	283
2003	National	277	245	259	276
	California	267	‡	247	‡
2000	National	270	233	245	‡
	California	‡	‡	‡	‡
2000	National	272	236	247	‡
	California	‡	‡	‡	‡
1996	National	266	234	255	‡
	California	—	—	—	—
1996	National	268	237	244	‡
	California	270	‡	243	‡
1992	National	264	230	245	‡
	California	258	‡	242	‡
1990	National	261	238	‡	‡

	California	258	‡	232	‡
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Note. National Assessment of Educational Progress.

Table A6

National Center for Education Statistics (2019). Nations Report Card.

Some education after high school	2017	National	288	263	276	294
		California	290	‡	269	‡
	2015	National	288	264	278	304
		California	287	‡	267	‡
	2013	National	292	269	279	296
		California	296	‡	272	‡
	2011	National	291	266	280	299
		California	284	‡	277	‡
	2009	National	291	266	277	298
		California	289	263	275	‡
	2007	National	291	265	273	295
		California	290	265	266	‡
	2005	National	288	261	269	289

		California	286	253	263	295
2003	National		288	258	270	290
	California		283	257	262	†
2000	National		288	255	265	†
	California		278	†	265	†
2000	National		289	258	271	†
	California		278	†	†	†
1996	National		286	249	†	†
	California		—	—	—	—
1996	National		284	261	†	†
	California		281	†	†	†
1992	National		278	244	†	†
	California		278	†	†	†

1990	National	273	†	†	†
	California	276	†	†	†

Note. National Assessment of Educational Progress.

Table A7

National Center for Education Statistics (2019). Nations Report Card.

Graduated college	2017	National	301	264	279	321
		California	300	260	273	320
	2015	National	300	265	282	315
		California	299	278	278	306
	2013	National	302	266	281	318
		California	302	259	274	317
	2011	National	302	264	280	314
		California	302	253	267	309
	2009	National	302	264	276	311
		California	300	253	263	303
	2007	National	300	262	275	307

	California	294	246	266	301
2005	National	297	259	271	306
	California	293	254	262	304
2003	National	296	256	272	300
	California	291	257	265	300
2000	National	295	246	260	302
	California	288	‡	‡	‡
2000	National	294	248	262	301
	California	286	‡	‡	‡
1996	National	289	245	264	‡
	California	—	—	—	—
1996	National	289	242	271	‡
	California	287	‡	257	296
1992	National	284	239	259	‡

		California	283	‡	‡	287
	1990	National	280	239	‡	‡
		California	276	‡	‡	279

Note. National Assessment of Educational Progress.

Math Score Achievement Gap in California

From the data, it is evident that the achievement gap was broader before the implementation of the No Child Left Behind Act in the year 2001. Since the enactment of No Child Left Behind, the achievement gap has minimized substantially, although at a slow rate. Therefore, according to NAEP (2018), closing the achievement gap could take longer. The reading, science and math score was minimal in the 1990s, according to Wright & Wright (2019).

The main goal of the 2001 No Child Left Behind Act (NCLB) was to bridge the racial gap. However, despite the gap narrowing substantially in the 1980s and 1970s, it only slightly narrowed in the 1990s and remained larger in the year 2001. Due to the dissatisfaction with the progress on the achievement gap, Congress passed the No Child Left Behind Act (NCLB) in the year 2001. The act ensures that all children access significant, equal, and fair opportunities to get a high-quality education and achieve proficiency on the rigorous State achievement standards as well as an academic assessment of the State. The objective was achievable through bridging the achievement gap between the low and high performing students, including non-minority and the minority students, as well as between disadvantaged students and advantaged students. The NCLB Act dictated that test results must be reported publicly for every educational institution, disaggregated by socioeconomic status and race, among others factors, and connected to the sanctions at the level of the school.

The National Assessment of Educational Progress or NAEP highlights that the achievement gap in reading and math between the Black and the White students has substantially narrowed in the last forty years. Gaps in math between the Hispanic and White populations have stagnated since the 1970s. The first year the Hispanic students were disaggregated. However,

despite progress, the achievement gap has remained large—from two-third to less than one standard deviation, depending on the subject and the grade. Data indicates that the White-Hispanic and White-Black achievement gaps have continued to narrow slowly throughout the 2000s. However, the racial achievement gap remains evident, and data suggested that the narrowing rate of the White-Black gaps in reading and math has significantly slowed over the last decade. There is no evidence that the racial achievement gap began bridging any faster after the introduction of the No Child Left Behind Act in 2001. The data demonstrates that the achievement gap was wider before the implementation of the No Child Left Behind Act in the year 2001. However, it has continued to reduce substantially and at a slow rate indicating that bridging the gap can take a long time, according to NAEP (2018). Wright & Wright (2019) state that the long-term trend demonstrated little change in math, science, and reading in the 1980s and 1990s.

From the 2019 test based scores in California schools, it is evident that the math percentage gap in schools that changed was minimal. The Alfred B. Noble Charter Middle school had a -0.10% change from 2018 to 2019, Middleton Street Elementary school had a change of -1.87%, Marshall Middle school had a change of -0.96%, Zamorano Elementary school had a change of -1.89%, the Katherine L. Albiana Middle school had a change of -3.33%, Carol Elementary school had a change of 1.79%, Giannini Middle school had a change of -2.18%, Monetara Middle school had a change of -5.52%, and Greenleaf Elementary school had a change of -2.46%. The data demonstrated that the math score did not change much over the years, showing that the achievement gap in math still exists (EdSource, 2019).

Economic Status, Gender, and Achievement Gap

The low-income students in California who failed to meet expectations in math stood at 45%, those who nearly met the standards were 27.50%, those who met the standards were 17.14% while those who exceeded the standards stood at 10.34%. The results demonstrate that the status gap still exists despite the adaption of the NCLB, and more needs to be done to bridge the gap. Furthermore, the female students in California who failed to meet expectations in math stood at 33.85% alongside male students 33.85%; 26.71% of female students nearly met the standards, compared to 24.17% of male students. 20.68% of female students met the standards, while males stood at 19.42%. The female students who exceeded the standards stood at 18.76%, with the male students at 20.58% (EdSource, 2019). The results indicated that female students were performing better than male students in math subjects, indicating gender equality.

The NAEP (2018) female and male student scores for the fourth-graders and the eighth-graders included the following: the achievement gap between male and female fourth-graders stood at -1 in 1990, -2 in 1992, and in the year 1996, the achievement gap was zero. In the year 2000, the achievement gap stood at -3. In the year 2003, the achievement gap was -3, while in the year 2005, the achievement gap stood at -3. In the year 2007, the achievement gap was -2. In the year 2009, the achievement gap stood at -2. In the year 2011, the achievement gap stood at -1. Furthermore, in the year 2013, the achievement gap remained at -1. In the year 2015, the achievement gap stood at -2 while in the year 2017, the gap stood at -2. The achievement gap between male eighth-grade students and the female eighth-grade students in the year 1990 stood at -1, 1992 the achievement gap stood at -1, and in the year 1996, the achievement gap was -2. In the year 2000, the achievement gap stood at -2. In the year 2003, the achievement gap was -2, while in the year 2005, the achievement gap stood at -2. Additionally, in the year 2007, the

achievement gap was -2. In the year 2009, the achievement gap stood at -2. In the year 2011, the achievement gap stood at -1. Furthermore, in the year 2013, the achievement gap remained at -1. In the year 2015, the achievement gap stood at zero, while in the year 2017, the gap stood at -1 (NAEP, 2018). Data indicated that no gender achievement gap existed since the 1990s to the 200s. For fourth-grade and eighth-grade students, the gap ranged from -1 to -3, showing gender equality in the achievement gap.

The White students in California who failed to meet standards in math stood at 21.58%, and Hispanics stood at 43.98%. The African-American student population who did not meet the standards was 54.55%, Asian-American was 10.76%, Pacific Islander was 38.47%, Filipino was 16.77%, while the American Indian and Alaskan Native stood at 47.25%. The White students in California who nearly met the standards in math stood at 24.18% and Hispanics stood at 28.0%. The African-American who did not meet the standards was 24.9%, Asian-Americans were 14.88%, Pacific Islander was 28.93%, and Filipino was 23.17% while the American Indian and Alaskan Native stood at 26.1%. The female students who met the standards were 20.68%, while the male students were 19.42% (EdSource, 2019).

The White students in California who met the standards in math stood at 25.36%, and Hispanics stood at 17.72%. The African-American who met the standards was 13.53%, Asian-Americans were 21.59%, Pacific Islander was 19.9%, Filipino was 27.31% while the American Indian and Alaskan Native stood at 32.21%. The White students in California who exceeded the standards in math stood at 28.87%, and Hispanics stood at 10.33%. The African-American student population who exceeded the standards was 7.02%, Asians were 52.78%, Pacific Islander was 12.7%, Filipino was 32.21% while the American Indian and Alaskan Native stood at 10.35% (EdSource, 2019).

From the data, it is evident that the Hispanics, American Indian, Pacific Islander, and the African-American students performed more poorly than the White students, Asian students, and Filipino students. Therefore, despite the implementation of the No Child Left Behind Act of the year 2001, the racial gap in achievement still exists and remains evident. This could be due to various factors, including the income status of the parent, out of school factors, and social capital, among others. Coleman discovered that there exists a significant achievement gap separating the White and the Black students and observed that family background played a considerable role in the achievement gap. The research stated that both community, home, and in-school factors affect the students' achievement gaps and contribute to the achievement gap. The inequalities imposed by the children's peer environment, neighborhood, and home affect their adulthood at the end of the school.

According to the National Assessment of Educational Progress NAEP (2018), there has been no gender achievement gap since the 1990s and 2000s, and the gap ranged from -1 to -3 for fourth-grade and eighth-grade students. Additionally, the achievement gap between White and Black scores in 1990 was 32, in the year 1992 the gap was 35, in 1996 the achievement gap was 34, in the year 2000 the achievement gap stood at 31, in 2003 the gap was 27, in 2005 the achievement gap was 26, in the year 2007 the achievement gap stood at 26, in 2009 the gap was 26, in 2011 the achievement gap was 25, in 2013 the achievement gap was 26, in 2015 the gap was 24, and in 2017 the achievement gap stood at 25. Therefore, the data indicated that in the 1990s, the achievement gap between the White students and the Black students remained higher than from 2003 to 2017. Additionally, the achievement gap between White and Hispanic score in 1990 was 20, in 1992 the gap was 25, in 1996 the achievement gap was 25, in 2000 the gap stood at 27, in 2003 the gap was 22, in 2011 the gap was 20, in 2013 the achievement gap was 19, in

2015 the gap was 18, and in 2017 the gap stood at 19. The data indicates that the White and Hispanic achievement gap was higher in the 1990s, but reduced substantially in the 2000s after the passing of the No Child Left Behind Act of the year 2001. Therefore, the achievement gap has been reduced at a slower rate after the NCLB Act was adopted. However, the racial achievement gap remains evident.

The results according to ethnicity or race indicated that Asian students performed very well in mathematics with more than of the students or 52.78% of the students exceeding the math standards, 21.59% meeting the standards, 14.88% nearly meeting the standards and 10.76% not meeting the standards. Furthermore, the White students also performed well in mathematics with 8.87%, exceeding the mathematics standards, 25.36% meeting the standards, 24.81% nearly meeting the standards, and 21.58% not meeting the standards. The Filipino students seemed to perform better with 32.21% exceeding the math standards, 16.23% met the math standards, 26.17% nearly met the math standards, and 16.77% did not meet the math expectations (EdSource, 2019).

The Black students seemed to perform poorly with only 7.02% exceeding the math standards, 13.53% meeting the standards, 24.9% nearly meeting the standards, and more than half of 54.55% not meeting the standards. Hispanic students performed poorly with 10.33% exceeding the math standards, 17.72% meeting the standards, 28.0% nearly meeting the standards, and 43.94% not meeting the standards. The American Indian and Alaskan Native students performed poorly with 10.35% exceeding the math standards, 16.23% meeting the standards, 26.17% nearly meeting the standards, and 47.25% not meeting the standards. The Pacific Islander students did not perform well with 12.7% exceeding the math standards, 19.9%

meeting the standards, 28.93% nearly meeting the standards, and 38.47% not meeting the math standards (EdSource, 2019).

Additionally, for the fourth-grade students, the White and Black student achievement gap score in 1990 stood at 32. In 1992 the achievement gap stood at 35, and in the year 1996, the achievement gap was 34. In the year 2000, the achievement gap stood at 31. In the year 2003, the achievement gap was 27, while in the year 2005, the achievement gap stood at 26. In the year 2007, the achievement gap was 26. In the year 2009, the achievement gap stood at 26. In the year 2011, the achievement gap stood at 25. Furthermore, in the year 2013, the achievement gap remained at 26, in the year 2015, the achievement gap stood at 24, while in the year 2017, the gap stood at 25 (NAEP, 2018).

The White and Hispanic student achievement gap score in the year 1990 remained at 20, while in the year 1992, the achievement gap stood at 25. In the year 1996, the achievement gap remained at 25, in the year 2000 the achievement gap was 27, in the year 2003 the achievement gap stood at 22 while in the year 2005, the 2009 the achievement gap stood at 21, and in the year 2011, the achievement gap stood at 20. In the year 2013, the achievement gap stood at 19, in the year 2015, the achievement gap stood at 18 while in the year 2017, the achievement gap was 19 (NAEP, 2018).

According to NAEP (2018), the eighth-grade White and Black students' achievement gap score in 1990 stood at 24, in 1992 the achievement gap stood at 40, and in the year 1996, the achievement gap was 41. In the year 2000, the achievement gap stood at 40. In the year 2003, the achievement gap was 35, while in the year 2005, the achievement gap stood at 34. In the year 2007, the achievement gap was 32. In the year 2009, the achievement gap stood at 32. In the year 2011, the achievement gap stood at 31. In the year 2013, the achievement gap remained at 31, in

the year 2015, the achievement gap stood at 32, while in the year 2017, the gap stood at 32. From the data, it's evident that in the 1990s, the achievement gap between the Black and the White students was higher than from the year 2003 to the year 2017 after the implementation of the No Child Left Behind Act, which was meant to close the achievement gap in the United States.

Additionally, the White and Hispanic students' achievement gap score in the year 1990 for eighth-grade students stood at 24, while in the year 1992, the achievement gap stood at 28. In the year 1996, the achievement gap stood at 30, in 2000, the achievement gap was 31, in the year 2003, the achievement gap was 29, while in the year 2005, the achievement gap was 27. In the year 2007, the achievement gap was 26, in the year 2009, the achievement gap stood at 26, and in the year 2011, the achievement gap stood at 23. In the year 2013, the achievement gap was 22. In the year 2015, the achievement gap stood at 22, while in the year 2017, the achievement gap stood at 24, according to NAEP (2018). The data indicated that the White and Hispanic achievement remained higher in the 1990s. However, after the adaption of the No Child Left Behind Act in 2001, the achievement gap substantially minimized in the 2000s. Therefore, the results indicated that the closing of the achievement gap has been minimized at a slower rate after the adaption of the No Child Left Behind Act. However, the results still indicated that the racial achievement gap still exists despite the No Child Left Behind Act.

Some of the elements that could have led to the racial achievement gap in mathematics include the social capital and the parent out of school elements, among others. Coleman found that the achievement gap that divided the White and Black students and observed that family background played a considerable role in the achievement gap. The research indicated that in-school factors community and home factors impact the achievement gaps of the students and has

contributed to the achievement gap. The inequalities exposed by the peer environment, neighborhood, and home of the children also influence their adulthood (Coleman, 1998).

Parent's Education Level and Achievement Gap

According to the National Center for Education Statistics (2019), the attributes of children's families remain connected with the educational experiences and academic achievement. In 2017, 10% of the children aged below 18 years lived parents who had not accomplished high school education. 19% lived with parents whose highest level of education was high school education, and 20% resided with parents who had attained an associate degree as their highest level of education. 26% of the students lived with single parent (mother) families, 8% lived with a single parent (father) families, and 18% lived in households in poverty (National Center for Education Statistics, 2019).

Furthermore, the NCES (2019) claimed that lower percentages of children aged 18 years and below lived without parents with high school education compared to the year 2010. In 2017, children with parents who had attended high school stood at 19%, while in 2010, the number stood at 20%. In 2017, the percentage of children with parents who had attained college education stood at 20%, while in the year 2010, the number stood at 23%. Furthermore, in 2017, the children residing with parents with a higher degree or a Bachelor's degree stood at 41% compared to 35% in the year 2010. The percentage of Asian-American children with parents who had completed a higher degree or Bachelor's degree stood at 68%, and White Children with parents who had completed a higher degree or Bachelor's degree stood at 52%. The percentage of children of two or more races with parents who had completed a higher degree or Bachelor's degree stood at 46% while Black children with parents who had completed a higher degree or Bachelor's degree stood at 26%. Pacific Islander children with parents who had completed a

higher degree or Bachelor's degree stood at 21%, while the percentage of American Indian/Alaskan children with parents who had completed a higher degree or Bachelor's degree stood at 21%. The percentage of Hispanic children with parents who had completed a higher degree or bachelor's degree stood at 20% (National Center for Education Statistics, 2019).

In 2017, the percentage of Hispanic children with parents who had completed high school stood at 23%, and the percentage of American/Alaskan children with parents who had completed high school stood at 10%, while the percentage of Black children with parents who had completed high school was 9%. The percentage of Asian-American children with parents who had completed high school stood at 7%, Pacific Islander children with parents who had completed high school stood at 6% while children of two or more races with parents who had completed high school composed 5%. The White children with parents who had completed high school stood at 4%. These results indicate that the percentages of students living in families without a parent who had finished high school remained lower for White children compared to children from other races and ethnicities (National Center for Education Statistics, 2019).

Data Analysis and Findings Summary

The data indicated that the achievement gap in math and English language remains prominent among minority students. Despite the improvement of the math achievement gap among the White, Black, Latino, and Asian-American students, the improvement remains different between them. The African-American population had the lowest improvement rate from 37% to 47% for six years, followed by the Hispanic population, which grew from 45% to 53%. The White population had a higher improvement rate of 74% to 76% while Asian-American students demonstrated the highest rate of improvement of 73% to 84% in six years.

Chapter V. Recommendations and Conclusion

Families can powerfully impact student achievement, and the Coleman Report tested the influence of family background through a series of questions posed to understand the effect of parental and peer background more clearly. Coleman's findings confirmed that family background was a highly significant source of considerable inequality. Coleman and his colleagues concluded that inequalities in the wealth of a household and family priorities affected a child's achievement.

Coleman claimed that the family background contains financial, human, and social capital. Financial capital is tested by the wealth of the household and offers the physical resources that can support achievement, such as a stable home for a child to learn, learning materials, and money to meet the family needs. The parents' educational level measures human capital, and it determines whether or not children are provided with optimal cognitive settings for learning. Furthermore, the social capital within a family provides children access to human capital and relies on the physical presence of an adult and attention provided to the children. The physical unavailability of a grown-up in a child's life is more pronounced in single parent households or in nuclear households where the parents remain unavailable. The availability of a parent must be combined with a sufficient connection with the children to ensure that the social capital in the family is fulfilled (Coleman, 1998).

Furthermore, the home and capital elements affect the achievement gap due to time spent by students in their homes and the community vs. the time spent at the educational institutions, and the in-school factors affecting the children in poverty remain distinct with the elements impacting the children from middle-income households. Greenway (2017) stated that well-prepared kindergarten students, as measured by their behavioral, social, and academic domains,

tend to perform better than those who are not well prepared. They tend to score higher on standardized tests, graduate on time, and graduate with higher grades than those who are unprepared for kindergarten. In the United States, the most impacted students originate from low-income families, and they include minority groups. Students from low-income households remain less prepared for kindergarten education. They do start kindergarten with basic skills in mathematics, but they start middle school unprepared to remain successful in college courses in high mathematics (Berry et al., 2009).

Therefore, the concerned authorities must develop policies and programs to ensure that students from low-income households remain well prepared for kindergarten and middle school so that they can progress to colleges and reduce their risk of dropping out of school. Parents from low-income households lack sufficient funds to provide their children with necessary materials, which can affect students' learning (Bomberg & Theokas, 2013). Research demonstrates that learning schools improve levels of achievement by influencing additional direct involvement, such as engaging in homework completion discussions if struggling students possess limited content knowledge and resources (EdSource, 2011).

Children should meet various developmental milestones before they initiate schooling, including language, art application skills, social development, mathematical thinking, and physical development. Children with less or uneducated parents and guardians and students from low-income families have a higher likelihood of arriving unprepared to kindergarten compared to children from high-income families with more educated parents (Balfanz & Byrnes, 2006). School readiness depends on various elements, including the home setting, emotional, social and physical health of the student, cultural identity, and economic status. For instance, higher numbers of Hispanic and African-American students live in low-income areas while higher

numbers of White students reside in high-income neighborhoods because of existing class and racial discrimination (Billings, 2005).

Students from public educational institutions experience various disadvantages, and most minority populations attend public schools due to the low income of their families. Some of the disadvantages include less preparedness for school, lack of learning materials, lack of funds, less qualified educators, larger classroom sizes, lack of educated parents who remain less engaged, and lack of appropriate learning environments at home (Ladson-Billings & Tate, 2006). Private school populations are disproportionately White and the Asian-American students from high-income families, and these students enjoy various benefits, including more engaged and educated parents, appropriate learning settings, adequate funds, adequate learning materials, highly qualified educators, smaller classroom sizes, additional extra-curriculum activities, and higher levels of school readiness. They further enjoy the benefit of more success in the process of college admission as well as in the labor market (Rojas-LeBouef & Slate, 2011).

According to Kozol, underfunded educational institutions can result in a generation of failure because students are not granted opportunities to showcase their talents and fulfill their potential. The author claims that most educational institutions in the United States remain segregated and fail to flourish as expected due to underfunding. There existing funding inequalities between private and public schools and urban schools attended by students from low-income families and suburban schools. The author further argues that Hispanic and Black students experience inequality in educational institutions, and White students access more funding, highly qualified teachers, and high-quality education than the low-income schools with minority students. The data analysis demonstrates that Hispanic and African American students

tend to get lower scores, and an achievement gap remains evident in schools in California despite the implementation of the No Child Left Behind Act in the year 2001 (Autin et al., 2015).

Out-of-school factors mostly impact students from low-income households, including minority populations (National Education Association, 2018). The out-of-school elements associated with poverty are the key cause of the existing gap between children from low-income households and students from high-income backgrounds. The elements are associated with school drop-out, attention disorder, under development in English, unpreparedness for school, defiant behaviors, and absenteeism. Schools in the United States are still segregated by race, ethnicity, and income, and poverty issues happen in low-income institutions with minority students such as the African American population, thereby impacting their achievement in school (Allen, 2017).

Schools utilizing the state accountability data from the third-grade to eighth-grade from 2008 to 2016 show that average schools failed to indicate any gender achievement gap in mathematics (Rearden et al., 2018). The mathematics gap seemed to favor male students from high-income school districts and the districts with greater gender disparities in adult incomes, education, and occupations. The results from the study indicate that no gender achievement gap has existed since the 1990s. For fourth-grade and eighth-grade students, the gap ranged from -1 to -3, demonstrating gender equality in the achievement gap. The female students seemed to perform mathematics better than the male students, demonstrating gender equality in mathematics achievement in California (NAEP, 2018). Furthermore, the results indicated that the closing of the achievement gap has been minimized at a slower rate after the adaption of the No Child Left Behind Act. However, the results still indicated that the racial and ethnic achievement gap exists despite implementing the NCLB Act in the year 2001.

From the data, the math achievement gap remains evident in most California schools, where 45% of students failed to meet mathematics standards despite the adaption of the No Child Left Behind Act. Therefore, more efforts remain necessary to bridge the gap (California Department of Education, 2017). The results indicated that the percentages of students living in homes without a parent who had finished high school remained lower for White children compared to children from other races. The attributes of children's families remain connected with educational experiences and academic achievement (National Center for Educational Statistics, 2019).

Schools in the United States face an important challenge of bridging the academic achievement gap among minority students, especially students from Hispanic and African-American backgrounds (Kamm, 2018). Math and reading performance among minority students needs improvement to support the graduation of students from high school as well as universities, in addition to success in trade and vocational schools (Balfanz & Byenes, 2006; Autin et al., 2015). The challenges remain huge. However, if the communities, politicians, school districts, teachers, and parents work as a team in an ongoing and concentrated effort, the gap can be closed (Constantine & Sue, 2006). In the year 2000, the National Assessment of Education indicated that in math and reading assessment, 28% more Caucasians scored at the proficient level in reading than the corresponding African-American student population, and 29% more Caucasians scored at the proficient level in math (Byun & Park, 2012; California Department of Education, 2017).

Furthermore, in almost five thousand schools with high populations of minority students and high levels of poverty, student populations scored in the top third of all educational institutions in their respective States (Autin et al., 2015; Pong et al., 2005). Therefore, in the

United States, the opportunity and achievement gap still exists between students of various socioeconomic groups, abilities, and linguistic, ethnic, and racial groups. Most schools try to minimize the achievement gap and enhance equitable results for students. However, eliminating the achievement gap remains a complex process and needs support from various stakeholders, policy changes, and different long term interventions (Berry et al., 2009). Some of the strategies that remain effective in closing the gap include the following:

- Educational institutions should ensure that the members of the community without or with children attend board meetings regularly.
- Members in the community should be provided with opportunities to address the school board and motivate positive transformations as well as responsible decision making.
- The board must include some community members to affect the transformations directly (Byun & Park, 2012; Billig, 2005).
- Schools must develop an environment with high expectations (President & Wilson, 2007). This can be developed by every educational institution though functioning with a powerful sense of purpose and incorporated efforts by all the members in the community to enhance the academic success of every student (Billig, 2005).
- Educational success and enhancements must be publicized to the public through local television announcements, news articles, street banners, award and picture events, and ceremonies (Balfanz & Byrnes, 2006).

Students who are not exposed to rigorous courses fail to perform well compared to those that undertake rigorous classes. Minority students remain underrepresented in advanced placement courses and remain overrepresented in special education, from elementary school through high school (Billig, 2005; President & Wilson, 2007). As a result, schools appear to

contribute to the gap by concentrating more on multicultural curriculum than advanced program placements (Constantine & Sue, 2006). The inclusion of multicultural curriculum remains important. However, it must remain within the academically rigorous curriculum (Hassan & Mahmoud, 2011). Additionally, since the expectations of the teachers greatly affect the achievement of students, lower teacher expectations lead to a gap among non-minority and minority students. Therefore, teachers must be trained and their attitudes evaluated before they are offered employment. Furthermore, school districts must ensure that the hiring of minority teachers remains a priority (Feliciano, 2005).

The community should offer supplementary academic programs for all students, both the underachievers and the achievers. Research indicates that lack of academic program during summers impacts the academic success of low-income students negatively. Children from high-income households engage in learning practices during summer, while those from low-income households do not (Lather, 2007; President & Wilson, 2007). Therefore, communities must adopt more supplementary weekend, after-school, and summer academic programs to assist African-American students as well as promote artistic and cultural talent. All the students, including the above average, average, and the struggling students, must enjoy year-round learning activities and classes as well as camps (McGee, 2004). Well-established summer and after-school programs boost children's performance indirectly and directly by improving engagement in school (Berry et al., 2009; Bomberg & Theokas, 2013).

At-risk students must have mentors. Many African-American people lack powerful role models from their households, and so mentoring programs remain very significant. The Sheriffs and the local police should participate in such programs to develop positive interaction between local law enforcement and African-American students (Xie & Goyette, 2003; Billig, 2005).

Educational institutions should offer comprehensive support for students by screening children early for social and medical services. They must further work with the community, social services, and medical agencies to determine the students in need of more instructional support. Schools must support students through role models, peer support networks, tutoring, and mentors (Wasonga, 2009; President & Wilson, 2007).

High school students should be included in community services, as these activities help to develop positive interactions with the local community and better insight into minority students and society. It further establishes opportunities for paid work, and each community agency and business must participate in the programs (Bomberg & Theokas, 2013).

All children between three to five years old must get pre-school education. Studies indicated the lack of high-quality pre-school education remains a key element contributing to the math achievement gap in the United States (U.S. Department of Education, 2002; President & Wilson, 2007). Most minority students start schooling less prepared for school compared to non-minority students. Almost 63% of African-American and 37% of Hispanic students participate in pre-school programs (U.S. Department of Education, 2002; Billig, 2005). Early high-quality child education and care that meaningfully engages parents early remains an appropriate strategy to bridge the achievement gap. Early, high-quality childhood education assists in narrowing the gap in addition to delivering long term advantages to children, their families, and society (Balfanz & Byrnes, 2006; Contantine & Sue, 2006).

It remains significant for schools to link with parents and the community because the parents and community in low-quality educational institutions are less engaged in the schooling of their children, because of economic and social reasons (Strutchens, 2000; President & Wilson, 2007). As a result, policies that connect parents with the educational institutions must establish

policies that align educational efforts and parental efforts. The connections will empower the schools and the children, and enhance their performance, and contribute to bridging the achievement gap (Stinson, 2006).

Districts should leverage partnerships to link parents with various educational institutions and community resources that support the children from birth to the time they start kindergarten. The partnerships include local community non-profit agencies and social service agencies to enhance parents' access to nutrition, mental health, and other resources (Atkinson, 2010; President & Wilson, 2007). Early engagement and education for parents will assist in preparing children for academia. The districts can develop a team that works together with the households to monitor and set the progress towards early childhood goals as well as connect family support to objectives in behavioral health, finance, career, housing, and academics (HB 2722 Advisory Committee, 2008). Parents remain their children's first and most significant teachers, and classes for parents offer them with adequate information on constructive disciplinary activities, health, early literacy, and child development as well as more specific guidance (Gavin et al., 2009; Billig, 2005).

The government and the concerned stakeholders must retain and attract high-quality teachers. Studies indicate that disadvantaged educational institutions with minority students may experience a lack of highly qualified educators (Smith, 2015). Therefore, strategies must be created to increase the number of excellent teachers in the educational institutions by providing educators with mentoring programs and adequate financial incentives to attract as well as retain teachers who can work meaningfully with minority students and develop favorable working conditions (Shafer, 2017; President & Wilson, 2007).

The government and the concerned stakeholders should create effective classroom learning methods. According to Rojas-LeBouef & Slate (2011), the government should create laws and policies that facilitate learning for minority students and motivate the use of the balanced combination of student-centered instructions that align with evaluation and curricular exercises. The teachers should utilize formative and summative evaluations in addition to the evaluation of diagnostic tools to monitor students' progress (Berry et al., 2009; Billig, 2005).

The government should foster a supportive educational setting in educational institutions (Atkins, 2010). Research indicates that schools that perform poorly face learning environment challenges and the concerned stakeholders and authorities should establish certain laws that focus on these educational institutions, including adequate counseling for the students to improve the data information systems and support students to continue with their studies (Allen, 2017). The laws must encourage smaller classroom sizes to motivate the teacher-student interactions and student-to-student interaction in addition to improving the learning methods (Buenstro, 2016).

The education department should support and empower school leadership (Byun & Park, 2012; Billig, 2005). Leadership and administration remain the initial milestone for transforming the poor performing educational institutions. However, the majority of leaders are unprepared and are not selected well (Byun & Park, 2012). The education department and other stakeholders should prepare the leaders and provide expertise and specialized knowledge to handle the educational institutions. Coaching and mentoring networks can be created to offer more support to the leaders to achieve permanent transformations. It remains important to attract and retain experienced and competent leaders, and the working rules should provide the necessary working conditions and terms, incentives, as well as other supporting systems (Constantine & Sue, 2006).

Minimizing the achievement gap requires coordination among students, parents, teachers, and administrators (Riley, 2014; President & Wilson, 2007). The achievement gap has developed and is perpetuated by a mixture of out-of-school and in-school elements, some of which remain beyond control. The interventions may remain general, and situated to a certain level, need, and a group of students (Reed, 2008). The State education department and the concerned stakeholders must ensure powerful district support by offering schools with timely assessment information and tests and engaging educators in empowering student assessment and curriculum. They must further minimize the sizes of the classroom and offer more support and resources to students facing the achievement gap (Kamm, 2018). Closing the achievement gap must remain a priority in the districts, and a successful leadership team should be created. The educators must be included in the development of continuous professional development and distribute the current study on successful methods to schools (HB 2722 Advisory Committee, 2008; Billig, 2005).

Educational institutions with limited disparity promote a high expectation culture and powerful teacher-student connections. The high expectations enhance the sense of motivation and efficacy among the students, which enhances their behavior, aspirations, and achievement (Pong et al., 2005; President & Wilson, 2007). Therefore, all schools must develop a high expectation culture to enhance students' motivation and efficacy. Furthermore, the achievement gap can be bridged through quality student-teacher relationships where the students perceive their teachers as responsive, sensitive, caring, supportive to their needs as well as respectful to their linguistic and cultural distinctions (Olszewski-Kubilius et al., 2016; Billig, 2005). Studies indicated that classrooms associated with responsive and sensitive interactions among students and teachers, students demonstrated a similar level of social and emotional engagement despite the self-efficacy (Ladson-Billings & Tate, 2006).

Cultural competency training offers a foundation for including linguistic and cultural experiences in schools. Cultural competency training motivates educators to remain culturally self-aware, value diversity, and integrate cultural knowledge in their classrooms (National Center for Education Statistics, 2018). The ELLs, or the English Language Learners, demonstrate better academic achievement when taught by educators with professional development on instructional and cultural strategies for teaching English Language Learners. Furthermore, administrators must ensure that their schools create an environment that respects cultural distinctions among the students (U.S. Department of Education, 2002). Schools should view diversity as an asset that can enhance the cultural competency of its faculty. The staff and the administrators must remain sensitive to the home cultures of students and capitalize and gain insight into the efforts, resilience, abilities, and culture of the students (McGee, 2004; President & Wilson, 2007).

The involvement of families in the education of students minimizes the achievement gap and remains positively connected with better academic achievement, behavior, attendance, and enhanced college and graduation rates (Kamm, 2018). Family involvement remains connected to the learning of students and targets certain skills. Educational institutions can enhance family integration by carrying out comprehensive communication and outreach with the families as well as fostering collaborative and trusting relationships that respect their differences (Constantine & Sue, 2006; Billig, 2005). The schools must ensure that they remain family-friendly, and family centers should be developed in the school and other locations within the community. The educational institutions must hire workers from within the community to integrate workers speaking the home languages of the students (Ladson-Billings, 2000). Additionally, educational institutions should offer transportation to and from school events as well as carry out adult parenting and education courses. On the other hand, the families must be advised to offer

students a conducive learning environment, participate in decision making within the school, and communicate effectively with the school staff—including the teachers and the support teams—as well as share high expectations of teachers and schools for the students (Le et al., 2009; Berry et al., 2009).

Most challenges can be solved by setting the expectations that all students will and can attend higher educational institutions including colleges and universities. Beginning with kindergarten, teachers and schools must speak to the students concerning colleges and allow them to visit the higher educational institutions (Bomberg & Theokas, 2013). By offering the students with exposure and resources to colleges and application processes to join the institutions early in the high school career of the students offers the students with information and tools to apply for, prepare for and joining the higher educational institutions (Radd, 2008; Billig, 2005).

Most students depend on the educational institution for college information, and high schools must offer students with college preparation information and strategies that will help them succeed in colleges through assisting with the contacts for college representatives, financial applications and college visits. School counselors play a significant role in offering parents information about college financial aid options and applications (Goodman, 2011). Educational institutions can enhance minority student achievement on college entrance assessment by offering access to preparation of the tests before they join the senior year. Schools must create a higher standard for achievement in the entrance exam to college and ensure that they gain insight into how the score connects to the admission process (McEwan-Adkins, 2009).

Schools must work towards closing the discipline gap and minimizing expulsion and suspension cases through the interaction of support and input from students, administrators and educators (Billig, 2005; Buenrostro, 2016). Regular reporting of data remains significant and

administrators and teachers should review the discipline and behavioral data of the students, trends for disaggregated by special education and ethnicity status and active decision making regularly. School-wide Positive Behavior Support remains a successful strategy to enhance the behavior of the students, including disabled students, and can minimize the racial discipline gap (National Center for Education Statistice, 2018). This includes a three-tiered program for avoiding issues that offers standard support for the students and more intensive support for individual students and small teams. Successful implementation of this program ensures the systematic adaption of positive behavioral support and processes at the school and classroom level (Berry et al., 2009; Billig, 2005).

According to Billig (2005), schools must develop a culture that recognizes high academic expectations, which can then be internalized by students. Educators holding the students to higher expectations and involving them with additional rigorous work contribute to reducing the achievement gap. The school principals play a vital role in developing a disciplinary technique that remains culturally and racially equitable and concentrates on preventive solutions to expulsion and suspension (Olszewski-Kubilius et al., 2016).

Educators should get progressive support and training for adapting positive behavioral support and intervention. This includes leadership coaches and teams and expert professional development to enhance their skills and knowledge of their connections with the cultural backgrounds of their students (Robert & Byrnes, 2006). Minimizing the discipline gap and minimizing suspensions are both goals that require commitment and support from all stakeholders. Principals remain important at school levels to narrow the racial disparities in the rates of expulsion and suspensions. Furthermore, the student and teacher level commitment remains significant in narrowing the suspension gaps (Billig, 2005; Grogan, 2017).

Educational institutions must determine the students at risk of not graduating at the right time immediately. Attributes of such students who fail to graduate on time include higher rates of absentism and very low achievement (Shafer, 2017). Educators and administrators must track the major transitions in the careers of their students and make necessary interventions to ensure that students remain on track. Schools should focus on enhancing the rates of on-time graduation in the entire school. Successful policies must be developed including enhancing the climate learning environment and enhancing academic support and behavioral interventions (Rojas-LeBouef & Slate, 2011). Furthermore, peer mentoring programs that link successful and trained older students with at-risk students can enhance the rate of graduating on time. Additionally, the educational institution's climate, including student-teacher connections, can contribute to the chances of a student graduating on time (Lee & Zhou, 2014).

When students feel challenged, cared about and respected by their teachers, they feel motivated, which increases their likelihood of graduating on time. Educational institutions must train students of all ages to minimize peer pressure which can contribute to failure to graduate on time (Billig, 2005; Smith, 2015). The efforts to promote on-time graduation rates can be enhanced by developing early warning systems for determining at-risk students and addressing their needs early. For instance, low achievement and attendance rates in middle schools remain contributing factors to not graduating in time. Therefore, schools must focus on the major transition points in students' academic careers to ensure they remain on track for graduation, beginning from kindergarten (Stinson, 2006).

All children must access high-quality pre-K education and develop readiness for education in kindergarten (Buenstro, 2016). Schools must ensure that all students can do grade-level math and read on grade level by the end of the second grade, and placement and

identification should be utilized exclusively for students with disabilities. Placement should not be based on English language proficiency, student behavior, and poor performance (Strutchens, 2000; Billig, 2005). Educational institutions must ensure that academic failure, behavior issues, and poor attendance are addressed through effective strategies that remain intensive and targeted in addition to the school-wide and on-time promotion to the next level with more support (Wasonga, 2009).

Elementary teachers must concentrate on enhancing math and reading proficiency before the students leave third grade to minimize future gaps (Greenway, 2017). Studies show that proficiency by third grade highly forecasts future academic achievement and rates of graduation (Billig, 2005; Gavin et al., 2009). Successful classroom-based activities that enhance reading and math proficiency of at-risk students require explicit, differentiated instructions and one-on-one tutoring (Autin et al., 2015).

Schools should provide classroom learning support through using different, successful methods to instruct diverse students and utilize tests and other data on the performance of the students in instructional planning (HB 2722 Advisory Committee, 2008). Furthermore, schools should target math and English literacy more as well as safeguard the instructional time. Administrators and educators should use the data and research to enhance their practice to bridge the achievement gap (Lee & Zhou, 2014).

Empower and Support School Leadership

Allen (2017) states that the school administration and leadership remain the starting milestone for changing the low-performing schools, but most school leaders remain unprepared and ill-selected. The educational department must prepare school leadership and management programs to prepare educational leaders and offer specialized and expert knowledge to deal with

the schools. Balfanz and Byrnes (2006) say that mentoring and coaching networks can be developed to provide additional support to the school leaders to gain long-term changes. It remains critical to retain and attract competent and experienced leaders, and working policies must offer appropriate working conditions, incentives, and other supportive systems.

Encourage Supportive Climate and Learning Environment in Schools

OECD (2012) state that low-performing school have challenging learning environments, and the concerned authorities must develop specific policies that concentrate on the schools, including enough counseling for the students, enhancing the data information system used for determining struggling students and elements that interrupt learning, and supporting students to continue with learning. Autin et al. (2015) discern that policies must also enforce smaller classrooms to encourage student-teacher interaction and student to student interaction as well as enhanced learning techniques.

Develop Successful Classroom Learning Techniques

Balfanz and Byrnes (2006) claim that the education department must develop policies that facilitate and ensure that the disadvantaged schools with minority students encourage the utilization of the balance mixer of student-centered instructions that match with the assessment as well as diagnostic tools to track the progress of students and ensure that they obtain adequate knowledge.

Retain, Support and Attract High-Quality Teachers

Constatine and Sue (2006) argue that disadvantaged schools that possess minority students may not have highly qualified teachers. Pang et al. (2011) state that the education department must, therefore, develop strategies that concentrate on increasing the teacher quality for the students and the schools by offering the teachers enough education training and

mentoring programs, enhance their retention, create favorable working conditions, and provide enough financial incentives to attract and retain qualified teachers who can handle the minority students.

Connect Schools with Parents and Community

Bomberg and Theokas (2013) claim that it remains critical to connect schools with community and parents because low-quality schools remain less involved in the schooling of their children due to social and economic reasons. Therefore, the California Department of Education (2017) stated that policies that associate the schools with the community and the parents must be developed to align with the parental and school efforts. The links will empower the students and the schools and improve performance by closing the achievement gap.

Increase Resources and Funding for Schools

The OECD (2012) state that the education department must design an appropriate funding system that responds to the students and the schools' needs. The HB 2711 Advisory Committee (2008) claims that secondary education must respond to the needs of the students because it enrolls many young students. The education builds on the knowledge and skills developed at the lower and primary education, and the greater the distinctions between students, the more difficult it becomes for schools to offer learning opportunities that take into account the interests of the students. In connection to the out-of-school factors that affect the students, the education department and the concerned stakeholders must offer summer programs for minority and low-income students to minimize summer losses in academic achievement (Pong et al., 2005).

The school administrators and the teachers should ensure that their school remains supportive through making bridging the achievement gap their responsibility and priority. They

must set higher expectations that offer deep and rigorous curriculum and emphasize academics (Buenrostro, 2016). Schools should offer an orderly and safe learning setting for teachers and students and use research and data on the performance of the students to inform instruction (Billig, 2005; Kamm, 2018). Additionally, schools must determine programs and strategies that remain effective in enhancing achievement and create successful school-wide leadership teams. The schools should offer ongoing professional development for school-based managers in successful strategies for bridging the achievement gap (Ladson-Billings, 2000).

Bomberg & Theokas (2013) highlight that the educational institutions must have sufficient funding and resources by targeting the resources that can bridge the achievement gaps in the schools. They must expand their capacity through more resources and engage foundations, universities and businesses in the work of the school (Rojas-LeBouef & Slate, 2011). They must further seek private, state and federal funding in collaboration with other agencies to leverage the NEA programs. Schools must encourage students celebrate achievements and encourage a no-excuse attitude to assist in closing the gap (Berry et al., 2009).

The education department and other stakeholders should provide access to qualified employees through enhancing their teacher learning programs. They must develop and retain qualified teachers (Xie & Goyette, 2003). The schools must attract highly qualified teachers to work with students with additional needs and compensate educators who are tasked with these additional responsibilities. The administration must offer adequate time for faculty to plan as well as meet and a data-driven and progressive professional development program (McEwan-Adkins, 2009). The teachers must be prepared to remain effective and knowledgeable on the school reforms and assist schools in working successfully with communities and families (Buenrostro, 2016).

At home learning settings require resources, including learning tools and books, among others, and homework involvement as well as high parental expectations assist in minimizing the achievement gap in math and reading (McGee, 2004). Educational institutions enhance student achievement levels by influencing additional direct parental involvement, and the learning environment must encourage parents to participate in offering a structured setting and participate in homework completion discussions if they possess limited content knowledge and resources (Billig, 2005; EDSOURCE, 2011).

The students should be encouraged to take individual responsibility for learning and engage with their classmates and educators as well as other people in the community and their school. The students should participate in learning and supplemental opportunities and programs to enhance their performance (Grogan, 2017).

The educators must utilize successful instructional strategies while teaching and maintain a high standard for the whole students by offering a rigorous curriculum. The school and district leaders should develop a professional learning community to close the gaps and provide support for learning and teaching through actions and priorities. Furthermore, they must share responsibility for enhancing school and district operations (Atkinson, 2010; Constantine & Sue, 2006). Educators should capitalize and gain insight into the diverse cultures of the students and assess their practices, beliefs and expectations through the equality lens (HB 2722 Advisory Committee, 2008). Teachers should act as the initial responders to determine the students in need of more instructional support and engage in professional development programs that offer them methods for working with at-risk students and their households (Billig, 2005; Constantine & Sue, 2006). Educational support professionals must act as connections to community and families and

offer instructional support in addition to acting as mentors for the students (Billig, 2005; Flores, 2007).

The ancient strategy of identifying students for talented and gifted programs tends to exclude socioeconomically, linguistically, ethnically, and racially diverse students (Bomberg & Theokas, 2013). Educational institutions can enhance participation in the advice classes through providing open enrollment or transforming their determination strategies to involve multiple criteria and channels beyond teacher referrals and grades (Berry et al., 2009).

School staff and educators can contribute to the success of students' underrepresentation in the talented and gifted programs by holding all students to high expectations and attending training on linguistic and cultural diversity (EDSOURCE, 2011). Therefore, schools can adequately prepare students for the talented and gifted programs or the AP exams through ensuring that the curriculum planning efforts in activities and assignments align with the exam rigor (Billig, 2005; California Department of Education, 2017).

Ethnically and racially diverse students can benefit from social groups in addition to academic support groups (Liu & Xie, 2014). Social groups permit them to socially and academically flourish through navigating intricacies in cultural difference (Hsin & Xie, 2014). Underrepresented students require academic scaffolding and support to enhance academic achievement in the advanced levels. Some of the significant strategies require targeting study skills, curricular scaffolding, and discussion groups (Gavin et al., 2009).

All districts must ensure that they enhance kindergarten readiness and reduce the race and income-based gaps among students in accessing the resources and tools that prepare them for colleges, civic life, and careers. They must further track the progress of the students and gather data on the measures that permit them to progressively enhance their work and student support

(Constantine & Sue, 2006). The well-prepared kindergarten students, as measured by their behavioral, social, and academic domains, tend to perform better than those not well prepared. They tend to score higher on standardized tests and graduate on time and with higher grades than those unprepared for kindergarten (Greenway, 2017).

Districts must invest heavily in kindergarten education. Districts can have powerful state early education programs that are then supplemented by the partner-guided affordable half-day pre-school as well as a summer kindergarten readiness program and parents advocates who visit the homes to offer various supports (Billig, 2005; Smith, 2015). They can further utilize federal resources to extend their local alternatives using the federally and state funded early learning programs to offer pre-K education (Strutchens, 2000). Schools can utilize local resources to supplement state resources. Districts can implement full-day kindergarten to improve the transition from pre-K to official kindergarten schooling. Schools can implement programs that assist caregivers and parents to learn with their children in a hands-on way via physical and outdoor activities (Autin et al., 2015).

Schools must create programs that support the mental and physical health of their students in addition to nutrition to sustain and boost early gains by assisting the students to remain focused, boost their performance and minimize chronic absence (Balfanz & Byrnes, 2006). These programs can include partnership with school-based wellness programs, school-based health clinics, and community providers (Billig, 2005; Berry et al., 2009). Programs that tend to support the mental and physical health of the students as well as enhance their nutrition tend to minimize the chronic absence and assist children to concentrate on learning, thus enhancing their academic performance (HB 2722 Advisory Committee, 2008).

Students at the K-12 level endure the challenges of neighborhoods riddled with poverty and minimal foundational academic skills and also lack the bridge to the educational leaders that manage our schools. The combination of struggle causes a wedge between community and school, and the result is a growing achievement gap among minority students. It may be advantageous for students to engage in a curriculum that is relevant and connected to their lived experiences. Using their culture and social capital as encouragement for academic success may be the bridge needed to achieve cultural competence (Ladson-Billings, 1995).

Historically, low-income communities have realized minimal parent involvement compared to their White counterparts (Wallis, 1995). Many minorities and poor parents that have made efforts to do so have received passive roles instead of opportunities to actively participate and engage in the decision-making process (Lightfoot, 2004), and those who demanded engagement and active participation faced an identifiable level of resistance (Lareau & Horvart, 1999). Perhaps schools pledging a commitment to diversify their decision-making committees, understanding time constraints that limit their stakeholders, and embracing the institutional fears among our African American and Latino communities could serve as the olive branch needed to reduce fears and stereotypes.

The issue of the achievement gap has gained popularity after the introduction of the No Child Left Behind Act. The No Child Left Behind require that the educational institutions, state education systems and districts meet yearly targets for improvement in identified academic sections, including science, reading and mathematics, not only for the entire population but for specifically determined groups, including the limited English proficiency or the LEP, special education students, and economically disadvantaged White, Hispanic and Black populations.

School are districts viewed as accountable for the rate of achievement of these groups (Ladson-Billings & Tate, 2006).

The reason for this research requires discovering the achievement gap in math at the K-12 level between minority students in the United States and Asian-American students. The study discovered that the achievement gap in math still exists in the United States among minority students and provides recommendations on bridging the gap.

This study focused on the continued mathematical achievement gap between minority students and majority White students in the United States, because education remains a fundamental privilege and is viewed as an equalizer in our society. This study examined factors influencing this persistent achievement gap. Studies have shown that the richest 10% of the school districts in the United States use approximately ten times more funds than the poorest 10% of school districts. Most low-income students remain in the least funded schools with most of the students positioned in rural regions and central cities and funded at a lower level than White suburban districts. This study examined variables influencing the achievement gap, including per student funding, school SES, and curricular influences.

The achievement gap in math and English language remains prominent among the minority students despite government efforts to close the gap and bring equality in education. Some of the elements that contribute to the achievement gap include the perceptions and the attitudes of teachers towards minority groups. Race and ethnicity contributes to the achievement gap. For instance, Hispanic and Black children have a higher likelihood of residing in low-income and segregated areas and attending educational institutions with a majority of low-income Hispanic and Black students compared to White children. The achievement gap between social class and racial groups seems to originate from racial segregation, social class, and

concentration of students by race and socioeconomic group. Most suburban schools have adequate teachers and resources that enable the students to learn compared to urban schools, which may have limited resources and funding, contributing to the achievement gap.

Socioeconomic status also contributes to the achievement gap because the students from high-income households tend to outperform those from low-income families, which mostly consist of minority groups.

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