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AN ANALYSIS OF NEW YORK STATE EDUCATION FUNDING AS IT RELATES TO MINORITY STUDENT ACHIEVEMENT

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AN ANALYSIS OF NEW YORK STATE EDUCATION FUNDING AS IT RELATES TO MINORITY STUDENT ACHIEVEMENT

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ABSTRACT

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The purpose of this quantitative study was to explore the relationship between New York State education funding for public school districts and gaps in both academic achievement and educational opportunity for Black and Latinx students. It was hypothesized that racial disparities and inequitable education funding lead to gaps in academic opportunity and achievement for minority students. Multiple linear regressions were used to assess the association between the variables of student enrollment rates by race, English and math proficiency scores, the number of advanced placement courses, and levels of state education funding per district. Data were obtained from financial reporting by the New York State Education Department. The theoretical frameworks utilized were Critical Race Theory and Conflict Theory, which provided context for the problem statement and results. Evidence was found that student enrollment by race is a significant positive predictor of state aid. Race was not predictive of Math and ELA State Assessment scores, but Black students had fewer advanced placement courses than their Latinx and White peers. The implications from this study are that educational disparities may result from educational funding and lead to further inequalities in careers, income, or political participation. Thus, lawmakers must be informed about the negative effects that inequitable education funding may have in promoting academic opportunity gaps.

DEDICATION

This study is dedicated to my husband. Throughout my academic journey, your unwavering support and boundless encouragement have been the threads that held it all together. Your belief in me, even during the most challenging moments, has been my rock and guiding light. This dissertation stands not only as a testament to my academic pursuits but also as a tribute to the steadfast partnership we share. Thank you for being my confidant, my source of strength, and my greatest supporter. This achievement is as much yours as it is mine.

To my beloved children, you are the living embodiment of my dreams and aspirations. As I delved into the depths of academia, you were a constant reminder of the profound importance of perseverance and self-improvement. This dissertation is dedicated to you as well, for being the driving force behind my pursuit of knowledge and personal growth. May it serve as a reminder that, with determination and a loving support system, any goal is attainable.

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CHAPTER 1 INTRODUCTION

Educational opportunity and achievement are inevitably connected and yet very different issues. Many low socioeconomic status (SES) school districts across New York State (NYS) lack critical resources and opportunities at the school building level. Lower-SES Black and Latinx students are some of the most vulnerable populations who so desperately need these opportunities and resources to reach their potential in school, in their careers, and as contributing members of society (Tabron & Chambers, 2019). The education funding formula in NYS is designed in a way that is inequitable to many socioeconomically disadvantaged Black and Latinx students. This study will analyze the relationship between NYS school district funding and the achievement of minority students, and the opportunity gaps the lack of educational funding creates. The study used Critical Race Theory (CRT) as explained by Delgado and Stefancic (1998) and Randall Collins' Conflict Theory (Khoo, 2019) to analyze the racial differences in education funding that create achievement and opportunity gaps for Black and Latinx students.

Achievement for lower-socioeconomic minority students is often the focus of educational leaders. Many have supported low SES students through varying education initiatives. Supporting states in their efforts to ensure quality teaching in every classroom raises standards for all students. Education initiatives can build systems to improve instruction and significantly improve low-performing schools (U.S. Department of Education [USDOE], 2022). Such initiatives are explicitly designed to emphasize the importance of improving outcomes for minority students. However, according to a Spring 2019 NYS Education Department report detailing student proficiency scores in ELA and

Math assessments, overall achievement for Black and Latinx students is more than 20 percent lower than that of White Students (NYSED, 2019c).

Education initiatives aim to ensure success for all students, particularly through positive changes in communities with concentrated poverty. Although the achievement gap is frequently referenced, a focus on school funding and the opportunity gaps it creates in high populations of minority students is missing from many education initiatives. The opportunity gaps prevent minority students from accessing programs and resources that other schools with predominately White students have. Furthermore, the USDOE (2015) has emphasized that "structural barriers, including inequitable funding systems, impede" school districts' ability to close opportunity gaps for Black and Latinx students (p. 44). According to the Education Trust (2017), districts with high enrollment of minority and low-income students obtain much lower rates of funding as compared to districts with more White and affluent students (Morgan & Amerikaner, 2018).

Background of New York State School Funding

There has been widespread attention to the inequitable school funding formulas adopted by NYS, and yet, school districts continue to be shortchanged. Studies have shown that inequities in educational funding are driven not only based on poverty, but also based on race. As outlined in a report by the Education Trust (2017), "previous studies have shown that districts serving the most students of color also tend to receive less state and local funding than districts serving the fewest" (p. 7). School districts in NYS with high poverty rates receive on average 7% percent less funding per student than school districts with low poverty rates (Education Trust, 2017).

School districts in NYS secure funding through various revenue sources, including state aid payments, the collection of property taxes, and grants. NYS's foundation aid is meant to guarantee school districts with preliminary funds to provide a sound, basic education for all students. NYS adjust the aid provided to account for additional funding in particular categories such as funding for students with special needs, funding to address students' poverty levels, and funding for students identified as English language learners. The local community also funds the school district via the collection of local taxes.

The NYSED provides funding to school districts across NYS with varying aid categories that support elementary and secondary education for pupils enrolled in over 650 school districts. Funding is provided to individual districts "based on statutory aid formulas and through reimbursement of categorical expenses such as prekindergarten programs, education of homeless children, and bilingual education" (NYSED, 2019b, para. 19). In NYS, foundation aid "is the largest unrestricted aid category supporting public school district expenditures" (NYSED, 2019a, para. 19). The unrestricted aid to school districts is meant to account for school operation and maintenance. Funding is based on an adjusted foundation amount, less an expected minimum local contribution. The formula used recognizes regional cost, district needs, and fiscal capacity. Foundation Aid has four main components, each of which has its individualized calculation on how funding is derived.

According to the NYSED (2005), wealth equalization is used "to distribute aid to districts to offset dramatic differences in the ability of school districts to raise local revenues" (section II). Despite the state using equalization strategies, tremendous

disparities in fiscal resources to support education exist. Since school districts rely heavily on revenue from local property taxes, differences in spending are directly associated with property wealth disparities. Therefore, higher expenditures per pupil are directly associated with higher property value per pupil. In other words, the higher spending districts are also those with the highest property value, which then require less tax effort. In financially challenged districts, this creates a burden for taxpayers to supplement educational funding, which often is insurmountable.

The core of disparities in fiscal resources for school districts lies in generating local property tax revenue due to lower home values. As is similar across the United States, residential and business property values and assessment practices vary dramatically. Therefore, where the student lives determines the access of educational resources. This raises concerns about whether there is opportunity and equity at all (NYSED, 2005). Since many socioeconomically challenged neighborhoods are often some of the most underfunded districts with the widest achievement gaps, it is unclear whether the funding mechanism through NYSED is equitable to all students.

School finance is incredibly complex, with multiple layers of varying school districts in NYS. According to the 2019-20 State Aid Handbook (NYSED, 2019a), the main sources of local revenues for education are the taxes on commercial properties as well as residentials along each school district, and non-property tax revenues. The variances in property value create inequities in the way districts are funded. Since funding comes from multiple government levels, policymakers who create these laws must have a thorough understanding of school finance to ensure equity for all students.

From the Independent Budget Office findings, the racial makeup in most New York schools presents a situation that is not only complex but also makes it easier for the opportunity gap among the minority students to widen (Domanico, 2018). The New York schools' demographic analysis reveals a worrying trend in how students' enrollment in the state's Department of Education (DOE) is conducted (Domanico, 2018). Students are geographically distributed to make it more challenging to achieve racial diversity in most DOE schools.

Educational funding and policy formulation for the elevation of minority students has not necessarily minimized the racial achievement gaps. According to a 2017 study by the New York's IBO, which involved tracking more than 71,000 students from their grade 3 through grade 8, the results were worrisome (Domanico, 2018). The findings revealed that Black and Latinx student achievement lagged in state administered English Language Arts and Math exams. Compared to their White counterparts, they were significantly behind in grade 8 (Domanico, 2018). The IBO reports reveal that, on average, White students are twice as likely to be proficient in all subjects compared to non-White peers.

As an example of education reform for Black and Latinx students and what to do with low performing schools, in the wake of fostering integration in the NYS education the former Mayor Michael Bloomberg and at the time, Mayor William de Blasio administrations were in heated contention. While the latter proposed a system that scrubbed off the underperforming schools, the former preferred to elevate their status by investing in their upgrade.

Some schools have had to be closed indefinitely, while others have merged to remain operational. For those whose performance index has tremendously improved, they have earned the term Rise Schools. Fortunately, with the increase in New York's charter school sector, the numbers of Black and Latinx students have rapidly grown over the years. The DOE reports an increase of 21,000 6th and 7th grade students of these demographic groups as of 2018 (Domanico, 2018). With the right school management and collaborative efforts by the surrounding communities, low-performing students and schools' achievement scores have gone up. The DOE reports indicate a 64% proficiency score in ELA for Black and Latinx students for the data collected in 37 charters (Domanico, 2018). These charter schools have presented numerous opportunities for minority students to improve their ELA and STEM units' proficiency.

With collaborative efforts from the school administrations, the state authorities in New York have set up measures to enhance diversity (Domanico, 2018). In New York City, led by the Mayor's office, the focus has been to alter admission rules as early as elementary school to increase the educational opportunities among Black and Latinx students. For this venture to be successful, the schools these students attend need to be upgraded and improved to become high-performing charter schools (Domanico, 2018). Fortunately, these efforts have gradually proven fruitful. This unfolding is because the admissions policies were mostly centered on the areas where schools were located. Unfortunately, they have been revised to accommodate students from other states and, more so, those of different demographic groups (Domanico, 2018). Racial integration has widely gained acceptance even in the face of opposition from White conservatives.

Efforts by White missionary groups and religious organizations in New York and most parts of the Northern States were, and have continuously been, instrumental in advocating for the access of education for Black individuals (Gasman, 2007). For example, the American Baptist Home Mission Society and the American Missionary Association funded the establishment of private institutions and provided teachers to assist in running these institutions (Gasman, 2007). Regardless, even with these massive efforts by various religious and political circles, the opportunity gap still widens. White supremacy still feels threatened. Hence, Black students have continuously been subjected to a corrupt and immoral system that opposes their efforts to gain equitable education (Allen & Jewell, 2002). Therefore, acknowledging racial realism in the NYS and its extensive persistence in the American culture will be crucial in tackling its adverse effects in the education sector. Similarly, this will help avoid the frustrations it presents to the authorities in their policy-making efforts. Moreover, it helps them shift their focus and attention to effective strategies to address racial inequalities.

It is believed that inequitable education funding practices in NYS are related to a lack of understanding of varying topics such as language, curriculum, equality, educational governance, and management. Furthermore, it is also related to assessment issues, early childhood development, and teacher and adult primary education (Vally & Motala, 2014). Policy restructuring is necessary for NYS due to poor implementation and financial constraints being the most significant obstacles to reforming the educational system (Vally, 2018). Educational policies must include personnel allocations, accountability, implementation channels, periods, and good leadership (Vally & Motala, 2014). Additionally, the making of policies should include the most affected groups and

allow them to contribute towards developing solutions in policymaking (Vally, 2018). For such policies to effectuate, they need to reflect the minority group's needs, understanding, and social realities. These policies are measurable by their relevance and applicability.

Inequality in the American education system has been mostly attributed to the fact that more priority is given based on social standards. Students from different backgrounds are exposed to different learning opportunities (Evans et al., 2001). The heavy financial investments by private organizations and the state authorities to deal with this inequity have only led to a widened opportunity gap between the minority students and "the rest." Another noticeable scenario in NYS and most U.S. public schools is that most poor and minority students make up the biggest population (Evans et al., 2001). Apart from this, their resource endowment in terms of curriculum offerings, school equipment, and teaching personnel is mostly limited. The same cannot be said for the schools in the urban and affluent neighborhoods serving mostly White students.

To close the achievement gap between minorities such as Black and Latinx students and their White counterparts, it is important to focus on the school leaderships' part (Amerson, 2014). School administrators play a crucial role in helping to close the opportunity gap. With the right leadership strategies and practices, low-income Latinx and Black students can be successfully elevated and be given equal representation in the education platform (Amerson, 2014). This study's effectiveness and efficiency can be aided by analyzing the standardized test scores. Additionally, a close look at the education funding and its correlation to academic achievement for minority groups such as Black and Latinx students is also crucial in this study.

Apart from social-economic barriers faced by low-income Black and Latinx students, they are also subjected to psychological obstacles. Some feel as if they live under the shadow of the Whites' success (Tabron & Chambers, 2019). Most minority students experience stigmatization because of the White supremacy dominance. Besides this, they are also faced with institutional racism. Most Black and Latinx students are still concentrated in racially segregated schools and environments of high poverty levels (Tabron & Chambers, 2019). Institutional racism plays a crucial role in determining the opportunities at the disposal of different individuals. Moreover, it is essential to identify academic readiness levels.

Purpose of the Study

The purpose of this quantitative study is to explore the extent to which education funding is related to achievement and opportunity gaps for minority students. The term "opportunity gap" refers to any significant and persistent difference in access to academic performance resources (Milner, 2012, p. 696). Opportunity gaps draw attention to "how schools perpetuate an unequal opportunity structure for low-income students of color" (Tabron & Chambers, 2019, p. 118). The U.S. has experienced decades of overall progress, but disparities in education outcomes persist for Black and Latinx students.

In the current study, student achievement scores were examined through their proficiency scores on state-administered Math and ELA assessments. Funding for individual school districts will be assessed to compare Black and Latinx students' proficiency levels with White students. The study attempted to identify factors that may influence achievement scores, such as poverty levels, school resources, and school

district funding by race. Assessing the potential contributing factors will be an essential step in identifying metrics to close Black and Latinx students' opportunity gap.

Theoretical Framework

This research study on the impact funding has on creating opportunity and achievement gaps for Black and Latinx students is grounded in Randall Collins Conflict Theory (Khoo, 2019) and viewed by the lens of CRT (Delgado & Stefancic, 1998). These theories will aid to explain the racial disparities in education that disadvantage many Black and Latinx students. Randall Collins Conflict theory observes how societal struggles occur because of conflicts between different social classes (Collins, 1971). Conflict theory is a way of studying society in which there is a focus on the inequalities of different social groups. As Collins (1971) has explained, the bases for conflicts are frequently related to status cultures based on ethnicity or religion, with varying intensity due to rising or falling processes and "the cultural distinctiveness of these groups [such that] the succession of advantages and disadvantages set by previous outcomes of these struggles determine the organizational resources available for further struggle" (p. 1001). The bases of conflict theory are from Karl Marx ideas, who believed society evolves in different stages. Karl Marx believed that society is propelled by its economy, which is manipulated by the social class system.

Randall Collins Conflict theory reveals how socioeconomic systems are the ultimate source of the educational disparities for lower-socioeconomic minority students. Conflict theory will help this study assess how each group struggles to attain more resources, and because resources are scarce, how they struggle with other groups

(Collins, 1971). Randall Collins Conflict theory alludes that minority student experiences are predetermined based on the economic structure in which they live.

Randall Collins Conflict theory also examines how assumptions shape the perception of reality for people in a society. For example, how do socioeconomically challenged individuals perceive their role in society? Do they believe they are limited in what they can achieve? As an example, a minority student may have a parent who is a custodian. They believe that the highest level they can achieve in life is to be a custodial supervisor. Knowing all the while, they could never be the custodial company owner? Looking at ideology and hegemony, one can examine how assumptions shape reality for people in a culture. How does a controlling class convince the working class that their way of life is in their best interest? What does the controlling class (i.e., the elite) do that shape the perception of the working class?

Conflict theory focuses mostly on social class and is also an important framework because Race is integrated in the United States. CRT explains better approaches to the fundamental educational inequality for minority students to the researchers and also the policymakers (Delgado & Stefancic, 1998). This research study aims to understand CRT as it has been applied to the development of policy in education, particularly how education is funded. This study also delves into the types of biasness Black and Latinx students face, such as low expectations and disregard, and how that furthers the achievement gap.

Past research has suggested that "racism alone causes academic achievement gaps because, by fiat, nothing else can" (Zorn, 2018, p. 205,). While there have been significant gains in combating racism, the achievement gap between White and Black and

Latinx students has proven difficult to close. The correlation between a student's zip code and their chances of academic success is hard to ignore. The way education is funded in NYS entrenches existing societal inequities. The goal is for this study to show the role racism plays in policy decisions and the inevitable achievement and opportunity gaps it creates.

Conceptual Framework

CRT is something that many in society have a lot of resistance towards. However, the idea that the past has far-reaching effects on the future is not a new concept because the idea of cause and effect is self-evident. When this concept is applied to racial disparities, many feel as if they are being personally attacked and that their accomplishments are being undermined. But when examining long-standing institutions like the NYS educational system, it is important to examine what CRT and Conflict Theory infer on the disparities between Black and Latinx students as compared to White students.

How America's History of Racism Impacts Schools Today

Test scores for Black and Latinx students lag in comparison to their White counterparts by 20% in the areas of math and science (NYSED, 2019c). Through the lens of CRT, this can be attributed to racial disparities with regards to income because of America's history of racism. The conceptual framework that lends credence to this view is structural racism (Health Affairs. n.d.). According to the theory of structural racism, many of the racist practices that were in place decades ago affect our society today in that people of color have historically had less opportunity to build wealth and thus have less generational wealth. Because of this, many Black and Latinx families were stuck in the

cycle of poverty and were unable to provide their children with opportunities. This has resulted in Black and Latinx families often earning 25-45% less than White families (Kochhar, 2023).

Racism's Impact on Funding

In NYS, school districts are primarily funded by the taxes levied in the local community (NYSED, 2005). Poverty has been shown to have an impact on educational outcomes (Ferguson et al., 2007). Thus, the economic factors that exist because of racism are inextricably linked to the quality of education received by Black and Latinx students. Furthermore, poor test results in schools have a compounding effect, as schools receive less funding when their students perform poorly on exams (Thompson, 2021). This set of circumstances perfectly illustrates the role of conflict theory in the NYS education system.

In the current system, students from more affluent neighborhoods receive access to more favorable funding, which then leads to higher academic achievement (Person & Lafortune, 2023), which then leads to even more funding. As this cycle continues to repeat itself, it perpetuates tropes of racial superiority by serving as confirmation bias for people who are still operating on the racist worldview that was put forward by the previous generation. Conflict theory explains how the issue of lower test scores by Black and Latinx students has the issues of race and class interwoven into it. This is illustrated by the fact that the benefits of privilege continue to accrue in the hands of the wealthy, as the conditions of the past caused schools primarily containing Black and Latinx students to receive less funding (Education Trust, 2017).

The theory of structural racism tells us that many of the systems that are around today have remnants of America's history of racism embedded within them. Racism as it historically relates to economic opportunity still has ripple effects on the incomes of Black and Latinx families, and subsequently, on the education their children receive. The current structure causes negative educational outcomes to repeat themselves, as the funding districts receive is partly dependent on the performance of students, and the performance of their students is impacted by the amount of funding the district receives. This helps keep the cycle of racism alive today.

Significance of the Study

Educational inequality is perhaps the fundamental beginning of other inequalities which include discrimination that Black and Latinx students face in relation to particular careers, income and wealth, and political participation, all of which are mitigated by equalizing the skills that education produces. The best results that we can produce are to create a type of society where we raise outcomes in education so that knowing someone's race or ethnicity tells you nothing at all about what their academic achievement or aspirational goals may be.

This study aims to move beyond conventional academic language and way of thinking and instead hopes to demonstrate the extent that funding disparities fuel opportunity gaps for low-income minority students. Ideally, it will help schools, educators, parents, and policymakers close the opportunity gap for Black and Latinx students, so they also have an equal chance to thrive. This study is intended to place the facts out in the open and help the state, policymakers, and community stakeholders

understand the effects of inequal distribution of funds and how equality can bring change to the Black and Latinx students and the society at large.

Research Questions & Hypotheses

Research Questions

1. To what extent does funding differ in districts with high proportions of Black and Latinx students in New York State?
2. To what extent does education funding influence opportunity gaps in districts with high proportions of Black and Latinx students in New York State?
3. To what extent is funding related to student achievement in districts with high proportions of Black and Latinx students in New York State?

Hypotheses

$H0_1$: Rates of enrollment for Black, Latinx, and White students in New York State public school districts do not significantly influence school district funding.

$H1_1$: Rates of enrollment for Black, Latinx, and White students in New York State public school districts significantly influence school district funding.

$H0_2$: Education funding (i.e., State Aid) for New York State public school districts does not significantly influence opportunity gaps for Black and Latinx students.

$H1_2$: Education funding (i.e., State Aid) for New York State public school districts significantly influences opportunity gaps for Black and Latinx students.

$H0_3$: Education funding (i.e., State Aid) for New York State public school districts does not significantly influence student achievement for Black and Latinx students, based on proficiency in NYS ELA/Literacy and Mathematics Assessments.

$H0_3$: Education funding (i.e., State Aid) for New York State public school districts significantly influences student achievement for Black and Latinx students, based on proficiency in NYS ELA/Literacy and Mathematics Assessments.

Data Methods and Procedures Overview

This study aimed to investigate education funding in NYS to analyze the influence it has on academic achievement for Black and Latinx students. The research design allowed for a deeper understanding of minority students' inequity when school districts lack education funding from NYS. A quantitative research design was used to examine how school funding is related to academic achievement for middle school minority students on the ELA/Literacy and Mathematics NYS test scores. The study also examined the correlation between school funding and opportunity gaps related to minority student achievement. The NYSED financial reporting will be used to analyze and explore any correlations that exist between education funding, course offerings, and proficiency on state exams.

Definition of Terms

Adequate Yearly Progress (AYP)

AYP is defined as the measure by which schools, districts, and states are held accountable for student achievement under Federal Regulations under Title funding, such as the No Child Left Behind Act of 2001, and the current version of the Elementary and Secondary Education Act (Education Week, 2011).

Critical Race Theory

Critical Race Theory (CRT) was defined by Delgado and Stefancic (2012) as "a collection of activists and scholars interested in studying and transforming the

relationship among race, racism, and power" (p. 2). In educational research, a CRT perspective highlights funding inequities as a political, social, and historical process in which "the normalization of inequity, subjugation of marginalized groups, and oppression of communities of color exists via the institution of a racist school finance system" (Alemán Jr., 2007, p. 527).

Culturally Relevant Pedagogy (CRP)

CRP is a theoretical model that describes forms of teaching that calls for learners to develop critical thinking strategies that challenge societal norms and inequalities. The purpose of CRP is to engage students whose experiences and cultures may be excluded from mainstream settings (Ladson-Billings, 1995).

Independent Budget Office

The Independent Budget Office (IBO) serves as a public information site that produces educational resources to assist the public in understanding the city's budget to aid in participating in the budget process (IBO, n.d.). It also offers the public an opportunity to ask questions about the city's budget and the local economy. The IBO serves as a resource for complex research and analyses on budgetary, tax, and economic issues for public officials, civic and community groups, and the media (IBO, n.d.).

Latinx

Latinx is a gender-neutral neologism, sometimes used to describe Latin American heritage (Merriam-Webster, n.d.).

New York State Education Department (NYSED)

NYSED is a subset of the University of the State of New York (USNY) and is representative of "one of the most complete, interconnected systems of educational services in the United States" (NYSED, n.d.).

No Child Left Behind Act

The NCLB Act was enacted into law in 2002 as a means to update the Elementary and Secondary Education Act which more clearly defined how the Federal Government would hold school districts accountable for student achievement (Klein, 2015). In 2015, Congress passed the *Every Student Succeeds Act* (ESSA), which served to replace the NCLB Act.

People of Color

A person whose skin pigmentation is other than and especially darker than what is considered characteristic of people typically defined as White (Merriam-Webster, n.d.).

Socioeconomic Status (SES)

Socioeconomic status is the recognition of the social standing or class of an individual, which is often measured by considering a person's education, wealth, and occupation (American Psychological Association, 2023).

In summary, the purpose of this study is to analyze the relationship between NYS school funding, the achievement of minority students, and the opportunity gaps the lack of educational funding creates. In the next chapter, literature related to this study is reviewed with a keen focus on the opportunity gaps exacerbated by the lack of educational funding. By synthesizing existing research, theoretical frameworks, and

policy analyses, this review seeks to highlight the multifaceted dynamics of educational funding and the implications for educational equity and social justice.

Conclusion

The purpose of this quantitative study was to explore the relationship between NYSED funding, academic achievement, and opportunity gaps for Black and Latinx students in NYS. All data were obtained directly from NYSED, including district funding, student achievement, and proficiency scores for state-administered Math and ELA assessments. This research was grounded in Randall Collins Conflict Theory (Khoo, 2019) and viewed through the lens of CRT (Delgado & Stefancic, 1998), which helped explain how disparities in education may disadvantage minority students. This study was designed to further the understanding of how the distribution of education funding can negatively impact minority students and to provide evidence that can assist policymakers and community stakeholders in NYS to help mitigate these challenges related to this problem. In the following chapter, the theoretical framework used in the study is discussed in detail and is presented alongside key literature that is relevant to this topic.

CHAPTER 2 REVIEW OF THE RELATED LITERATURE

This chapter presents an overview of the theoretical framework used as a guide for this research design, explaining how the current study relates to prior research of various scholars such as Derick Bell, Richard Delgado, Karl Marx, and Randall Collins. It includes a summary of the findings from extensive research of relevant literature. The research reviewed in this chapter comes from various peer-reviewed articles and journals and national reports, state education policy, and reputable websites.

The literature review helps develop the connection between Black and Latinx students' achievement and educational funding. The findings from the literature review have been organized into the following themes: a) policymaking as it relates to education funding, b) district-level funding limitations related to education funding, c) the opportunity gaps lack of funding create, for Black and Latinx students, and d) the impact on student achievement for Black and Latinx students. This chapter concludes with a discussion of the research gaps and how this study aims to address such gaps directly.

Theoretical Framework

CRT and Conflict Theory help explain how policymakers set up systems to benefit certain social classes. Moreover, race is intertwined with social class and policies that tend to disadvantage Black and Latinx families. Two stark examples of this disparity in NYS are school districting and education funding. The following sections provide more details about how these theories are useful in understanding the relationship between Black and Latinx students' achievement and educational funding.

Critical Race Theory

CRT was used to develop an extensive and beneficial systematic framework. It offers a historical overview and criticizes the progressive and regressive measures employed by policymakers to increase, and at times limit, access, and active participation in educational funding for Black and Latinx students. CRT encompasses law, history, sociology, and ethnic studies to help tackle racial injustice (Harper, 2006). Apart from rejecting the notion surrounding the ideologies of color blindness in society as a tool used in advancing racial subordination, CRT helps recognize the legitimacy and unique perspectives of minority individuals. Furthermore, CRT offers a heavy criticism of the meritocracies that uphold White supremacy. It also assists in comprehending racism as an area deeply rooted in society without excluding higher learning institutions.

By utilizing the instruments and procedures of CRT and Culturally Relevant Pedagogy (CRP) it becomes easier to develop a comprehensive and extensive view of the marginalizing practices that work against minority students (Amerson, 2014). CRP is a sufficient instructional criterion that identifies with the uniqueness of a student's way of life and incorporates cultural knowledge and numerous scholars' previous experiences. This strategy assists in fostering the essentiality of learning for minority students. CRT's theoretical framework helps to describe the perspectives and techniques used in identifying and analyzing minority students. Those in this marginalized and subordinated bracket are mostly Black and Latinx students (Amerson, 2014).

The framework of racial opportunity assists in giving a holistic model for comprehending the complicated school to student interactions. By looking at the psychosocial costs one can understand the achievement gaps' impact from marginalized

groups' level (Tabron & Chambers, 2019). Tabron and Chambers (2019) utilized a sample of five individuals who were enrolled from a highly selective university and with the qualification of being Black and coming from a low-income household was selected. The participants' results revealed that academic success came with the psychosocial costs where one's value was based on proximity to the middle-class financial level or assimilation to the White community (Tabron & Chambers, 2019). Furthermore, these marginalized groups were also subjected to additional representation and community costs that governed their status in their day-to-day education lifestyles.

Racial opportunity cost is essential in highlighting the perspectives of marginalized minority students. It is readily applicable in comprehending the expenses incurred by low-income students and high achieving Black students in their quest to achieve academic prowess (Tabron & Chambers, 2019). With the aid of data collected from focus groups and semi-structured interviews, it is easy to show the unequal opportunity subjected to students of color.

As Alemán (2007) has discussed, using CRT is useful because it "situates school funding inequity as a political, social, and historical process in which the normalization of inequity, subjugation of marginalized groups, and oppression of communities of color exists via the institution of a racist school finance system" (p. 527). CRT began in the 1970s by Derrick Bell, a Black civil rights attorney and the first person of color to teach at Harvard Law School. Bell was a member of "a small but growing group of scholars and minority activists who realized that the gains of the heady civil rights era had stalled and, indeed, were being rolled back" (Delgado & Stefancic, 1998, p. 467).

Scholars and activists (such as Derrick Bell, Patricia Williams, Richard Delgado, and Kimberlé Williams Crenshaw) worked to blend concepts from critical legal studies and radical feminism with other minority-based movements at the time (Childers-McKee & Hytten, 2015). According to CRT scholars, inequality arises from the social and economic disparities perpetuated by White people to maintain elite White interest in labor markets and politics resulting in poverty and criminal actions in the minority communities (Farley, 2011). CRT was predominately used in legal scholarship in the early years, but now is used across varying fields (Ledesma & Calderón, 2015).

CRT compels us to contemplate how we might reshape the dynamics among race, racism, and power to emancipate minorities. In the field of education, "a CRT framework provides critical administrative and policy analysis tools for educational leaders interested in the struggle for social justice" (Alemán, 2007, p. 527). Through scholarship, CRT identifies and exposes "White privilege, and an ahistorical context dominates institutions and systems, social norms, and daily practice" (Alemán, 2007, p. 527). CRT counters and combats systemic and structural racism. It recognizes the multiple forms of oppression and the myriad manifestations and effects of their intersections.

CRT scholars have generally identified five major components or tenets of CRT (Delgado & Stefancic, 2012). The first major component or tenant of CRT is the idea that "racism is endemic and ingrained in U.S. society" (Alemán, 2007, p. 528). Scholars of CRT suggest that racism exists everywhere in American life and culture. It is believed that it is ingrained in thoughts, personal relationships, places of work, education, and judicial systems. Critical Race Theorists believe that racism is not just individuals' actions but also that it is embedded in our institutions, systems, and culture. For example,

the notions of *colorblindness* and *meritocracy* are viewed as ways to marginalize people of color. It considers this type of rhetoric serves to allow Whites to disassociate themselves with the idea they are promulgating racism and to maintain strongholds within communities.

The second major component or tenant of CRT is how "the civil rights movement, and subsequent laws require reinterpretation" (Alemán, 2007, p. 528). Critical Race Theorists suggest that American history be closely scrutinized and reinterpreted instead of blindly accepted at face value. Delgado and Stefancic (2012) characterize this concept as Revisionist History, aimed at revisiting America's historical narrative by replacing mainstream interpretations of events with ones that better align with the experiences of minorities.

The third major component or tenant of CRT believes the notions of neutrality, objectivity, colorblindness, and meritocracy warrant scrutiny and questioning (Alemán, 2007). Critical Race Theorists believe that such concepts camouflage how racial advantages propel the self-interests, power, and privileges of White people (Delgado & Stefancic, 2012). There is a theme in law and other areas that concepts like neutrality, objectivity, colorblindness, and meritocracy can be fully actualized. CRT emphasizes that one cannot be truly neutral on race issues when racism is embedded into the fabric of American ideologies. Through this lens, claims of objectivity and color blindness may be how some dominant groups camouflage their interests to obtain what is best for them, their race, and social class.

One such example of institutional racism is housing segregation. The government has been instrumental in the way the federal government suburbanized the White

working-class population into single-family homes in all-White suburbs. African Americans were often prohibited from participating in such programs (Kushner, 2009). The best example of deliberate housing segregation is perhaps the history of developing a suburban town in Nassau County, NY named Levittown. This community was developed in the 1950s specifically for returning White World War II veterans. The developers of Levittown prohibited people of color from moving in through contract clauses (Kushner, 2009).

The fourth major component or tenant of CRT is "providing a space for the voices of marginalized people to be heard vital to reform" (Alemán, 2007, p. 528). Critical Race Theorists believe that lived experiences are crucial to comprehending racism and oppression and providing such experiences a "voice" is essential to reform. Those experiences are necessary for all areas such as academic, legal, and activism. This dichotomy of storytelling and counter-storytelling implies the notion that schools are neutral spaces that treat everyone equally. However, close examination contradicts this; simply evaluating graduation rates accomplish this (NYSED, 2021). Given the curricula inequity in the U.S. education system, counter-storytelling is a necessary tool. Without it, the true stories would never come to light and the inequities minorities face may never be known.

The fifth major component or tenant of CRT is “Whiteness is constructed as the ultimate property” (Alemán, 2007, p. 528). Critical Race Theorists recognize this as interest-convergence. The belief is that Whites will allow and support racial justice and progress to the extent that there is something positive in it for them (Delgado & Stefancic, 1998). It is the process whereby the White power structure “will tolerate or

encourage racial advances for Blacks only when they also promote White self-interests" (Harper et al., 2009, p. 391). The public education arena could serve as an example of interest convergence because of the inequitable access to quality education for Black and Latinx students and the social advantage it creates for White students since public schools are well funded especially if White students attend the same school.

CRT can be used as a tool to help political and education leaders ensure that all students, irrespective of their race, are given an equal opportunity for quality education. CRT can be used to dismantle racism in education by teaching awareness about how racism functions and, as a result, would inspire social consideration. CRT is a framework that acknowledges the way oppression interrelates and focuses on eradicating racism and other forms of oppression by taking a stance on issues of social justice. For example, in 1935 minorities were denied Social Security and excluded from unions (DeWitt, 2010). As a result, non-Whites were locked out of higher-paying jobs and union benefits such as medical care, job security, and pensions. Low-income workers and minorities were among those with the greatest need for such provision, and yet, they were systematically excluded and denied access to these benefits, and it has followed them generation after another. The wealth and benefits have remained to the same generation of White people disadvantaging those from Black families. This has resulted in less generational wealth on average for Black and Latinx communities.

CRT has been instrumental in identifying the inequities in the U.S. educational system. Decades after Brown v. Board of Education, 347 U.S. 483 (1954), separation has been replaced with segregation. The "White flight" from public schools in socioeconomically challenged school districts have left many minority students with

relatively few White student peers. The Brown case ultimately provided the opposite of what it sought out do accomplish; it has restricted equality for Black and Latinx students (Gibson, 2010). It has failed to improve education for minority students because it has represented a restrictive view of equality, not an expansive view. There is a need to challenge the fundamental structure of education that produces the inequitable social hierarchies in society.

According to Ledesma and Calderón (2015), CRT "has become an increasingly permanent fixture in the toolkit of education researchers seeking to critically examine educational opportunities, school climate, representation, and pedagogy, to name a few" (p. 206). CRT is an education that values challenging the status quo and prioritizing lived experiences. The approach encourages coalition-building and recognizes the importance of including stakeholders in knowledge sharing and the decision-making process.

CRT offers theoretical insights that center on the endeavors of White individuals to uphold their historical privileges over minorities. As Delgado and Sefancic (1998) have suggested, critical race theorists were pioneers in terms of "legal storytelling, both as a means to tell one's own of discrimination and also to question, mock, and displace comforting majoritarian tales and myths that discrimination does not count unless proved to be intentional" (p. 475). This leaves the question, how is race considered when policymakers in government are deciding how to fund education? Scholars argue that educational policies and practices are not culturally relevant, at times to be culturally insensitive, Eurocentric, and even ethnocentric since they are monolingual and male-oriented (Delgado, 2009; Delgado & Stefancic, 2012). The law does not merely regulate

advantage and disadvantage among pre-existing groups; it participates in the very construction of those groups-the systems of categories-themselves.

Conflict Theory

Academic achievement and opportunity gaps among racial groups have persisted for many years in the American education system. The racial divide in education funding has persisted due to the lack of affirmative action on higher education and equal employment opportunities. Today, affirmative action favors students from racial majority groups and yields an unfair advantage to minority groups (Delgado, 1990). This is an issue of concern to every American, irrespective of their racial background, are given the increased dependence on academic attainment and knowledge in the distribution of opportunities. Comparatively, White Americans have consistently shown better academic performance than Black and Latinx students. These disparities in academic achievement and opportunities have been partly attributed to differences in education funding.

A significant fraction of Black and Latinx parents firmly believe that racially based funding differences significantly affect their children's' academic success. In a study conducted by the Leadership Conference Education Fund, 90% and 57% of Black and Latinx parents maintained that most students from minority communities in many K-12 schools receive less funding than White areas (Mathewson, 2017). The inequalities in education funding often make it difficult for students from minority communities to access important resources and educational technology, leading to differences in teaching quality and academic achievement. Racially based differences in education funding remain one of the leading causes of differences in academic achievement among Black and Latinx students in the American education system.

Notably, many students from low SES communities receive disproportionately less funding in their school districts than school districts where the predominant school population consists of White students (Books, 1998). This dramatic discrepancy indicates the degree of funding inequities in White school districts and school districts where Black and Latinx students comprise the dominant student population. While most of the efforts to address the education funding disparity have largely centered on policymaking to reduce the income status and class differences, it is apparent that the racial makeup of different school districts receiving education funding may contribute to inequalities. A majority of Black and Latinx students attend public schools with racially diverse student populations. On average, students from White communities attending schools in predominantly White school districts receive 19% more funding than those in non-White school districts (Camera, 2019).

Notably, the race-based discrepancy in education funding varies from one state to another, with the differences in education funding going as high as 30% in states like Arizona and Oklahoma (Camera, 2019). The differences in budgetary allocations for school districts are intrinsically linked to property taxes, implying that schools in affluent White communities have a higher chance of receiving funding compared to schools in which Black and Latinx students comprise the dominant student population. Impossible to ignore in this example of housing segregation is the influence government programs have implemented that have furthered this divide.

Randal Collins Conflict Theory: Racial Disparities in Education Funding

Often, conflicts emerge when people are exposed to different conditions and situations. Under such situations, everyone has pragmatic goals to achieve failure, leading

to the escalation of conflicts. For example, in a school environment, students from various racial backgrounds have different academic achievement goals. By looking at conflicts from a micro-perspective, Randall Collins maintains that conflicts constitute part and parcel of day-to-day life. According to Randall Collins, all relationships that arise in different situations bring about an element of domination and disputes are bound to happen at one point or another (Brittain & Kozlak, 2007). Randal Collins proposed that conflicts occur in a dynamic process that involves initiation, escalation, and de-escalation (Rumshisky et al., 2017). Randal Collins offered a micro-sociological perspective on how such issues as racially based disparities in education funding can create conflict situations which affect students' level of academic achievement and access to other opportunities.

Collins (1971) brought about the concept of educational stratification in his conflict theory by discussing how different socioeconomic and cultural conditions can segregate people into separate and distinct categories. Based on Randall's conflict theory, access to employment opportunities reflects the degree of academic achievement and efforts by the competing racial groups to obtain jobs by exploiting their cultural ideals in the hiring process (Collins, 1971). The American education system stratifies students based on their racial differences and socioeconomic conditions.

Many White students attend affluent, majority-White schools to acquire knowledge and relevant experience required in their professional careers. This means that there is a likelihood of White students performing better in their studies and having greater access to employment opportunities in the future due to the status and high educational credentialism attached to their race (Khoo, 2019). Race-based inequalities in

education funding increase educational stratification, with students from racial minority communities reporting low academic attainment compared to White students.

Horizontal inequalities, such as race-based inequalities in education funding, significantly increase the risk of conflicts (NYSED, 2022). Randal Collins' conflict theory shows how the convergence of cultural inequalities, social inequalities, economic inequalities, and political inequalities can create violent struggles in a given context. Horizontal inequalities, like racially based disparities in education funding, positively correlate with the intensity of conflict struggles (Solomon et al., 2019). Conflict struggles are more likely to occur in district schools with greater racial polarization and low economic development levels. This implies that district schools with a high concentration of racially diverse student populations are more likely to experience conflict struggles than school districts where the Whites constitute the dominant student population.

Stewart (2010) notes that "different types of inequalities can reinforce one another, with inequality in one sphere, such as access to education funding, making inequalities in other realms more likely" (p. 4). Issues such as race-based discrimination in education funding compound other inequalities caused by socioeconomic variables such as social status differences, social exclusion, and poverty. Altogether, these inequalities create a conflicting struggle in academic contexts leading to complex problems such as reduced academic achievement and access to educational opportunities among disadvantaged racial groups.

The ongoing debate on education production function has revealed a significant relationship between education funding and students' academic achievement and access to opportunities. From an economic standpoint, it is conceivable that greater access to

educational resources can translate to better academic outcomes among students (Murray & Rueben, 2008). Students who receive greater education subsidize are more likely to produce better returns to education. Differences in education spending across districts in NYS reflect the extent to which the race-based inequalities have continued to widen the achievement and opportunity gap among Black and Latinx students. The ever-widening gap in academic achievement and access to opportunities stems from differences in teaching quality access to educational resources among Black and Latinx students from socioeconomically disadvantaged backgrounds and affluent White backgrounds.

Educational differences such as race are intricately linked to other factors like family income, social status, and parent education, influencing students' academic achievement. Achievement gaps among students from Black, Latinx, and White backgrounds often predict other persistent problems in later stages of life. Race-based disparities in education funding imply that students from minority races, like Black and Latinx, have low access to high-quality instruction and educational resources than White students, leading to poor academic performance. These achievement gaps are more likely to escalate with time if race differentials are not controlled.

Academic struggles driven by race-based discrimination in education funding may increase school dropout cases among students from disadvantaged races. Notably, students of Black and Latinx descent have reported higher dropout rates than those of White students. A study conducted by the American Community Survey in 2014 indicated a 1.1-4.2% range in status dropout rates among White students and Latinx students (McFarland et al., 2018). Although Black and Latinx students constitute a significant fraction of the students' population in many public schools, the two groups

remain far behind their White American peers in academic achievement and access to educational opportunities (Gándara & Mordechay, 2017).

Differences in the number of Black, Latinx, and White students completing high school studies and those with a high school degree provide a critical indicator of students' school experience. Low funding in district schools where Black and Latinx students constitute the dominant student population results in poor quality instruction and negative learning experiences. This exacerbates school dropouts' risk and lead to low graduation and school completion rates.

Academic achievement among students is intrinsically linked to individuals' intellectual abilities. Given the growing population of Black and Latinx students in K-12 district schools and postsecondary institutions, overall academic achievement among these students is more likely to depend on education funding factors. Typically, inequalities and discrimination in educational funding in non-White schools and colleges where Black and Latinxs make up the dominant student population may translate to low achievement levels due to a lack of access to educational resources and quality teaching.

Today's racial segregation and discrimination in education funding reinforce Latinxs and Blacks' degraded status in the American education system. This separation in educational financing for White and non-White schools reflects the persistent status differences between Black, Latinxs, and Whites by establishing an education funding system favoring White students and shortages students from minority races. Spatig-Amerikaner (2012) has posited that if the U.S. government increases per-student funding in non-White schools where Black and Latinx students make up the largest student population at the same levels as the White schools enjoy, the former would be better

positioned to hire more experienced teachers or purchase important educational inputs. This would translate to better learning and teaching experience, which would, in turn, lead to improved student outcomes.

Many schools serving minority students such as Latinx and Black remain underfunded compared to schools dominated by White students. These differences have contributed to poor learning experiences and low academic achievement among racial minority students compared to their White counterparts. The percentage of Black and Latinx students completing college education with a bachelor's degree remains relatively low compared to the statistic for White students. In 2015, the U.S. Census Bureau provided figures indicating the disparities in academic achievement among Black, Latinx and White American students (Gándara & Mordechay, 2017). According to the report, the number of Black and Latinx students aged 25-29 years, and who had completed their degree in college in the year 2015 stood at 17% and 40%, respectively; 62% of Asian students and 40% of White students had the same academic accomplishment (Gándara & Mordechay, 2017).

This disparity in academic achievement predates other complex issues, such as inequalities and discrimination in education funding among students from racial minority groups. In most cases, a student's educational achievements determine the extent to which a person can access future opportunities. However, with the ever-growing gaps in academic achievement, Black and Latinx students may remain uncompetitive in the contemporary economy, which only seems to favor those individuals with better academic qualifications and competences. The problem is more pronounced in metropolitan areas where Black and Latinx comprise the dominant student population

(Mordechay, 2014). The problem of race-based inequalities and discrimination in education funding among Black and Latinx in academic institutions can partly explain why academic achievement and opportunity gaps continue to persist.

Black and Latinx students who attend Historically Black Colleges and Universities or other institutions that mainly serve non-White students are more likely to secure low paying jobs than White students who attend the more affluent academic institutions. Although the number of Black and Latinx students enrolled in colleges and universities has noted an upward trend in the recent past, issues like funding inequalities have rendered it challenging to succeed in these institutions and transition into formal employment (Murakami, 2020). Many Black and Latinx students from poor backgrounds attend community colleges where only a small percentage of them complete their studies, and a small fraction proceeds to formal employment. The disproportionately low funding in non-White schools makes it difficult for these institutions to provide enough financial assistance for Black and Latinx students (Murakami, 2020). As a result, these students are forced to work and study at the same time to meet their financial demands. Difficulties in balancing academic and work responsibilities may contribute to low academic achievement, which predates more challenges in accessing employment opportunities in the future.

Addressing academic achievement and opportunity gaps observed among students from racial minority communities requires a multifaceted approach to mitigate vertical and horizontal inequities that cause a disparity in education funding. Strategies like school-based budgeting can go a long way in reducing race-based inequalities in education funding. The strategy calls for schools to adopt a weighted student funding

formula to eliminate any inequalities that may arise while allocating funds in schools that serve Black and Latinx students. Alternatively, the U.S. government can provide additional policy options to expand adequacy programs and focus resources on affected schools, which may help reduce the achievement and opportunity gaps. As Sosina and Weathers (2019) have suggested, "If spending matters for student achievement, then racial disparities in resources may play a key role in the racial opportunity gap" (p. 1).

Federal interventions may increase aggregate spending to supplement funding in underfunded schools where Blacks and Latinxs constitute the dominant student population. With increased access to financial assistance, students from minority races will likely note an improvement in their academic achievement. Most importantly, the federal government should adopt improved education funding designs and increase monitoring to assess students' welfare across NYS. For example, collecting information on graduation rates and school completion rates among students from various backgrounds would provide insights into racial subgroups affected by such issues as inequalities in education funding. Consistent measurement of students' dropout rates across different racial and ethnic groups can help the government predict such problems as race-based inequalities in education funding. As a result, the government can create targeted solutions to reduce the conflict struggle resulting from race-based inequalities in education funding.

Review of Related Literature

Why School Funding Matters

Through the decades, there have been dozens of lawsuits challenging state education funding systems (Stanford University, n.d.). While some cases were lost, the

challenges have improved education for some children if analyzing total dollars spent, though not if using a comparison of what was spent for some students relative to all. Considering the discrepancies between funding, student demographics, and student success, Books (1999) explained:

> Some students—generally, but not always, White, middle- to upper-class children and youth in suburban areas—attend well-funded schools in good repair. Others—generally, but not always, poor children and minorities in urban areas attend inadequately funded schools where they learn in a thousand different ways that they do not matter very much (p. 53).

NYS is no different. According to Books (1998), in previous annual reports the NYSED has explained that there is "a dismaying alignment of disadvantaged students (disproportionately children of color), schools with the poorest educational resources (fiscal and human), and substandard achievement" (para. 2). In contrast, schools with the least amount of “at-risk children have the greatest financial resources, teachers with the best credentials, and the highest levels of achievement" (NYSED, 1997, p. vi; NYSED, 1998, p. 79). Patterns of relationships between poverty and racial composition of cause-and-effect, related to student achievement are evident and should not be ignored. In NYS, "schools with the highest percentages of minority children—who are frequently also poor—have the least experienced teachers, the most uncertified teachers, the lowest-salaried teachers, and the highest rates of teacher turnover" (NYSED, 1998, p. vi).

A 2014 report by the Civil Rights Project declared New York as the state with the most segregated schools. The report focused on school segregation and enrollment practices. Black and Latinx students find themselves in high poverty concentrated schools

while White students find themselves in a school that enrolls high proportions of middle-class students. The report indicated that issues related to racially segregated schools are unqualified teaching staff, inadequate facilities and learning materials and very high dropout rates which are caused by poverty concentration. The report pointed out the benefits desegregated schools would bring to all students whether White, Black, or Latinx.

For low SES families, education can be seen as the most effective and direct route out of poverty. In 1966, The Coleman Report was mandated by the Civil Rights Act of 1964. The act required that the U.S. Office of Education produce a report to describe the inequality of educational opportunities across the United States. The Coleman Report documented the disparities in academic achievement and segregation was done on basis of race and ethnicity. Differences in educational spending were an obvious source of the disparity in academic achievement (Coleman et al., 1966).

Public education is primarily funded through local property taxes, directly correlated to differences in expenditures per student. School districts in wealthier communities automatically have a larger pot of local funding for their school budget. Wealthier districts may benefit from other advantages not commonly accessible to low SES districts, such as Parent Teacher Associations (PTA). Some PTAs in wealthier districts have been known to raise hundreds of thousands of dollars and, in some cases, even millions. Such revenues are of critical importance to districts as they help shoulder the burden of costs that would otherwise be accounted for in the district's budget.

Meanwhile, school districts in low SES communities are often hampered by compounding economic distress, drug abuse, and high crime rates. The U.S. government

has implemented school equalization formulas and has provided access to state and federal grants to reduce the disparity in state education inequities. Still, the academic achievement gap for Black and Latinx students persists.

School-based budgeting has received growing levels of attention as a way to mitigate inequities in school funding. The ESSA was signed by President Barack Obama on December 10, 2015, and represents the reauthorization of the 50-year-old bipartisan measure to commit to an equal opportunity for all students (USDOE, 2015). The goal of ESSA is to ensure students are making progress in their education regardless of race, income, zip code, disability, home language, or background.

The ESSA law advances equity for all students by upholding critical protections for the most disadvantaged and high-need students. The law requires, for the first time in U.S. History, that all students be taught to high academic standards that will aid in preparing them for success in college and after college (USDOE, 2015). Perhaps most importantly, the law ensures that vital information is provided to stakeholders such as educators, families, and students through the use of annual statewide assessments. The assessments serve to measure student progress towards the law's high academic standards and serve as an accountability tool to ensure district-level implementation is in place and effective.

Studies of the Relationships between Racial Composition and Funding

NYS is not the only state with low SES minority schools and wealthier, predominately White schools. Based on several studies, Sosina and Weathers (2019) have suggested that: Certain categories of expenditure could moderate the connection between spending and student achievements. However, racial disparities persist in funding

distribution and educational experiences, raising apprehensions regarding the influence of school finance on perpetuating opportunity gaps (p. 1). This aligned with Books' (1999) earlier conclusions that central questions related to social justice and fairness:

> have been pushed aside in the legal reasoning contained in court opinions, in journalistic accounts of public battles over school funding, and mainstream scholarship on school finance. Instead, the discourse on school funding seems marked by a reluctance to cast issues of school finance is fundamentally moral terms, that is, to talk about what's fair rather than what's legally defensible, and by a refusal to confront the reality of ghettoization and its educational significance (p. 53).

Funding disparities are especially disheartening when the responsible parties continue failing to provide equal opportunities for all students, irrespective of their race or social class. In a study titled "School Funding: Justice v. Equity," Taylor and Clark (2009) explored connections between justice and its relation to equity for Black and Latinx student achievement. They also evaluated lawsuits challenging the judicial interpretation of the requirement to provide free and appropriate education. The legal challenges experienced by Black and Latinx students have made things better for public schools and the children they teach, but just by not looking at how much is spent on one student compared to another (Books, 1999).

Sosina and Weathers (2019), in their study on the pathways that may lead to inequities, explored sources of educational inequality by analyzing how racial segregation and socioeconomic disparities based on race are related to disparities in school district spending over some time. The authors used a sample of 15 years of data on

school district expenditures and demographics to explore patterns of racial/ethnic segregation and racial/ethnic disparities across six categories of per-pupil expenditures. They found that changes in racial/ethnic segregation over time "are associated with racial/ethnic disparities in spending, even after accounting for disparities in shortage" (Sosina & Weathers, 2019, p. 1).

Inequality in school funding has been hard to overcome. Since the early 1970s, courts in more than 30 states have issued decisions on school finance cases, most of which have declared funding systems illegal or inadequate and have mandated various corrective measures. Despite evident disparities in school funding prompting judicial mandates for reform, preventing governors and state legislators from circumventing, or restricting the impact of court orders has proven exceedingly challenging. Due to apprehensions regarding the separation of powers and the prevailing conservative political atmosphere, the majority of courts have refrained from recommending comprehensive solutions. Instead, they have afforded states considerable discretion to implement partial measures, occasionally indicating the possibility of further scrutiny if reforms are deemed insufficient.

Achievement Gap

There has been much research on the disparities in student achievement between White and Black and Latinx students (NCES, n.d.). Race differences are often entangled with differences in other family characteristics such as income and parental education that also affect student achievement. Research has found that academic achievement gaps often predict school attendance, which persists into adulthood (Fryer Jr. & Levitt, 2005). Levitt (2004) found that academic achievement gaps could be explained by controlling

covariates such as SES measures or the number of children's books in the home. They believed such differences might reflect real gains. The suggestion was that altering a child's home environment may increase academic achievement.

As measured by NYSED graduation rate data, disparities in state-administered exams have narrowed in the achievement gap for Black and Latinx students compared to their White peers. Still, they have overall remained significant (NYSED, 2021). The report indicates the graduation rate gap has narrowed by 5.5 percentage points for Black students and 4.5 percentage points for Hispanic/Latinx students compared with the state's White students (NYSED, 2021). Academic achievement gaps are of critical importance because research has shown that Black and Latinx students have a higher dropout rate than White students (Amerson, 2014; NYSED, 2021; Yeung & Conley, 2008).

Rothstein (2015) sought to consider how social and economic disadvantages suppress academic achievement for minority students. Rothstein (2015) concluded that most of the segregated schools that minority students attend are in hardship neighborhoods. Students living in low SES neighborhoods for multiple generations increases a barrier to achievement. According to Rothstein (2015), it is impossible to desegregate schools without working on changing the neighborhoods. Rothstein (2015) further argued that "without awareness of the history of state-sponsored residential segregation, policymakers are unlikely to take meaningful steps to understand or fulfil the constitutional mandate to remedy the racial isolation of neighborhoods, or the school segregation that flows from it" (p. 21).

Rothstein (2015) believed that policymakers must reacquaint themselves with the history of racial segregation to mitigate it. The argument was that desegregation is a

constitutional obligation that all policymakers must make a priority and indicated that this duty needs to be carried out not just be the district schools. Rothstein (2015) called on policymakers to make significant changes to policies that continually disadvantage low SES students because we cannot avoid our racial history. Failing to fulfil this obligation means not being able to narrow the achievement gap and guarantees that educational opportunity to Blacks and Latinx students will continue being unreachable (Rothstein, 2015).

Opportunity Gaps

Educational funding and disparities have resulted in minority groups of students diminishing compared to the rest, especially in engineering, science, and mathematics. The effort to address the ethnic and racial issues facing this group based on the federal education policies has been minimal. As a result, school financing has led to tremendous implications for Black and Latinx students by creating significant opportunity gaps.

Even with the view that higher education provides an opportunity and platform through which learners can transform society, many disparities have been viewed in this sector. These exclusions are mostly towards Black and Latinx students. According to Harper's (2006; 2009) studies, a reduced number of Black and Latinx students are exposed to the socioeconomic advantages crucial to their educational programs' success compared to their White counterparts (Harper, 2006). This racial inequality presents the challenges that continue to face public universities regardless of the numerous policies formulated to bridge the opportunity gap between people of different races (Harper, 2006). However, even with the formulated policies, sustainable progress is not usually

guaranteed. There is little change on acquiring equity and access to higher education among minority students.

From an urban, diverse social context with disparities in educational funding in NYS, the current study focuses on the importance of an opportunity gap in assisting theorists and researchers in explaining, naming, and analyzing educational practices (Milner, 2012). It uses an opportunity gap framework to point out that attention has been overly placed on achievement gaps. Therefore, there is a need for theorists and researchers to identify and analyze the origin of existing disparities among minority groups (Milner, 2012). This study revolves around some essential aspects in pointing out how educational practice relates to opportunity. These aspects include cultural conflicts, low expectations, and deficit mindsets.

Additionally, it revolves around meritocracy, context-neutral mindsets, practices, and approaches to color blindness (Milner, 2012). The study also emphasizes language and research to help give insight into educational literature to cut off inequitable processes in the education system and structures, practices, and policies that can be a barrier to achieving full potential by some students in the minority group. The opportunity gap framework used in this study explains both positive and negative features and realities of people, policies, and places in education through the five interrelated tenets (Milner, 2012). The framework is essential in explaining, problematizing, and understanding educational practices above the overdependence on an achievement gap. The interrelatedness of the tenets explains the necessity of concentrating on opportunity rather than entirely achievement.

Conclusion

This chapter included an overview of the theoretical framework that guided this study by helping to explain how this research is connected to CRT and the work of scholars like Derick Bell, Richard Delgado, Karl Marx, and Randall Collins. Also included was a synopsis of various findings from the extant peer-reviewed literature on the state educational policies as related to funding and academic achievement for minority students. The theoretical and conceptual frameworks for this study were organized according to policymaking, as related to education funding, district-level funding limitations, opportunity gaps for Black and Latinx students, and how disparities in education funding may negatively impact academic achievement for Black and Latinx students. Chapter three includes a detailed discussion of the research design and methodology used in this study.

CHAPTER 3 METHODS AND PROCEDURES

This chapter presents an overview of the research design and methods used in this study. I aimed to investigate the relationship between levels of student enrollment in NYS public school districts, academic achievement, and state education funding. The key objectives were to determine how the enrollment rates of Black, Latinx, and White students correlate with levels of state funding and if students' race and rates of state funding per district significantly influence academic opportunity and achievement levels. It was theorized that this analysis would provide a deeper understanding of whether NYS educational funding disproportionately and negatively affects minority students, and thereby systematically promulgates academic inequity. The data analysis procedures used in this study are outlined, including a rationale for the chosen analytical approach. Finally, the steps taken to enhance the study's trustworthiness (i.e., validity and reliability) are discussed along with the role of the researcher.

Methods and Procedures

This nonexperimental quantitative design included three research questions, which were developed to determine if educational funding is significantly related to minority students' achievement and opportunity gaps. The level of significance for the rejection of the null hypothesis was $\alpha < .05$. A series of multiple linear regressions (MLRs) was conducted in IBM SPSS Statistics (version 28) to determine if the relationship between the variables was statistically significant. The rationale for using MLR was that this statistical procedure helps identify patterns in the relationships between several numeric variables simultaneously and can be used to predict how changes in levels of an IV affect changes in levels of a DV.

For this study, each null hypothesis suggests that levels of the IVs have no effect on the DV, holding all other variables constant. For each alternative hypothesis, it was predicted that there is a statistically significant relationship between the variables, such that at least one of the coefficients is not equal to zero. Thus, rejecting a null hypothesis implies that at least one IV significantly affects the DV.

Sample and Population

The target population was publicly funded NYS school districts (excluding charter schools). Charter schools were excluded because of differences in the funding mechanisms, allocation processes, and regulatory frameworks that can impact their financial resources and operational flexibility. These differences can have implications for the educational programs, services, and outcomes provided by charter schools compared to traditional public schools. From this population, a sample of school districts with high enrollment rates of Black and Latinx students was selected.

Data Collection

The data utilized for this study was obtained from the NYSED. This agency provides access to school-level data related to students and publicly funded school districts in NYS. This data was considered valid for the purposes of this study since NYSED is responsible for collecting and reporting statistics for all NYS school districts, including public schools, charter schools, and nonpublic schools. As a result, the NYSED among the most interconnected educational services systems in the United States.

Instruments

In NYS, students in grades 3-8 participate in the English Language Arts (ELA) and the Mathematics State Assessments (MSA) State Common Core tests. These untimed

exams are used to assess students' knowledge and proficiency related to the skills that are necessary to thrive in college and beyond and are purposefully aligned with NYS Learning Standards and Core Curriculum (NYSED, 2019c). The exams consist of multiple-choice and open-ended questions based on short passages from stories, articles, and poems that are presented to students through visual and/or auditory means. The ELA and MSA are administered by the NYS Office of State Assessments. Proficiency rates are based on students' responses to the exam questions and all scoring procedures comply with NYSED policies for State exams. The exams are scored by licensed teachers who have been trained in a distributed scoring process, such that no student's exam is scored by a teacher from that student's school. The results are converted into scale scores that are provided by schools to the students, families, educators, and the public. Performance levels are reported along with data on students' strengths and weaknesses in various skill areas (NYSED, 2019c).

Reliability and Validity of the Data

The NYSED uses various systems to collect and verify school-level data on variables related to finances (i.e., levels of state funding) and students' academic performance (i.e., state assessments). The results of state assessments are utilized to distinguish between students who have satisfied NYS learning standards from those who have not. This assists with NYS planning activities and helps meet the objective of determining levels of equity in public schools by identifying achievement gaps. The type of data that was used in this study, which relates to state funding and ELA/MSA student assessments, is made publicly available each year by the NYSED through its website (www.nysed.gov) along with tools for extracting and reviewing it. The reliability and

validity of the data is ensured through expert oversight and compliance with appropriate NYS Learning Standards.

Research Questions

1. To what extent does funding differ in districts with high proportions of Black and Latinx students in New York State?
2. To what extent does education funding influence opportunity gaps in districts with high proportions of Black and Latinx students in New York State?
3. To what extent is funding related to student achievement in districts with high proportions of Black and Latinx students in New York State?

Hypotheses

Hypothesis for RQ1

The hypotheses for the first research question were:

H0: Rates of enrollment for Black, Latinx, and White students in New York State public school districts do not significantly influence school district funding ($\beta_j = 0$).

H1: Rates of enrollment for Black, Latinx, and White students in New York State public school districts significantly influence school district funding ($\beta_j \neq 0$).

The independent variable (IV) used to test the first hypothesis was rates of student enrollment per district by race, with three levels (e.g., Black, Latinx, and White). The dependent variable (DV) was state funding for NYS public school districts in U.S. dollars.

Hypothesis for RQ2

The hypotheses for the second research question were:

H0: Education funding (i.e., State Aid) for New York State public school districts does not significantly influence opportunity gaps for Black and Latinx students ($\beta_j = 0$).

H1: Education funding (i.e., State Aid) for New York State public school districts significantly influences opportunity gaps for Black and Latinx students. ($\beta_j \neq 0$).

The IVs used to test the second hypothesis were rates of student enrollment per district by race, with three levels (e.g., Black, Latinx, and White) and state funding for NYS public school districts in U.S. dollars. The DV was school districts' provision of AP courses. This was used as a proxy for opportunity gaps since limited access to AP courses can result in limited academic opportunity. All NYS public school students have testing opportunities but not all take assessments (Campanile, 2023).

Hypothesis for RQ3

The hypotheses for the third research question were:

H0: Education funding (i.e., State Aid) for New York State public school districts does not significantly influence student achievement for Black and Latinx students, based on proficiency in NYS ELA/Literacy and Mathematics assessments ($\beta_j = 0$).

H1: Education funding (i.e., State Aid) for New York State public school districts significantly influences student achievement for Black and Latinx students, based on proficiency in NYS ELA/Literacy and Mathematics assessments. ($\beta_j \neq 0$).

The IVs used to test the third hypothesis were rates of student enrollment per district by race, with three levels (e.g., Black, Latinx, and White) and state funding for NYS public school districts in U.S. dollars. The DV was proficiency scores on NYS

ELA/Literacy and Mathematics assessments, which were used as a proxy for academic achievement.

Conclusion

The goal of this chapter was to illustrate how the research methods were used to answer each research question. A discussion of the design, procedures, and detailed data analysis were described. In chapter four, the results of the study will demonstrate that the methodology described in this chapter was appropriate and followed.

CHAPTER 4 RESULTS

The aim of this study was to explore the association between educational factors that impact academic success in NYS public school districts. The variables of interest were students' race (i.e., differences between Black, Latinx, and White students), levels of funding per district, and educational opportunity gaps based on access to AP courses and rates of proficiency for Math and ELA State assessment scores. The target population for this study was public school districts in NYS with high proportions of Black and Latinx students, as compared to White students.

Preliminary Data Analysis

Before conducting the primary analysis in SPSS, a series of procedures was performed in Excel to explore the data sets and to select a cohesive sample. First, charter schools were eliminated. Next, data corresponding to all study variables for each district were compiled into a single Excel spreadsheet (e.g., enrollment rates by students' race, number of AP courses available, proficiency in NYS ELA/Literacy and Mathematics Assessments, and levels of State Aid) along with district codes and names. VLOOKUPs were then used to match data for each case by district code and the resulting spreadsheet was uploaded into SPSS for analysis.

The data were first reviewed for the presence of missing values, outliers, and accuracy; this process is necessary to determine if adjustments to the data set are needed (Bridgmon & Martin, 2012). Several school districts were identified as outliers and removed from the analysis to prevent undue bias (Stevens, 1996). These districts were Albany, Buffalo, New York City, Rochester, Syracuse, and Yonkers which are each part of the Conference of Big5 School Districts in NYS (Big 5 School Districts, n.d.). This

Conference represents the largest urban school districts within the State of New York; they face unique challenges due to their major student populations and for this reason differ substantially from other settings (Big 5 School Districts, n.d.). The remainder created a sample of n = 309 NYS public school districts for the data analysis.

Descriptive Statistics

A summary of the descriptive statistics for each of the variables related to this study is presented in Table 1. The average amount of State Aid for NYS public school districts was $29,066,426. Overall, the average number of White students per district was greatest (M = 2,601), followed by the number of Latinx students (M = 1,549) and Black students (M = 615).

Table 1

Descriptive Statistics

Variable	*M*	*SD*	N
State Aid	$29,066,426.30	$30,408,342.23	309
Black Students	614.81	1,103.88	309
Latinx Students	1,548.61	2,716.38	309
White Students	3,560.58	2,829.13	309
Number of AP courses	9.58	7.70	309
ELA/Literacy-Mathematics proficiency	0.0096	0.0085	309

Research Question One

The first research question was, do rates of enrollment for Black, Latinx, and White students in New York State public school districts significantly influence school district funding?

Hypotheses for RQ1

H0: Rates of enrollment for Black, Latinx, and White students in New York State public school districts do not significantly influence school district funding.

H1: Rates of enrollment for Black, Latinx, and White students in New York State public school districts significantly influence school district funding.

Analysis

To test the null hypothesis for research question one, a multiple linear regression (MLR) was conducted using SPSS. This was the correct statistical test for the analysis based on the specific research question, the types of variables that were assessed, and the scales of measurement (see Table 2).

Table 2

Variables for RQ1

Variable	Scale of Measurement
Independent: District enrollment by race Black Latinx White	Numeric/discrete (count of student enrollment)
Dependent: Funding State Aid by district	Numeric/continuous (U.S. dollars)

The null hypothesis was rejected. The MLR model statistically significantly predicted levels of State Aid, $F(3, 305) = 318.988$, $p < .001$, adj. $R^2 = .756$ (see Table 3).

Table 3

Analysis of Variance for RQ1

Model 1		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.160E17	3	7.1989E16	318.988	<.001[b]
	Residual	6.883E16	305	2.257E14		
	Total	2.848E17	308			

a. Dependent Variable: State Aid
b. Predictors: (Constant), White students, Latinx students, Black students

Approximately 76% of the variance in State Aid per district can be explained by the number of Black, Latinx, and White students enrolled in that district (see Table 4).

Table 4

Model Summary for RQ1

Model	R	R Square	Adj.R^2	Std. Error of the Estimate	Durbin-Watson
1	.871[a]	.758	.756	$15,022,585.17	2.045

a. Predictors: (Constant), White students, Latinx students, Black students

b. Dependent Variable: State Aid

All three IVs, the counts of Black students, Latinx students, and White students enrolled in a district, added significantly to the prediction, $p < .001$. The regression coefficients and standard errors are presented in Table 5.

Regression Equation

The regression equation that resulted from the analysis for research question one referencing the Unstandardized Coefficients is, Expected level of State Aid = $771,169.75 + $10,284.37(Number of Black students in district) + $5,869.87(Number of Latinx students in district) + $3,617.99 (Number of White students in district) as seen in Table 5. This indicates that, for example, for every additional Black student enrolled in an NYS public school district, we would expect an increase in State Aid by $10,284.37. In contrast, the expected increase in State Aid based on an additional Latinx student is $5,869.87, while for an additional White student the expected increase is $3,617.99.

Table 5

Coefficients for RQ1

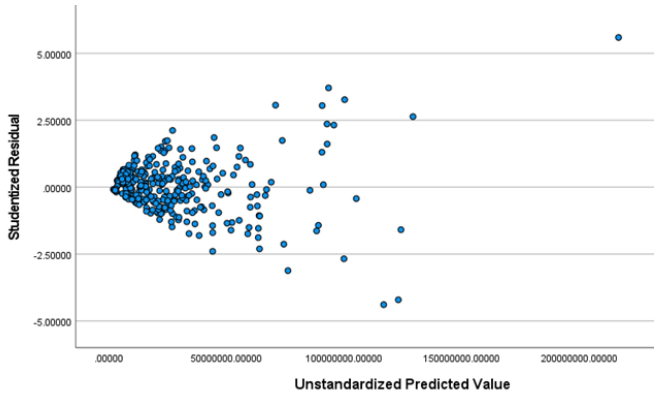
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	771,169.75	1,474,756.60		0.523	.601
	Black students	10,284.37	948.91	0.373	10.838	<.001
	Latinx students	5,869.87	385.59	0.524	15.223	<.001
	White students	3,617.99	302.59	0.337	11.957	<.001

a. Dependent Variable: State Aid

The MLR test assumptions were also assessed in SPSS as part of the analysis. There was an independence of residuals, based on a Durbin-Watson statistic of 2.045, which was very close to the standard of 2.0 (Laerd Statistics, 2015). To assess the assumption of homoscedasticity (i.e., if there was equality across the residuals), the unstandardized predicted values were plotted against the studentized residuals. Evidence of heteroskedasticity was observed within the data in the uneven spread and increasing funneling observed across the residuals (see Figure 1).

Figure 1

Scatterplot of Studentized Residuals by Predicted Value for RQ1



There was no evidence of multicollinearity (i.e., significant correlations between the IVs), based on all correlations < 0.70 and VIF values well below 10 (Hair et al., 2014; Laerd Statistics, 2015). Remaining outliers were identified in SPSS using casewise diagnostics. There were some studentized deleted residuals more extreme than ± 3 standard deviations (see Table 6). However, none were deemed as overly influential leverage points based on a range of 0.00013 to 0.47479, using Huber's (1981) standard of no leverage values ≥ 0.5.

Table 6

Casewise Diagnostics for RQ1

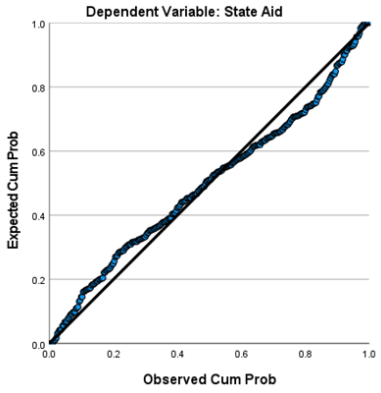
Case Number	Std. Residual	State Aid	Predicted Value	Residual
23	4.040	$277,434,933	$216,737,535.15	$60,697,397.853
69	-4.067	$62,063,055	$123,157,613.06	-$61,094,558.057
111	3.191	$148,270,288	$100,334,465.15	$47,935,822.847
177	-4.298	$52,362,827	$116,937,235.36	-$64,574,408.355
272	3.596	$147,535,938	$93,509,670.62	$54,026,267.384
302	-3.085	$29,901,889	$76,239,119.19	-$46,337,230.191

a. Dependent Variable: State Aid

Finally, a visual inspection of the residuals was made using a normal P-P plot of the studentized residuals (see Figure 2). The points are fairly well aligned across the diagonal, which indicates that the residuals are approximately normally distributed, and the assumption of normality is met (Laerd Statistics, 2015).

Figure 2

P-P Plot of Studentized Residuals for RQ1



Research Question Two

The second research question was, does education funding (i.e., State Aid) for NYS public school districts significantly influence opportunity gaps (i.e., Number of AP courses offered in district) for Black and Latinx students?

Hypotheses for RQ2

H0: Education funding (i.e., State Aid) for New York State public school districts does not significantly influence opportunity gaps for Black and Latinx students.

H1: Education funding (i.e., State Aid) for New York State public school districts significantly influences opportunity gaps for Black and Latinx students.

Analysis

To test the null hypothesis for RQ2, a second MLR was conducted in SPSS. This was the correct statistical test for the analysis based on the specific research question, the types of variables that were assessed, and the scales of measurement (see Table 7).

Table 7

Variables for RQ2

Variable	Scale of Measurement
Independent:	
Funding	Numeric/continuous
State Aid by District	(U.S. dollars)
District enrollment by race	Numeric/discrete
Black	(Count of student enrollment)
Latinx	
White	
Dependent:	Numeric/discrete
Access to AP courses	(Number of AP classes offered in district)

The null hypothesis was rejected. The MLR model statistically significantly predicted the number of AP courses offered in a district, $F(4, 308) = 36.587$, $p < .001$, adj. $R^2 = .316$ (see Table 8).

Table 8

Analysis of Variance for RQ2

Model 1		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5,935.71	4	1483.93	36.59	<.001[b]
	Residual	12,329.75	304	40.56		
	Total	18,265.46	308			

a. Dependent Variable: Number of AP courses

b. Predictors: (Constant), White students, Latinx students, Black students, State Aid

Approximately 32% of the variance in the number of AP courses offered by an NYS public school district can be explained by the number of Black, Latinx, and White students enrolled in that district and the amount of State Aid (see Table 9).

Table 9

Model Summary for RQ2

Model	R	R Square	Adj.R^2	Std. Error of the Estimate	Durbin-Watson
1	.570[a]	.325	.316	6.369	1.849

a. Predictors: (Constant), White students, Latinx students, Black students

b. Dependent Variable: Number of AP courses

All four of the IVs, the number of Black students, Latinx students, and White students enrolled in a district, and the amount of State Aid, added significantly to the prediction, $p < .001$. The regression coefficients and standard errors are presented in Table 10.

Regression Equation

The regression equation for research question two referencing the Standardized Coefficients is, Expected number of AP courses = 4.825 -.656(Amount of State Aid) + .245(Number of Black students in district) + .623(Number of Latinx students in district) + .597(Number of White students in district), as seen in Table 10. This indicates that for every additional U.S. dollar of State Aid in an NYS public school district, we would expect to see a decrease of approximately one (.656) in the Number of AP courses offered. For every additional Black student, we would expect an increase of approximately two AP courses (.245) while for Latinx (.623) and White students (.597), the expected increase is approximately six. This indicates that there appears to be a difference in the effect of students' race on the number of AP courses offered in a district.

Table 10

Coefficients for RQ2

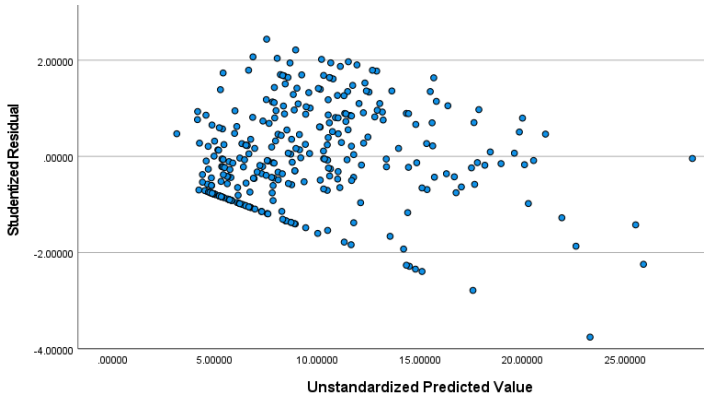
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.825	625		7.715	<.001
	State Aid	-1.660E7	.000	-.656	-6.839	<.001
	Black students	.002	.000	.245	3.611	<.001
	Latinx students	.002	.000	.623	8.144	<.001
	White students	.002	.000	.597	10.461	<.001

a. Dependent Variable: Number of AP courses

Again, the MLR test assumptions were assessed in SPSS. There was independence of the residuals, based on a Durbin-Watson statistic of 1.849 (see Table 9). Again, this was very close to the standard of 2.0 (Laerd Statistics, 2015). Homoscedasticity was assessed with a visual inspection of a plot of the unstandardized predicted values against the studentized residuals. The assumption of homogeneity was passed based on the approximately even spread of the residuals (see Figure 3).

Figure 3

Scatterplot of Studentized Residuals by Predicted Value for RQ2



There was some evidence of multicollinearity based on one significant correlation between the IVs of State Aid and Latinx students $r(307) = .741$, $p < .001$. However, all VIF values were well below the upper limit of 10 (Hair et al., 2014; Laerd Statistics, 2015). Only one outlier was identified using casewise diagnostics as a studentized deleted residual more extreme than ± 3 standard deviations. Similarly, only one highly influential point was detected based on a range of 0.00029 to 0.52832, using Huber's (1981) standard of ≥ 0.5.

Table 11

Casewise Diagnostics for RQ2

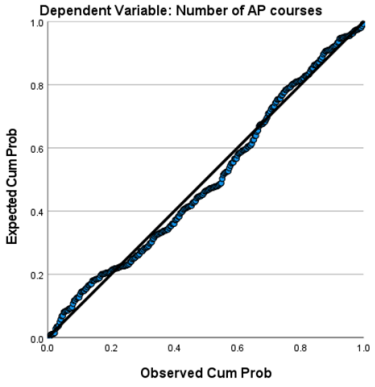
Case Number	Std. Residual	Number of AP courses	Predicted Value	Residual
307	-3.655	0	23.28	-23.276

a. Dependent Variable: Number of AP courses

A visual inspection of the residuals was made using a normal P-P plot of the studentized residuals (see Figure 4). The points are well aligned across the diagonal, which indicates that the residuals are approximately normally distributed, and the assumption of normality is met (Laerd Statistics, 2015).

Figure 4

P-P Plot of Studentized Residuals for RQ2



Research Question Three

The third research question was, does education funding (i.e., State Aid) for NYS public school districts significantly influence student achievement for Black and Latinx students, based on proficiency in NYS ELA/Literacy and Mathematics Assessments?

Hypotheses for RQ3

H0: Education funding (i.e., State Aid) for New York State public school districts does not significantly influence student achievement for Black and Latinx students, based on proficiency in NYS ELA/Literacy and Mathematics Assessments.

H1: Education funding (i.e., State Aid) for New York State public school districts significantly influences student achievement for Black and Latinx students, based on proficiency in NYS ELA/Literacy and Mathematics Assessments.

Analysis

To test the null hypothesis for research question three, an MLR was conducted in SPSS. This was the correct statistical test based on the specific research question, the types of variables that assessed and the scales of measurement (see Table 12).

Table 12

Variables for RQ3

Variable	Scale of Measurement
Independent:	
Funding	Numeric/continuous
State Aid by District	(U.S. dollars)
District enrollment by race	Numeric/discrete (Count of student
Black	enrollment)
Latinx	
White	
Dependent:	Numeric/continuous
Math and ELA State Assessment Scores	(Proficiency rates by district)

The null hypothesis was rejected. The MLR model statistically significantly predicted Math and ELA State Assessment Scores in a district, $F(4, 308) = 25.988$, $p < .001$, adj. $R^2 = .245$ (see Table 13).

Table 13

Analysis of Variance for RQ3

Model 1		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.006	4	.001	25.988	<.001[b]
	Residual	.017	304	.000		
	Total	.022	308			

a. Dependent Variable: Math and ELA State Assessment Scores

b. Predictors: (Constant), White students, Latinx students, Black students, State Aid

Approximately 25% of the variance in Math and ELA State Assessment Scores in a NYS public school district can be explained by the number of Black, Latinx, and White students enrolled in that district and the amount of State Aid (see Table 14).

Table 14

Model Summary for RQ3

Model	R	R Square	Adj.R^2	Std. Error of the Estimate	Durbin-Watson
1	.505[a]	.255	.245	.007385829	1.264

a. Predictors: (Constant), White students, Latinx students, Black students

b. Dependent Variable: Number of AP courses

State Aid was not a statistically significant predictor of L3 proficiency ($p = .207$). However, the number of Black students ($p = .033$), Latinx students ($p < .001$), and White students ($p < .001$) enrolled in a district did significantly affect the prediction. The regression coefficients and standard errors are presented in Table 15.

Regression Equation

The regression equation for research question three referencing the Standardized Coefficients is, Expected Proficiency Rates = 0.016 +.127(Amount of State Aid) - .152(Number of Black students in district) - .274(Number of Latinx students in district) - .455(Number of White students in district), as seen in Table 15. This indicates that State Aid has a negligible effect on Math and ELA State Assessment Scores in NYS public school districts. However, in terms of students' race (i.e., number of students enrolled), we would expect to see a decrease in proficiency of less than one point for every additional Black student (-.152), Latinx student (-.274), or White student (-.455). There does not appear to be any difference in Math and ELA State Assessment Scores in a district based on race.

Table 15

Coefficients for RQ3

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.016	.001		21.377	<.001
	State Aid	3.559E11	.000	.127	1.264	.207
	Black students	-1.174E6	.000	-.152	-2.138	.033
	Latinx students	-8.572E7	.000	-.274	-3.408	<.001
	White students	-1.367E6	.000	-.455	-7.584	<.001

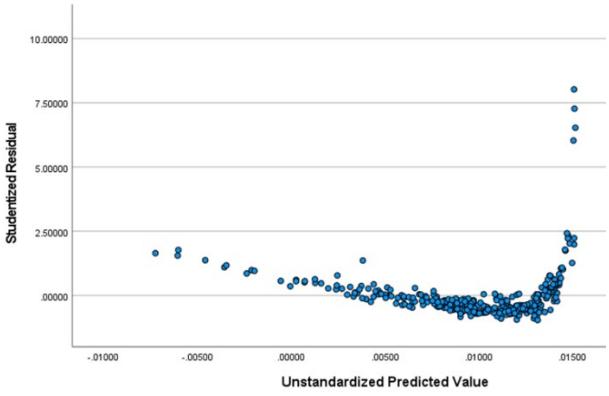
a. Dependent Variable: Math and ELA State Assessment Scores

The results of the MLR assumption tests were as follows. There was some evidence of a dependence of the residuals, based on a Durbin-Watson statistic of 1.264 (see Table 14). This deviates from the standard of 2.0. Homoscedasticity was assessed with a visual inspection of a plot of the unstandardized predicted values against the

studentized residuals. The assumption was violated based on the uneven spread of the residuals (see Figure 5).

Figure 5

Scatterplot of Studentized Residuals by Predicted Value for RQ3



Again, there was some evidence of multicollinearity based on the significant correlation between the IVs of State Aid and Latinx students $r(307) = .741$, $p < .001$ but again all VIF values were well below the upper limit of 10 (Hair et al., 2014; Laerd Statistics, 2015). Four outliers were identified using casewise diagnostics, as studentized deleted residuals more extreme than ± 3 standard deviations (see Table 16) but again only one highly influential point was detected based on a range of 0.00029 to 0.52832, using Huber's (1981) standard of ≥ 0.5.

Table 16

Casewise Diagnostics for RQ3

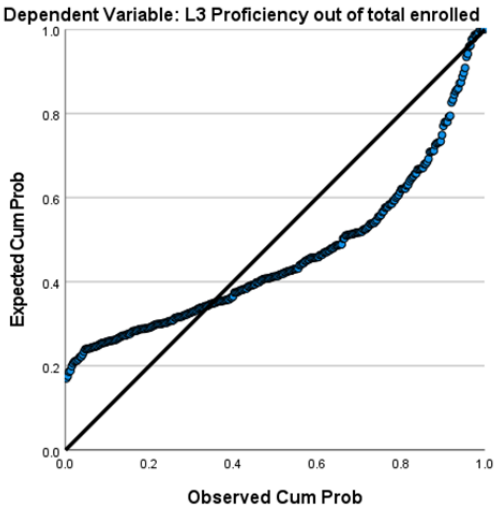
Case Number	Std. Residual	Number of AP courses	Predicted Value	Residual
107	6.502	0.063158	0.01513622	0.048021678
112	7.989	0.074074	0.01506640	0.059007675
113	7.241	0.068571	0.01508825	0.053483183
115	6.008	0.059406	0.01503334	0.044372603

a. Dependent Variable: Math and ELA State Assessment Scores

The points of the residuals were not well aligned across the diagonal on the normal P-P plot of the studentized residuals (see Figure 6). This indicates the residuals are not approximately normally distributed, and the data failed the assumption of normality.

Figure 6

P-P Plot of Studentized Residuals for RQ3



Conclusion

This chapter included the results of this study. Multiple linear regressions were run in SPSS to answer each research question, which was the appropriate analysis based on the types of variables and their scales of measurement. Evidence was found to support the alternative hypothesis for each research question. Significant relationships were found between minority students' race, levels of state aid per district, the number of AP courses offered per district, and academic achievement scores. The findings, and their implications, are discussed in greater detail in the following chapter. Also included in Chapter 5 is a discussion of the strengths and limitations of this research, recommendations for practice, and suggestions for future studies.

CHAPTER 5 DISCUSSION

Introduction

The purpose of this study was to explore the relationship between student enrollment by race, opportunity gaps and academic proficiency, and state funding for students in NYS public school districts. This chapter begins with a discussion of the results for each research question, how the major findings are related to prior research, and the implications for practice. The chapter concludes with a discussion of the study's strengths and limitations, recommendations for educational funding practices, and recommendations for future research. A summary of each research question, the statistical methods, and the variables is presented in Table 17.

Table 17

Summary of RQs, Statistical Methods, and Variables

Research Question	Method	Independent Variable	Dependent Variable
1. Do rates of enrollment for Black, Latinx, and White students in New York State public school districts significantly influence school district funding?	MLR	Enrollment by Race	District Funding
2. Does education funding for NYS school districts significantly influence opportunity gaps for Black and Latinx students?	MLR	Enrollment by Race District Funding	Opportunity Gaps (access to AP courses)
3. Does education funding for NYS school districts significantly influence student achievement for Black and Latinx students?	MLR	Enrollment by Race District Funding	ELA/MSA proficiency scores

Results of Research Question One

The first research question was used to determine if there is a relationship between educational funding by race in districts with high proportions of Black and Latinx students in the state of New York. The purpose of this question was to determine if rates of enrollment for Black, Latinx, and White students influence district funding in NYS. education funding is related to opportunity gaps in districts with high enrollments of minority students. The independent variable was enrollment by race. The dependent variable was school district funding.

An illustrative instance of inequity is evidenced in the outcome pertaining to research question one. The regression indicates that for every additional Black student enrolled, we would expect an increase in State Aid by $10,284.37. In contrast, the expected increase in State Aid based on an additional Latinx student is $5,869.87, while for an additional White student the expected increase is $3,617.99. While the observation of higher state aid allocated for Black student enrollment is higher than initially anticipated, it is important to note the disparity in funding for Latinx and White students. This clearly indicates a significant difference.

School District Funding by Race

There are many variables that can affect school district funding in NYS. As explained by the NYSED (2005), state aid is distributed to school districts according to the principles of wealth equalization and the intent to offset substantial differences in school districts' access to local revenues. Although the NYSED has implemented various equalization strategies, ongoing disparities in fiscal resources that are meant to support education should not be ignored. This study highlights this type of inequity, as seen in the

direction (either positive or negative) of the co-efficients from the regression analysis for the research questions.

Results of Research Question Two

The second research question was used to determine if there is a relationship between educational funding and opportunity gaps in districts with high proportions of Black and Latinx in the state of New York. The purpose of this question was to determine if education funding is related to opportunity gaps in districts with high enrollments of minority students. The independent variable was district funding. The dependent variable was school responsiveness as access to AP Courses.

An illustrative example of inequity is seen in the result for research question two. The regression equation based on the standardized coefficients is: Expected number of AP courses = 4.825 -.656(Amount of State Aid) + .245(Number of Black students in district) + .623(Number of Latinx students in district) + .597(Number of White students in district). In other words, for every one dollar increase in state aid, we would expect to see the number of AP courses offered in a district decrease by .656. Although numerically this represents less than one AP course, the impact of more funding is a reduction in academic opportunity. This supports the hypothesis that there is a difference in opportunity, as seen in the higher decrease for Black students as compared to Latinx and White students. For every additional Black student in a district, we would expect to observe an increase of approximately 2 AP courses. In contrast, for both Latinx students and White students, it's approximately 6 courses.

Opportunity Gaps for Black & Latinx Students

The outcome of this research supports prior research on the implications educational funding has on college readiness (Ferrare & Phillippo, 2021). Students from high-poverty districts are constantly exposed to insufficient resources and lack access to advanced coursework, including Advanced Placement courses that prepare learners for college-level work. When there is unequal funding, Black and Latinx students are unreasonably impacted. When learners are not provided with quality education or resources for college readiness, they are more likely to experience decreased academic performance, thus significantly influencing their college readiness. Additionally, most Black and Latinx students in these districts barely meet admissions and scholarship requirements for college, leaving them unprepared for college and incapable of hunting higher education. Besides the funding disparities in the State, it is also clear that learners with low-SES are more likely to attend underperforming schools, which further makes it hard for them to gain college admission.

The major findings of the study supports and extends prior research studies in the field of education funding and its influences on opportunity gaps for Black and Latinx students. Funding disparities, which are common in NYS, can also have a significant impact on teacher quality. The lack of funding in mainly districts with high populations of Black and Latinx students in NYS generates a scheme where marginalized learners are less likely to benefit from high-quality teachers. The inadequate resources in these districts lead to the scarcity of qualified and competent educators, higher teacher turnover rates, and overcrowding in schools and classes. In contrast, predominantly White districts with better subsidy levels can give better pay, more proficient development prospects,

and smaller class sizes, which increase high-quality teacher retention rates (Brittain & Kozlak, 2007).

The effect of inadequate funding on teacher eminence is apparent in the academic achievement of sectional students in NYS. The academic achievement of Black and Latinx students is significantly lower than that of White students according to reports by the NYSED (2020). This discrepancy in academic achievement reflects lack of access to high-quality teachers and resources in high-minority districts.

CRT is a context that underlines the role of systemic racism in spreading the unsatisfactory dispersal of resources, which has resulted in discrepancies in teacher quality (Christian et al., 2019). CRT advocates that the inadequate dispersal of resources is not unintentional; instead, it is the effect of deliberate policies that reinforce systemic racism. One instance of this is the practice of "redlining," where banks declined to offer loans to minorities in some neighborhoods, creating cycles of scarcity and limiting access to resources. This method has led to inequalities in backing for schools in principally minority neighborhoods, widening the achievement gap between Black and Latinx students as compared to White students (Delgado & Stefancic, 2012).

The effect of the funding disproportions in schooling on professor quality is clear in the academic accomplishment of disregarded apprentices in NYS. Interpretation to the New York Municipal Education Subdivision, the academic accomplishment of disregarded learners is meaningfully reduced to that of White students (NYSED, 2020). This divergence in speculative success is due to the lack of superior teachers and resources in minority schools.

CRT recommends that the deficiency of funding and the consequential lack of access to high-quality teachers in principally sectional districts are the effects of systemic prejudice that have been continued over time, with the system profiting White learners at the cost of marginalized groups, particularly low-socioeconomic Black and Latinx students. This disparity in resources restrains the prospects for disadvantaged learners to benefit from quality education.

Conflict Theory proposes that the inadequate dispersal of resources in education funding is the outcome of the struggle between wealthy White individuals and minority groups (Kühne et al., 2019). In such situations, the dominant (mainly wealthy group) controls the resources, and the minority groups, which are largely minorities, have inadequate access to resources. The battle between the marginalized and the wealthy class leads to the incapable dispersal of resources, which develops discrepancies in teacher quality and reinforces the achievement gap between Black and Latinx students in comparison to White students. The inadequate resources in districts with high proportions of Black and Latinx students results in a shortage of qualified and competent teachers, higher teacher income rates, and bigger class sizes, limiting opportunities for success and facilitating the cycle of poverty. This discrepancy in academic achievement is due to the limited access to high-quality teachers and resources in high-minority districts.

Results of Research Question Three

The third research question was used to determine if there is a relationship between educational funding and academic achievement in districts with high proportions of Black and Latinx in the state of New York. The purpose of this question was to determine if statistically significant differences in proficiency scores on the ELA and

Mathematics State Assessment for Black and Latinx students compared to their White peers. The independent variable was district funding. The dependent variable was proficiency scores on state assessments. Another interesting result was obtained for this research question. According to the regression equation, for every 1-unit increase in the number of students enrolled *for all races* we would expect to observe a decrease in levels of L3 proficiency. Increases in state aid were associated with an increase in L3 proficiency, but this predictor was not statistically significant ($p > .05$).

Achievement Gaps for Black & Latinx Students

The outcome of this research reflects that education funding (i.e., state aid) in NYS public school districts significantly influences student achievement for Black and Latinx students, based on proficiency in NYS ELA/Literacy and Mathematics Assessments. One of the substantial implications of funding inequalities in NYS is the continuance of the achievement gap between learners from different socioeconomic backgrounds. The research contained herein reflects evidence that compared to their White peers, Black and Latinx learners from low-income communities have low proficiency on state exams, thus facilitating the continuity of persistent disparities in academic achievement. Some school districts with a high population of minority learners receive inadequate funding, which exacerbates these disparities by limiting both opportunities and resources available to these learners. The student achievement gap is an intricate and complicated issue, although research has consistently illustrated that funding inequality associated with inadequate resources significantly contributes to this issue (Rich, 2021).

The impact of unequal funding on the achievement gap is evident in the differences in graduation rates and test scores between learners from diverse economic backgrounds. In the school year 2019-2020, data from the NYSED show that while learners from the high-poverty district had a graduation rate of 68%, learners from low-poverty districts had 87%. Additionally, the proficiency rate of English Language Arts for learners in low-poverty districts was 63%, while that of learners from High-poverty districts was 38%. Academic achievement disparities have long-term impacts on learners since those behind academically have low chances of graduating from high school, attending higher education, or obtaining high-paying jobs. The perpetuation of the achievement gap has a significant impact on society and on the opportunities available to specific learners. There can be a stronger economy, reduced income inequality, and improved social and economic mobility when there is an equitable education system.

The implication of the perpetuation of the achievement gap for future studies calls for continuous research on the effect of funding inequalities on academic achievement. Different stakeholders need to examine the specific interventions and resources that effectively reduce the achievement gap and drop inequalities in academic achievements and compare that information with the use and availability of these strategies across funding levels. Researchers should also explore the long-term effect of underfunded schools on learners' social and economic mobility and the wider implication on society (Sy et al., 2021). They should also concentrate on the effect of funding discrepancies on other areas of learners' progress beyond academic achievement. Researchers should examine how underfunded schools lack resources for extracurricular activities such as music and sports, which positively impact the learner's social and emotional well-being.

Therefore, researchers should explore the effect of funding inequalities on learners' overall health, development, and well-being.

Both Conflict Theory and CRT can provide insight into the implication of funding disproportions in NYS and how they subsidize the continuation of the achievement gap between learners from diverse socioeconomic backgrounds (Christian et al., 2019). CRT, on one hand, would contend that funding inequalities would result in unequal access to resources (facilities, quality instructors, materials) based on structural racism and discernment (Christian et al., 2019). This theory would argue that systems of funding schools through local property taxes encourage the existing disparities since communities of higher SES are capable of offering more funds for their learning institutions compared to low socioeconomic communities (Sy et al., 2021). Therefore, individuals from poor backgrounds are more likely to attend underfunded learning facilities, and experience educational barriers, thus spreading the achievement gap.

Relationship to Prior Research

There is a clear disparity in educational funding in NYS, mostly in districts that have a high population of Black and Latinx students and low-SES compared to districts with predominately White students. Conflict Theory and CRT can offer an important framework for evaluating this issue and comprehending how power structures and race intersect to develop these disparities. CRT analyzes how race and racism intersect with social and political power structures (Christian et al., 2019).

Unequal educational funding in NYS leads to a variety of discrepancies in educational opportunities, including overpopulation, lower teachers' salaries, and fewer advanced course offerings. Different studies have shown that learners who do not have

access to high-quality education are less likely to be academically prepared for higher education than from wealthy, mainly White, families (Christian et al., 2019). Well-funded schools have enough resources and can provide more rigorous coursework and personalized support to learners. The conflict theorist contends that learners from underfunded schools are disadvantaged and lack the necessary resources for advanced courses and support services, including college counselling and tutoring (Kühne et al., 2019). These students are, therefore, less likely to have access to financial resources, be unexposed to college-level coursework, and be less likely to receive guidance on the college application process.

According to the CRT theorists, this theory highlights the systematic racism perpetuated by educational funding disparities or the distribution of resources. They argue that funding disparities are an exhibition of organized racism that has been disseminated over the years. These funding disparities in the education sector perpetuate the cycle of poverty, limiting the opportunities for underprivileged students to excel (Christian et al., 2019). This theory illustrates or examines the impact of racism in society, highlighting how racism has been used to develop policies that are in favor of White, wealthy students leaving Black and Latinx students with insufficient resources that are critical in preparing them for college/higher education learning (Christian et al., 2019).

Furthermore, Conflict Theory offers another lens to scrutinize the relationship between funding disparities and college readiness. The main proposers of this theory argue that societies are alienated into different groups with contradictory interests and that these struggles are portrayed in the distribution of resources (Ferrare & Phillippo,

2021). This issue is complex and multifaceted and requires evidence-based research to address the disparity in college admission or readiness. There is a need to focus significantly on increasing education funding in high-poverty districts and giving disadvantaged learners greater access to financial aid opportunities.

Implications for Practice

Education is an ultimate pillar for the development of society; thus, funding is an important aspect of offering quality education. Educational funding in NYS has been an issue of concern for decades as it has constantly struggled to offer sufficient resources to all public schools, leading to a widening gap between learners from disadvantaged and affluent communities (Rich, 2021). The findings of this research reflect funding differences in districts with high proportions of Black and Latinx students. The lack of funding often results in understaffed classrooms, overcrowding, and outdated facilities resulting in significant opportunity and academic gaps where learners from Black and Latinx communities are disproportionately impacted. College readiness rates, standardized test scores, and graduation rates illustrate this gap.

Besides the implications of this gap being far-reaching, they can also hinder future research. Learners from underprivileged communities do not have access to quality education, and thus they lack the necessary knowledge and skills to pursue higher education, restraining the pool of investigators and modernizers. The lack of quality education may also lead to a lack of interest in STEM subjects which is fundamental to the development of a society. The implications of unequal educational funding on future studies are far-reaching and immense. Some of the impacts of unequal educational funding on future research include the impact on graduation rates, impact on teacher

quality, impact on college readiness, and impact on student achievement. Each of these impacts will be discussed in depth within the following sections.

Reliability and Validity of the Study

The following measures were taken to increase the level of reliability and validity of the research design. For enrollment demographics, district funding, and student achievement, data were collected from the data.NYSED.gov website, which is used to publicly report educational data to avoid selection bias and obtain a sufficient sample size. Opportunity gap-related data were collected from NYSED financial and accountability data which provides information related to access to advanced placement (AP) courses, thereby assessing academic opportunities for minority students.

A strength of this study was the inclusion of three levels of students' race (e.g., Black, Latinx, and White) so they could be compared as predictors in the regression analyses. This provided consistency and the ability to assess differences in the impact of different racial groups on the DVs. Excluding NYS charter schools from this study should also be considered a strength of the research design. The funding of charter schools differs substantially from that of public schools; therefore, failing to exclude them could have introduced an extraneous or confounding variable and reduced the study's validity. Confounding variables can influence IVs or DVs and lead to spurious correlations (Bridgmon & Martin, 2012). Thus, no major threats to internal validity were detected for this study. According to the NYSED, the procedures used to measure public school data are consistent. I did not rely on a sampling procedure that could have introduced bias or that could have resulted in unknown systematic differences between the groups that were assessed.

It should also be noted that five public school districts were eliminated from the data analysis, after the data were collected. This was based on the finding that these districts were both outliers and high leverage data points, as ascertained through the statistical analysis. Removing them likely helped promote the accuracy of the predictions of the regression equations. Also, the sample size was large and the level of significance for the statistical tests was $\alpha = .05$, which is the accepted criteria for statistical power (Creswell & Creswell, 2018). Using a large dataset helped avoid a common problem caused by inadequate sample sizes, which can reduce statistical power and make it more difficult to detect true effects (Creswell & Creswell, 2018).

Another strength is that the dataset used for this study represented the entire population of NYS public school districts. This helped reduce a common threat to statistical validity, which is sampling bias (Creswell & Creswell, 2018). Given the source of the data, it is likely that the sample used in this study was representative of the student demographics of the target population and thereby accurately reflects the population. This also promotes external validity and the ability to generalize the results to all Black, Latinx, and White students in NYS public schools. No other likely threats to external validity were identified. Since I did not interact with the students who were the sources of the data, there was no opportunity for experimenter effects, which are characteristics or behaviors of the researcher that can influence a study's outcome (Creswell & Creswell, 2018).

Limitations of the Study

The quantitative research design used in this study provided measurable outcomes, but a possible limitation is related to the assumption that the data provided by

NYSED was reliable and valid. A possible threat to statistical validity for this study is measurement error. It is possible that there could be some inaccuracies in the data provided by NYSED based on either the instruments or methods used to compile the data (Bridgmon & Martin, 2012). If there was some unknown missing or incomplete data provided by NYSED, this could have also introduced bias or reduced the generalizability of the results.

Recommendations for Future Practice/Research

The evidence from this study indicates that student racial demographics play a discernible role in predicting the amount of state aid received by schools. Further exploration of these findings could delve into the specific mechanisms through which race influences state aid allocation. Understanding these underlying factors is crucial for addressing and remedying the disparities in education funding. The results underscore the importance of considering race as a factor in educational policymaking and resource allocation.

The findings for research question 2 further unveiled a notable correlation: as education funding increased, access to Advanced Placement (AP) courses decreased. This discovery presents a paradoxical scenario that warrants further examination and consideration. On the surface, increased education funding might intuitively be expected to enhance opportunities for all students, including access to advanced coursework such as AP classes. However, the observed inverse relationship suggests a more complex dynamic at play.

One potential interpretation of these results could involve the allocation of resources within school districts. It's conceivable that as funding levels rise, schools may

prioritize different initiatives or allocate resources differently, inadvertently impacting access to AP courses for Black and Latinx students. This could be due to a variety of factors, including resource allocation strategies, staffing decisions, or shifts in curriculum priorities. Another plausible explanation could be the presence of systemic barriers or inequities within the education system. Despite increased funding, Black and Latinx students may still face disproportionate challenges or barriers to accessing advanced coursework, such as implicit bias in placement decisions, lack of support or encouragement, or disparities in educational opportunities within schools.

The analysis of research question 2 sheds light on the complex relationship between education funding and opportunity gaps for Black and Latinx students. The findings underscore the importance of critically evaluating the impact of education funding policies on marginalized communities. While increased funding is often touted as a solution to address educational disparities, these results highlight the need for a nuanced understanding of how funding decisions can inadvertently perpetuate or exacerbate existing opportunity gaps.

The analysis conducted for research question 3 delved into the intricate relationship between education funding, particularly state aid, and student achievement outcomes, focusing specifically on Black and Latinx students within NYS school districts. The results yielded a compelling finding: education funding, particularly in the form of state aid, significantly impacts the academic performance of Black and Latinx students, as gauged by proficiency levels in the NYS English Language Arts (ELA) and Mathematics Assessments.

This provides compelling evidence of the significant impact of education funding on student achievement outcomes for Black and Latinx students in NYS school districts. This finding underscores the critical role that financial resources play in shaping educational opportunities and outcomes for marginalized student populations. By demonstrating a direct link between education funding and student achievement, the results highlight the pervasive nature of the achievement gap among Black and Latinx students within NYS school districts.

It is important to address the funding disparities in NYS as a measure to guarantee that all learners benefit from high-quality teachers and resources, irrespective of their SES or race. This necessitates the universal transformation of the existing policies that facilitate systemic racism and hinder access to resources for underprivileged learners. This transformation should include improved funding for those minority districts, better teacher salaries, professional expansion prospects to attract and hold high-quality teachers, and smaller class sizes to advance the eminence of education.

The discrepancy in educational funding and the consequential prospect and academic gaps in NYS have significant implications for future studies. Scholars should continue to scrutinize the inequitable effects of funding on student success, including academic achievement and college readiness. The researchers must also investigate approaches to close the opportunity gap and improve results for learners in low-socioeconomic and high-minority districts. Therefore, policymakers must emphasize funding equity in education and discover other funding models that are not solely dependent on local property taxes. They should guarantee that all learners benefit from high-quality teachers, expertise, and extracurricular programs.

In future studies, other statistical tests could be used to determine if they would help overcome the violation of homogeneity that was observed in the dataset. The presence of homoscedasticity in linear regression analysis indicates that the variance of the residuals is inconsistent across levels of the IVs (Laerd Statistics, 2015). Some suggested alternatives are regression techniques that are less sensitive to violations of homogeneity and outliers. This includes weighted least squares, which assigns different weights to the observations based on the variance of the residuals so that the influence of diverging data points on the regression estimates is reduced (Laerd Statistics, 2015). Another alternative is to use a bootstrap method, which is a process that involves resampling from the dataset so that new estimates of the population parameters are generated (Field, 2018). Bootstrapping is effective for helping to increase the validity of hypothesis tests and can be conducted in SPSS (Field, 2018).

Conclusion

This quantitative study explored the extent to which education funding is related to achievement and opportunity gaps for minority students. The outcome of this research reflects that education funding (i.e., State Aid) for NYS public school districts significantly influences opportunity and achievement gaps for Black and Latinx students. Black and Latinx students from underfunded schools scored lower on proficiency exams and have less access to advanced placement courses, and often have less access to essential components of education and academic success. The resources might even be of more importance to learners from low SES since they may not have access to such resources outside of school.

The outcome of this research suggests that rates of enrollment for Black, Latinx, and White students in NYS public school districts significantly influence school district funding. This evidence reflects that educational funding inequality in NYS greatly impacts districts with a high population of Black and Latinx learners, thus it is significant and far-reaching. Funding disparities in the education sector in NYS have continued to be a significant issue for many years.

The funding disparities in NYS result from the state's educational funding system that allocates funds based on property taxes, a system that inherently favors wealthier districts. This is evident in information provided by the NYSED which indicates that 82.3% represented the average state graduation rate, while only a 53.7% graduation rate was recorded in the high-poverty districts. However, when a comparison is made between graduation rates for students from the high minority population districts and those from low minority districts, the gap is even wider, where a 47.4% graduation rate is recorded in the high minority districts compared to the state average.

The incongruity in graduation rates between different regions in the state directly impacts the lack of educational funding in the state. Because learners from these districts do not access the same resources as those in the wealthier districts, their ability to reach their full potential is limited. This outcome implication can be evaluated through the lens of Conflict Theory and CRT.

This issue can be analyzed using the CRT, a theoretical context that scrutinizes how cultural, social, and historical factors contribute to the persistence of racial inequalities in society. This theory argues that educational funding discrepancies in NYS are due to discrimination and systematic racism, which facilitate disparity and limit

resources for Black and Latinx students (Christian et al., 2019). According to the main scholars of this theory, disparities are not incidental or accidental but are the deliberate result of policies and practices developed to support White individuals at the expense of Black and Latinx students (Sy et al., 2021). Based on graduation rates, this theory would contend that the funding disparities in NYS would contribute to the tenacity of racial discrimination in educational outcomes. Learners from disadvantaged backgrounds, mainly Black and Latinx students, face significant barriers that impede their ability to graduate, including limited access to support services, resources, and quality education (Christian et al., 2019). These barriers are the result of policies and practices and are not accidental, since they prioritize the needs of White learners at the cost of Black and Latinx students.

Additionally, Conflict Theory can be used to evaluate the effect of education funding disparities on graduation rates (Kühne et al., 2019). According to this theory, social and economic discrepancies result from a power struggle between different individuals in society. In the framework of educational funding inequalities, this theory highlights the struggle between White and Black and Latinx communities, including the poor. According to the main proponents of this theory, White, wealthy communities have more political and economic power compared to the poor minority groups who have no influence, thus White communities secure more funding for their schools.

Therefore, a Conflict theorist would contend that addressing the funding inequalities in NYS necessitates challenging the power structures (policies and practices) that facilitate the disparities and advocating for policies that prioritize the needs of all learners irrespective of their SES or their ethnicity (Kühne et al., 2019). To warrant that

all learners have the same access to educational resources, NYS should increase education funding for these districts and review the policies that perpetuate funding disparities in these districts. Creating policies addressing this issue would include increasing access to technology and resources, providing financial support and services to learners and their families, and providing extra school funding.

APPENDIX A

ST. JOHNS UNIVERSITY IRB APPROVAL MEMO

Federal Wide Assurance: FWA00009066

Mar 11, 2023 8:55:37 AM EST

PI: Linda Macias
CO-PI: James Campbell
Dept: The School of Education, Ed Admin & Instruc Leadership

Re: Initial - IRB-FY2023-232 *An Analysis of New York State Education Funding as it Relates to Minority Student Achievement*

Dear Linda Macias:

The St John's University Institutional Review Board has rendered the decision below for *An Analysis of New York State Education Funding as it Relates to Minority Student Achievement*.

Decision: Exempt

PLEASE NOTE: If you have collected any data prior to this approval date, the data must be discarded.

Selected Category: Category 4. Secondary research for which consent is not required: Secondary research uses of identifiable private information or identifiable biospecimens, if at least one of the following criteria is met:

(i) The identifiable private information or identifiable biospecimens are publicly available;

(ii) Information, which may include information about biospecimens, is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained directly or through identifiers linked to the subjects, the investigator does not contact the subjects, and the investigator will not re-identify subjects;

(iii) The research involves only information collection and analysis involving the investigator's use of identifiable health information when that use is regulated under 45 CFR parts 160 and 164, subparts A and E, for the purposes of "health care operations" or "research" as those terms are defined at 45 CFR 164.501 or for "public health activities and purposes" as described under 45 CFR 164.512(b); or

(iv) The research is conducted by, or on behalf of, a Federal department or agency using government-generated or government-collected information obtained for nonresearch activities, if the research generates identifiable private information that is or will be maintained on information technology that is subject to and in compliance with section 208(b) of the E-Government Act of 2002, 44 U.S.C. 3501 note, if all of the identifiable private information collected, used, or generated as part of the activity will be maintained in systems of records subject to the Privacy Act of 1974, 5 U.S.C. 552a, and, if applicable, the information used in the research was collected subject to the Paperwork Reduction Act of 1995, 44 U.S.C. 3501 et seq.

Sincerely,

Raymond DiGiuseppe, PhD, ABPP
Chair, Institutional Review Board
Professor of Psychology

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