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Influence of Educational Equity Policies on High School Graduation Rates for Black Students

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Abstract

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MA, Portland State University, 2014

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

The achievement gaps between White and Black students remain prevalent in American public schools. To resolve the problem, many school districts have developed equity-centered practices to improve high school graduation rates. The purpose of this quantitative study was to determine whether the (a) duration of exposure to educational equity policies, (b) percentage of economically disadvantaged students, (c) percentage of students with disabilities, and (d) percentage of limited-English-proficient (LEP) students are predictive of high school graduation rates for Black students in large school districts. This study was grounded in Schneider and Ingram's social construction of target populations theory. Archival data of 466 case files from the regulatory 4-year adjusted cohort graduation rates and duration of exposure to educational equity policies were evaluated using a one-way ANOVA and a multiple linear regression. A statistically significant ANOVA indicated that large school districts without educational equity policies in place were associated with the numerically largest mean level of high school graduation rates ($M = 79.73$), while large school districts with 4 or more years of having educational equity policies in place were associated with the numerically smallest mean level of high school graduation rates ($M = 75.48$). The negative regression relationship between the percentage of economically disadvantaged students variable and the outcome variable predicted that an increase in low income students (22%) results in a 3% decrease high school graduation rates for Black students. While expressing reservation in interpreting the students with disabilities variable, the LEP variable was not significant. The findings of this study could contribute to positive social change through public policy development to increase chances of closing the education divide in America.

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Dedication

To Miryana, Elizabeth, and Baraka. Hard work pays off no matter how late you might think you are.

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Chapter 1: Introduction to the Study

Introduction

In the United States, educational statistics revealed persistent achievement gaps between White and minority students (Kena, et al., 2016). Hartney and Flavin (2014) pointed out that achievement gaps among student groups raised concerns of inequalities of access to quality education and have long-term negative effects in adulthood for Black students. In their study, Hartney and Flavin found that White citizens tended to reject educational reforms whenever their students were performing better in schools. The underlying argument was to keep the status quo if it was working for the majority. However, statistics show that Black and other minority student groups continue to trail behind in American public schools. This was evident in the data reflecting the achievement gaps between White and Black students (Kena et al., 2016).

Meanwhile, some continue to argue that public schools in the United States are failing to the extent American students have lower graduation rates compared to their counterparts in developed countries. The debate on school reforms ignites passionate and divergent ideologies in Congress and nationwide. At the same time, setting school priorities and developing comprehensive educational policies become complicated in such a polarized political climate. However, according to the National Center for Education Statistics (NCES, 2019), high school student graduation rates in public schools increased from 79% in the 2010–11 school year to 85% in the 2016–17 school year. In like manner, student dropout rates decreased from 10.9% in 2000 to 6.1% in 2016 (NCES, 2018).

While American public schools have improved students' graduation rates in recent years, the United States is still trailing other developed nations. For instance, the United States ranks

behind Denmark, Finland, Hungary, Iceland, Ireland, Japan, Korea, Latvia, the Netherland, Slovenia, Spain and the United Kingdom, all of which have graduation rates that equal or exceed 90% (Organization of Economic Cooperation and Development, 2014). The improvement in public school graduation rates in the United States can be attributed to multiple factors. For this study, however, I examined the extent to which the duration of exposure to educational equity policies influenced graduation rates for Black students in the quest of increasing public schools' graduation rates performance in order to boost the nation's position worldwide.

Recent statistics showed a 11% graduation rates gap between White and Black students (NCES, 2019). To close the education divide and persistent predictabilities of Black students' underachievement nationwide, Ladson-Billings (1997) suggested that whenever society has an opportunity to improve Black students' schooling experiences, it should act to reverse the trend of poor performance in schools to increase their life chances. In this context, many school districts across the nation have adopted educational equity policies focusing on providing additional instructional tools and allocating resources where they are mostly needed to improve Black students' academic results. However, empirical evidence related to the influence of the length of time an educational equity policy has been implemented on graduation rates for Black students has yet to be established. The findings of this study provided new knowledge in the field of education and public policy and equipped policy makers, educators as well as the general public with additional information on ways in which to improve Black students' graduation rates in public schools.

This chapter previews the background of this dissertation, presents a problem statement, provides the purpose of the study, poses the research questions and presents hypotheses. The

social construction of target populations theory informed the study. This chapter also details the assumptions, describes the nature of the study, defines key terms, and recognizes its limitations. The chapter provides the significance of this study and closes with a summary.

Background

The concept of equity can be defined in many ways depending on the field in which it is applied. In education, for instance, equity is related to the paradigm of leveling the playing field for all students in order to achieve higher academic and social outcomes. Benadusi's study (as cited in Castelli, 2012) traced the development of issues that have been a focus of debate for educational policy makers. The author pointed out that over the years, the concepts of efficacy and efficiency in education were predominant in the 1960s and 1970s. The concept of quality education emerged in the 1980s and 1990s. Finally, the equity approach began in late 1990s and has been a used in addressing diversity and inclusion in public schools in America.

The concept of equity in education has been linked to strategic equal opportunities. Castelli (2012) indicated that equity provided access to opportunities in education and broke barriers associated with limited resources, well-being, parental support, health, socioeconomic status, and cultural background. Nonetheless, some critics continue to argue that the adoption of equity policies in public schools raises the possibility of reverse discrimination and provides preferential treatments to minority and disadvantaged groups. Castelli refuted that assertion and argued that equity in education equipped educators with discretionary power to allocate resources to target specific groups of students and to use differentiation strategies in instruction delivery Levin (2012) built on Castelli's arguments and pointed out that through equity lenses,

the education provided to minority students was adequate, and educational systems guaranteed success for all students, regardless of their backgrounds.

To achieve the goal of guaranteeing equality of results in education, the central concern was providing all learners with equitable educational resources (Kornhaber et al., 2014). Such equal treatment appealed to American constitutional rights. Nonetheless, given the inequality of resources in public schools and outside factors, such as high-poverty or other environmental factors that may hinder students' performance, students' achievements reflected unequal results.

Unequal results were linked to inequity in education and have a lifelong economic impact on students who drop out. For example, employment statistics for 2014 revealed that the median annual earning of full-time employees, ages 24 to 35, who dropped out of high school was $25,000 for males and $19,000 for females. However, the median annual earning of full-time workers of the same ages with bachelor's degrees was $54,000 for males and $49,000 for females. At the same time, the unemployment rate for young adults with less than high school completion stood at 21% in comparison to 5% for young adults with bachelor's degrees (Kena et al., 2016).

Building on economic statistics to underline the dynamics of educational equity, the national education plan in Brazil established explicit targets to overcome educational inequities and used education to reduce social inequality in order to provide equal opportunities to all students (Leitao, 2015). Leitao (2015) suggested that social inclusion and equity should be considered when addressing educational evaluation and accountability policies for the establishment of fair criteria in determining educational effectiveness. Equally important, Valiandes (2015) indicated that the quality of differentiated teaching had a positive impact on

students' achievements. As an element of equity in education, differentiated instruction recognized the diversity of learners with ongoing assessments to get learners' feedback. In this context, teachers offered choices related to students' experiences to create a motivating learning environment that encouraged students to explore big ideas and expand their understanding of concepts. Valiandes argued that core instructional practices and systematic support of teachers' knowledge and the shaping of their beliefs in proactive educational policies were proven to be a prerequisite for the successful implementation of differentiated instruction to promote equitable learning environments.

Much of the literature discussed the benefits of using different instructional strategies to improve minority students' graduation rates and close the achievement gaps. However, there was a gap in the research that linked equity-centered practices to high school graduation rates for Black students. While considering a large amount of secondary data and controlling for the percentage of economically disadvantaged students, the percentage of students with disabilities, and the percentage of LEP students, this study filled in the gap by determining the influence of educational equity policies on high school graduation rates for Black students.

Problem Statement

A body of emerging literature on educational equity (Ford & Moore, 2013; Hartney & Flavin, 2014; Graham, 2007; Levin, 2012; Lucas, 2010; McNeal, 2009) stressed the imperative for educational equity policies in American public schools to close the opportunity gaps between White and minority students. Research showed that Black students were disproportionally affected with lower graduation rates (Hartney & Flavin, 2011; Ford & Moore, 2013; Noguera, 2010; Pitre, 2014). To comply with the No Child Left Behind Act of 2001 and Every Student

Succeeds Act of 2015, a growing number of school districts across the nation have implemented

educational equity policies designed to respond to minority students' academic needs and close

the education divide among student groups. To evaluate the efficacy of equity strategies, Gordon

(2013) conducted a study to investigate the merits of advancement via individual determination

(AVID) instruction in mathematics, an element of equity strategies in some school districts, and

the extent to which AVID program resulted in increasing Black students' achievement. Gordon

found that there were no significant differences in achievement among Black students enrolled in

AVID and non-AVID school districts.

Moreover, Robert et al. (2015) compared graduation rates for economically

disadvantaged and at-risk students before and after 23 high schools in North Carolina

implemented educational equity policies to increase graduation rates. The results pointed to a

significant increase in graduation rates. Equally important, Dansby and Dansby-Giles (2011)

collected first-generation college students' perspectives to explore their experiences, practices

and factors that influenced them to remain in high school and graduate. In their study, Dansby

and Dansby-Giles found that a holistic strategy based on a student-centered approach was the

driving force behind meeting students' needs through "provisions of rigorous instruction in core

subjects" (p. 21). Another contributing force was courageous leadership to initiate and

implement equitable programs tailored to meet the serious and urgent needs of historically

disenfranchised students to increase their graduation rates. This study expanded on the studies of

Dansby and Dansby-Giles (2011) and Robertson et al. (2015) and examined the influence of the

duration of exposure to educational equity policies on high school graduation rates for Black

students in large school districts. The findings of this dissertation could contribute to the

emerging literature in the fields of public policy and administration and education leadership, and they could provide new insights to policy makers, educators, and the general public.

Purpose of the Study

The purpose of this quantitative study was to determine the extent to which the duration of exposure to educational equity policies predicted high school graduation rates for Black students in large school districts while controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students. The independent variables were defined as the duration of exposure to educational equity policies, percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students. The dependent variable was defined as high school graduation rates for Black students within a 4-year adjusted cohort.

Theoretical Framework of the Study

This study was examined through the lenses of social construction of target populations theory. According to Schneider and Ingram (1993), this theory promotes the distribution of resources and burdens to create balanced groups. Schneider and Ingram contended that through this theory, marginalized and historically disenfranchised groups in a society were given access to resources to improve their lives. As such, the social construction framework is a political tool by which policymakers take deliberate actions to shape the public policy agenda. Schneider and Ingram advanced the idea that social construction framework helps explain the distribution of political power and why some groups are advantaged while others are not and how public policy development can reinforce or alter such advantages.

In a more general sense, the social construction of target populations is an idea driven by a sense of equity and access to resources in a way that contributes to improving people's lives (Culyer, 2001). Likewise, this framework shapes the public policy agenda, provides access to resources where they are mostly needed, uplifts vulnerable populations, and creates a more balanced society. Some elements of the social construction of target populations framework include (a) equity in education designed to providing additional resources to struggling students, (b) delivering differentiated instruction in classrooms to access rigorous curriculum, (c) taking care of veterans, infants and their mothers, (d) offering paid maternity leave to parents of newborns, etc. By and large, the social construction of target populations theory is relevant to public policy and administration because it influences politics and sheds light on both how policies affect certain groups of people and how those policies construct an unequal society. Schneider and Ingram (1993) pointed out that this social construction framework was essential to public officials because they must consider the needs of target populations and come up with comprehensive solutions to their problems.

Nature of the Study

The subjects of this quantitative study consisted of large school districts nationwide, with and without educational equity policies in place. The data were obtained from the school year (SY) 2015—16 4-year Adjusted Cohort Graduation Rate (ACGR). This disaggregated data set contained the number of students who graduated in 4 years with a regular high school diploma divided by the number of all students who formed the cohort for that graduating class, including students who graduated earlier. The cohort group members in this study consisted of Black

students in large school districts who started high school in the fall of 2012 and graduated on or before June 2016.

The regulatory 4-year ACGR data included the total number of all students, number of students by subgroups as well as graduation rates for all students including American Indian/Alaska Native, Asian/Pacific Islander, Black, Hispanic/Latino, White, two or more race/multiracial, children with disabilities, economically disadvantaged and LEP students. To calculate the percentage of economically disadvantaged students, I used the number of disadvantaged students within the SY 2015—16 high school cohort divided by the number of all students in the school who formed the adjusted cohort. The same calculation was done for the percentage of students with disabilities and the percentage of LEP students. The regulatory 4-year ACGR database is an archival record (property of the United States Department of Education) that provides a continuum of disaggregated statistics on high school graduation rates (United States Department of Education, 2016).

This study used a criterion-group design because the independent variables possessed the characteristics of educational equity policies, economically disadvantaged, impact of disabilities, and limited English proficiency. Tuckman and Harper (2012) asserted that a criterion-group research approach, also known as ex post facto design, sought to examine an existing condition and its contributing effects. For this quantitative study, the data were analyzed using a one-way analysis of variance (ANOVA) and a multiple linear regression. I selected the ANOVA test to analyze the first research question and examine the difference in means of high school graduation rates for Black students. A multiple linear regression approach was selected to analyze the second research question because it was the best way to evaluate two or more

independent variables in order to identify the fitness of the model and the contribution of each predictor in relation to the dependent variable. The working hypothesis was that the independent variable of the duration of exposure to educational equity policies was a significant predictor of improving Black students' graduation rates. This assumption justified the need for prioritizing the adoption and implementation of educational equity policies in school districts to increase Black students' graduation rates.

Research Questions and Hypotheses

The following research questions were addressed to test the hypotheses and predict graduation rates for Black students in large school districts within a 4-year adjusted cohort.

Research Question 1: What is the difference in means of high school graduation rates for Black students between duration of exposures to educational equity policies within a 4-year adjusted cohort while controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students?

H_0 1: There is no significant difference in means of high school graduation rates for Black students between duration of exposures to educational equity policies within a 4-year adjusted cohort.

H_1 1: Black students with 4 years of exposure to educational equity policies will be associated with a numerically largest mean level of high school graduation rates for Black students within a 4-year adjusted cohort.

H_2 1: Black students without exposure to educational equity policies will be associated with a numerically smallest mean level of high school graduation rates for Black students within a 4-year adjusted cohort.

Research Question 2: To what extent does the duration of exposure to educational equity policies predict high school graduation rates for Black students in large school districts within a 4-year adjusted cohort while controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students?

$H_0 2$: The duration of exposure to educational equity policies while controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students is not significant predictive measure of high school graduation rates for Black students in large school districts within a 4-year adjusted cohort.

$H_1 2$: The duration of exposure to educational equity policies while controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students is a significant predictive measure of high school graduation rates for Black students in large school districts within a 4-year adjusted cohort.

Definitions of Terms

The following terms were defined according to their contexts in the study.

Achievement Gaps: The inequality of results between student groups in that students of color underperform on graduation rates. Hartney and Flavin (2013) argued that the achievement gaps between White and minority students had political and economic consequences as rigorous education was the most predictor of individual success in life.

Adjusted Cohort Graduate Rate (ACGR): United States Department of Education indicator that measures the percentage of students who graduated within four years of high

school. ACGR is calculated based on the number of cohort members who graduated with a regular high school diploma by the end of four years in high school divided by the number of first time ninth-graders at the starting of the cohort plus students who transferred in, minus students who transferred out, emigrated or died during cohort members' high school years (Snyder, de Brey & Dillow, 2016).

Black Students: In the United States, Black refers to a person of African descent. According to the U.S. Census Bureau (2011), the black racial category includes African Americans, Sub-Saharan Africa, and Afro-Caribbean. The 2010 census reported the Black population to be 42,020,743, an equivalent of 13.6 percent of the entire population.

English Language Learner: A student whose primary language is not English to the extent that the lack of an academic language in English affects the student's progress at school. Oyastan (2016) explained that the No-Child Left Behind Act (2001) mandated supplemental educational services to at-risk children including economically disadvantaged, students with disabilities, and English language learners enrolled in low-performing schools.

Equity in Education: A paradigm of leveling the playing field for historically marginalized and disadvantaged students towards achievement of results. In 2013, the assistant secretary of education, John King, issued guidelines for educational equity policies to ensure all students have access to educational resources they deserve under Title VI of the Civil Rights Act of 1964. Secretary King stressed the need for school districts to be creative and courageous enough to come up with bold educational policies to close opportunity gaps between racial groups. In some ways, equity is mostly confused with equality. In fact, all students are equal under the United States Constitution. However, some students need additional resources to be

successful. To form a more perfect union, educators and policy makers must take into consideration the ability of each student to determine what resources each individual student needs or can access to be successful. Equity in education involves tailored instructions at an individual level with additional opportunities to access rigorous curriculum.

Free and Reduced-Price Lunch: To qualify for the program, families must be at or below 185 percent of the federal poverty level, which means that a family of four can make a maximum of $44,000 per year. Any family that receives supplemental nutritional assistance (SNAP), commonly known as "food stamps", is automatically qualified for free lunch. School districts across the nation use the eligibility for free and reduced-price lunch to determine a student socio-economic status. Nonetheless, Snyder and Musu-Gillette (2015) argued that the eligibility for free and reduced-price lunch alone does not constitute a measure of socioeconomic status (SES), as such measure required a range of factors of family characteristics such as parental cultural background, education and/or occupations that may influence student performance.

Large School Districts: Public school districts enrolling more than 15,000 students were considered large. The national Center for Educational Statistics (2011) reported that during 2008 – 2009 school year, the United States and jurisdictions had a total of 17,953 school districts serving 49.9 million students. However, 43% (21.5 million) of students were enrolled in the 500 largest school districts, an equivalent of 3% of all public-school districts.

Poverty: Milner (2013) defined poverty as an outside factor that influences a student's experience at school. Poverty was also associated with the percent of students who are economically disadvantaged and eligible for free and reduced-price lunch.

Social Construction of Target Populations Theory: Developed by Schneider and Ingram (1993), social construction of target populations theory is a political tool by which policymakers take deliberate actions to shape public policy agenda and advocate for marginalized people through various public policies designed to empower disenfranchised groups in a society.

Socioeconomic Status (SES): A combination of social factors, income, occupation of a person to the extent the economic and social position of the later falls below the norms as related to others. In many ways, social economic status impacts a student's early language skills and the general development. In American public schools, SES is often determined by a student's eligibility for free and reduced-price lunch (Alt et al., 2016). This study used SES measure to determine the percentage of economically disadvantaged students.

Teacher-Student Ratio: Number of students assigned to a teacher in a small or large group instruction. Schwartz (2012) revealed that teacher-student ratio is a factor that maximizes the chances of at-risk students to developing learning skills.

Assumptions

It was assumed that the archival SY 20152016 ACGR was recorded accurately. It was also assumed that large school districts' policy manuals contained accurate information on the adoption or non adoption of educational equity policies. It was further assumed that there was a significant number of school districts with educational equity policies, and the contribution of the duration of exposure to educational equity policies to high school graduation rates for Black students was significant. Finally, in relation to the implications for positive social change, it was assumed that large school districts that adopted and implemented educational equity policies saw an increase in graduation rates for Black students. This was justifiable given that educational

equity policies provided educators with discretionary power to allocate resources where they were mostly needed.

Scope and Delimitations

This study examined whether the independent variables were predictive measures of graduation rates for Black students in large school districts within a 4-year adjusted cohort. The archival data included graduation rates and comparable information on total numbers of students by subgroups, such as American Indian, Asian and Pacific Islander, Black, Hispanic, White, two or more races, children with disabilities, economically disadvantaged, and LEP students.

However, the experiences of students and teachers in large school districts with equity policies were not considered because this study focused on determining the extent to which selected variables were significant predictive measures of graduation rates for Black students. To that end, quantitative research design was chosen as the method of inquiry for this study. The archival data on regulatory, 4-year ACGR was selected because it was accessible, reported disaggregated data, and provided additional information on large school districts' economically disadvantaged students, children with disabilities, and LEP students.

In the United States, there were 18,328 operating school districts that provided educational services to 50,327,015 students in pre-kindergarten through 12th grade during the 2015–2016 school year (NCES, 2018). However, this study was delimited to 547 large school districts enrolling more than 15,000 students. This study was also delimited by the data collection and analysis applied to high school graduation rates for Black students, educational equity policies adoptions, the duration an educational equity has been in place, subsequent data on economically disadvantaged students, children with disabilities, and LEP students.

Limitations

This study was limited by the design and methodology. As a quantitative study, one limitation related to the lack of in-depth interviews to capture the experiences of students, teachers, parents and other stakeholders to uncover a phenomenon derived from the adoption and implementation of educational equity policies to improve high school graduation rates for Black students. Another limitation was that most large school districts were in most densely populated metropolitan areas, which constituted 3% of all school districts. As such, small school districts in metropolitan and rural areas were excluded from this study. For that reason, the findings of this study can be limited only to large school districts.

Significance

As more and more school districts across the nation adopted educational equity policies to close the achievement gaps between White and minority students, research related to the influence of the duration of exposure to educational equity policies on high school graduation rates for Black students was significant because it filled the gap in current literature. The contribution of this study is realized through its unique approach of selecting variables to predict high school graduation rates for Black students. This research contributed to the field of public policy and administration by providing empirical evidence on the contribution of each variable. In addition, it provided useful information on the initiatives of school boards to close the education divide among student subgroups. This study was grounded in the social construction of target populations theory.

The findings of this study can be used to promote positive social change in public policy and education leadership fields. By informing elected school board members, politicians, public

policy makers, and communities about the potential connection between educational equity policies and high school graduation rates for historically marginalized groups, this research can be a reference tool for adopting meaningful policy changes to level the playing field for Black and other minority students. An increase in graduation rates for minority students not only boosts a school district's graduation rates but can also promote positive social change in a community and, in the aggregate, the nation.

Summary

The fields of education and public policy and administration have carried out considerable research on to the benefits of equity policies and their impact on students' achievement (Castelli, 2012; Kornhaber et al., 2014; Leitao, 2015; Valiandes, 2015). For example, educational equity policies provided clear and concise guiding principles on how to tackle the inequality of results in public schools with the goal of constructing a more balanced society with opportunities to all students. Essentially, literature on equity pointed to opportunities in education to the extent that students' cultural backgrounds, socioeconomics, disabilities, or English language proficiency were not inhibiting factors for successful high school completion.

In Chapter 2 of this study, I present the literature on the influence of educational equity policies on high school graduation rates. While most of the existing research on this topic analyzed the benefits of an equitable school environment, empirical research examining the benefits of equity in education to closing achievement gaps between White and students of color has not yet established. This chapter begins with outlining the relevance of equity in the field of education through the lens of the social construction of target populations theory. The chapter also integrates literature on the impact of poverty, SES, English language proficiency, teacher-

student ratio, and educational equity policies to promote positive social change. The chapter concludes with how past research in this field affected this study and how this dissertation adds new insights to the literature by providing findings on potential predictive measures of graduation rates for Black students, a subgroup that, historically, has been disenfranchised and at-risk of dropping out.

In Chapter 3, I present the quantitative nature and the methodology of this study. I explain the rationale of using an ex post facto design and the choice of independent one-way ANOVA test and multiple linear regression to analyze the variables susceptible to evaluate the difference in means and predict high school graduation rates for Black students through selected variables including the duration of exposure to educational equity policies, percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students. This chapter includes a description of census sampling, research procedures, measures, all ethical considerations, and analysis of the data.

In Chapter 4, I analyze and report the findings. Finally, in Chapter 5, the review of literature in Chapter 2and the study's results served to enlighten the following elements: discussion, limitations, recommendations for possible future studies, implications for social change, and conclusion.

Chapter 2: Literature Review

Introduction

The relationship between educational equity policies and high school graduation rates for Black or African American students is a relatively new field of exploration in public policy research and educational policy research. Multiple studies within the last decade began to examine the influence of educational equity policies on closing the achievement gaps between White and minority students (Garver, 2017; Robertson, Smith & Rinka, 2015; Turner & Spain, 2016). This research was designed to fill a gap in the literature in the educational and public policy field to determine the influence of educational equity policies on high school graduation rates for Black students. The theoretical framework that supported this research was the social construction of target populations theory. This literature review established the need for continued research in education and public policy concerning the problem of achievement gaps between White and minority students.

Search Strategy

In this study, I searched the literature electronically through the following databases: Academic Search Complete, Education Research Starters, ProQuest Central, SAGE, Political Science Complete, and Science Direct. The following search terms were used: *equity in education, graduation rate, achievement gap, poverty rate, English language learner, free and reduced-price lunch, socioeconomic status, teacher-student ratio, special education, social justice,* and *social change.* Only peer-reviewed articles were obtained and reviewed for this research study.

This chapter offers a comprehensive overview of prior research in educational equity policies and school districts' efforts to close the achievement gaps in American public schools systems. In addition, research related to the questions addressed in this study was included for analysis. Studies that explored the impact of poverty, disabilities, English language proficiency, and student–teacher ratio were incorporated into this chapter. To maintain objectivity, this chapter included literature that challenged some of the research outcomes in these areas. The chapter discusses social change in education and concludes with an explanation of how past research has influenced this study.

Achievement Gaps

The achievement gap between White and minority students, particularly Black students, derives from inequality of school results. Pitre (2014) explained that in American public schools systems, the achievement gaps between White and Black students continued to widen to the extent that the disparity in achievement and standardized tests was significant. As a result, the inequalities of access to adequate quality education have had a long-term effect on Black students (Davis et al., 2013). For example, Hartney and Flavin (2014) investigated the political foundations of achievement gaps in the American educational system. The political aspect of achievement gaps was studied because of sustained inequalities of results along racial lines. Their results showed that Whites were more inclined to prioritize achievement gap as a policy concern or believed that the government had the responsibility to fund programs vital to help narrow the gap if White students were far less likely to meet established educational standards. However, Black students, who historically struggle the most, received less attention and

subsequent interventions. Hartney and Flavin concluded that persistent inequalities of results between White and Black students were results of systemic racial and political inequalities.

The inequalities of results along racial lines were more evident in high school graduation rates between White students and other students of color. For instance, the National Center for Educational Statistics (NCES, 2015) reported that in 2014 the ACGR for public school students who graduated on time was 85% of White students compared to 68% of Black and American Indian/Alaska Native. The aggregated data by ethnicity showed that Hispanic students performed better than Black students (76% graduation rates) but less than White students. One exceptional group of students of color, Asian/Pacific Islander, outperformed White students with a graduation rate of 93%.

However, there was evidence that the achievement gaps between White and Black students could be narrowed. Olszewski-Kubilis et al. (2017) conducted a longitudinal study on reducing minority students' achievement gaps over 14 years. In this study, Olszewski-Kubilis and colleagues compared the performance of underprivileged students who participated in supplemental programs designed to prepare them for advanced-level math and science in high school and the Illinois standards achievement test to determine the measures of academic progress and the rates of placement in above grade level math courses in ninth grade. The findings indicated that economically disadvantaged students who participated in supplemental programs outperformed their Black low-income peers and were far more likely to be placed in above-grade-level math course than their counterparts.

Graduation Rates for Black Students

In further support for supplemental programs, Robertson et al., (2015) examined 23 high schools in North Carolina that maintained increased graduation rates for at-risk students over five years. In this study, Robertson and colleagues compared graduation rates after these high school implemented policies changes and interventions such as adjusting attendance and tardy monitoring and enforcement, academic support, mentoring, freshman academy, and advancement via individual determination (AVID). Other interventions included after school programs, providing supplemental special programs, behavioral interventions, credit recovery, graduation coach, 20-21 credits option, no failure as all work was made up, family engagement, pregnancy prevention, life skills development, school and classroom climate, and caring school culture. The results indicated that selected schools "made significant improvement to their graduation rates ranging from 16.7% to 31.3% increase over a 4-year period" (p. 16).

Despite a recent focus on supplemental programs, graduation rates for Black students continued to lag compared to White peers (Apprey et al., 2014; Ford & Moore III, 2013; Pitre, 2014). Wodtke et al. (2011) used longitudinal data to investigate the condition of living in disadvantaged neighborhoods and its impact on high school graduation rates. The exposure to disadvantaged neighborhoods was studied because failure to graduate from high school was found to be a combination of social structure and academic unpreparedness over time (Rumberger, 2004; Wodtke et al., 2011). The results revealed considerable racial differences between black and non-black children. Black children, for instance, were more likely to spend a long period of their childhood in impoverished neighborhoods characterized by chronic unemployment, female-heads of family units living on government subsidies, and children

surrounded by few well-educated adults. Wodtke and colleagues concluded that these characteristics had a devastating impact on high school graduation rates for black children in disadvantaged neighborhood contexts.

Effects of Poverty in American Public Schools

The significance of children poverty and its implications on black students across the nation had been documented over time. According to Milner (2013), the dynamic of poverty line was defined based on the federal government's estimation of income for a household. In a school context, Day et al. (2016) used school-level percentages of students eligible for free and reduced-price lunch (FRPL) as a proxy to measure individual-level poverty. The authors also used alternatives methods such as home neighborhood-level poverty (HNP) and school neighborhood poverty (SNP) to measure individual-level poverty. Their results showed that both HNP and SNP had strong associations with poverty, but FRPL accurately predicted individual-level poverty and was applicable to a broad socioeconomic context. The percentage of students eligible for free and reduced-price lunch by school district was publicly available on the NCES website and reported annually.

Equally important, Ransdell (2012) conducted a school-wide analysis to examine the impact of poverty in standardized reading comprehension in grades three through ten in large public schools in South Florida. The author defined poverty through SES lenses, which include percentage of students receiving free and reduced-price lunch, family income, and home values in school neighborhoods. Randell's findings demonstrated that poverty remained a major obstacle for students' performance and one of the strongest predictors of reading comprehension for students living in poverty including most English language learners. The impact of poverty

on students' achievement must be understood because outside of school influences affected what happened inside schools (Milner, 2013).

While SES was strongly associated with students' academic achievements and had been confirmed in several studies (Coleman et al., 1966; Gordon & Cui, 2014; Milner, 2013; Palardy, 2015; Papay et al., 2015; Perry & McConney 2010; Ransdell, 2012; White 1982), a growing body of literature remained skeptical about the influence of poverty on Black students' achievement. Marks (2015) used longitudinal data with achievement test data from the Australian national assessment program in literacy and numeracy (NAPLAN) to investigate the effects of SES on student achievement in years three, five and seven, controlling for student and school prior achievement. The results suggested that, when controlling for student and school prior ability, the effects of SES are much smaller and statistically insignificant on students' achievements. In concluding, Marks (2015) argued that similar studies found a strong correlation between SES and students' achievements because they did not control for student and school prior ability. Based on the analyses presented in this study, Marks suggested that a policy response to control the effects of SES was not warranted.

The statistical insignificance of SES on students' achievement and other school outcomes has been documented in the literature (Lauen & Gaddis, 2013). In their study, Lauen and Gaddis used data on a cohort of students followed from third to eighth grade to examine the effect of exposure to classroom poverty on student test achievement. The authors used a cross-sectional design that controlled for prior test scores or grades because prior studies that did so reported a relative reduction of SES and statistically insignificant contextual effects (Alexander et al., 1979; Gamoran, 1987; Lauen & Gaddis, 2013). The results challenged previous studies, most of which

have established an association between SES and student achievement and report a negative effect of poverty on student achievement. Furthermore, the findings suggested that integrating students by socioeconomic background without policies designed to provide extra resources to students who need them the most may not produce intended expectations of increasing student outcomes, for "achievement is not a function simply of poverty context but of student and family background" (Lauen & Gaddis, 2013, p. 972). Despite conflicted empirical results on the role of poverty in influencing educational outcomes, it was evident that poverty remained a factor that educational policy makers needed to address.

Students with Disabilities

Another factor to consider in improving public schools' outcomes is education of students with disabilities. Marita and Hord (2017) reviewed twelve articles from 2006 to 2014 on mathematics interventions for students with learning disabilities. The review found that some studies were focused on systematic instruction strategies and others involved problem solving based learning and visual representations. Regarding systematic instruction strategies, teachers presented the materials in a series of contexts with certain level of sophistication during which students were taught how to solve a problem using specific formulas. In this case, teachers encouraged students' interactions with open-ended questions. For example, using systematic instruction strategies in sixth to eighth grade, students' ability to solve ratio problems improved and the level of sophistication increased as well. Meanwhile, with problem-solving based learning in sixth to eighth grade, students who received both formal and informal instruction improved fraction computation skills. The authors concluded that these strategies benefited students with learning disabilities as well as their typical peers.

To a certain extent, however, students from ethnic and racial minority groups represented a large number of students with disabilities in American public schools' system. Zhang and Katsiyannis (2012) contended that the growing number of minority students in special education has been a concerning educational inequity for decades. Investigating the status of minority representation in special education and identifying trends, Zhang and Katsiyannis used growth models to analyze patterns in national data collected from 50 states including the District of Columbia over five years period from 2004 to 2008. The findings revealed that there was a decrease in the number of Black students eligible to receive special education services under the intellectual disability category, but an increase of Hispanic students diagnosed with learning disabilities. After all, the trend of racial and ethnic representation in special education remained constant as it was for decades. Researchers have demonstrated that minority students, particularly students with disabilities, were more likely to drop out of school or not complete high school in four years (Wilkins et al, 2014).

However, successful stories of increased high school graduation and graduation rates for students with disabilities from West Virginia challenged previous findings cited in Wilkins and colleagues (2014). Partnering with the state of West Virginia Department of Education Office of Special Education, the national dropout prevention center for student with disabilities provided technical assistance to 12 rural school districts in five counties. They helped design interventions focused on dropout prevention such as establishing leadership and team design, analyzing data to inform decisions, identifying targeted areas for interventions, developing an improvement plan, and implementing the plan with fidelity to improve student engagement, attendance, parental involvement, academic performance and student behavior (Wilkins et al, 2014). The results

demonstrated that in five years from 2008 to 2013, all 12 rural school districts in five counties made significant improvements in graduation rates with a combined gain of 19.7%.

In further support to these findings, Schifter (2016) investigated the duration students with disabilities spent in high school and their graduation trends. This study was conducted because students with disabilities who graduated from high school with a regular diploma were more likely to be enrolled in postsecondary education and had higher probability of employment security than other students with disabilities who did not graduate from high school. Utilizing Massachusetts data on students with disabilities from 2005 to 2012, Schifter conducted a discrete-time survival analysis to measure the conditional probability of high school graduation and identified differences by SES as well as special education placement determinations. The results explained that students with disabilities had a higher probability of graduating on-time with their cohort members, except for students with intellectual disability. However, Lerner and Johns (2015) pointed out that low income students with disabilities had a lower conditional probability of graduating on time compared to affluent students with disabilities. Additionally, students with disabilities in inclusion settings have higher probability of graduating within 4 years after high school entry than students with disabilities who received most of their instructions in self-contained classrooms. Schifter (2016) indicated that it took up to seven years for low-income students with disabilities in self-contained settings to complete high school. Findings from these studies had a potential to broaden educators' perspectives and create an impetus for policy makers to address on-time graduation for students with disabilities including English language learner (ELL) students.

LEP Students

Alt, Arizmendi and DiLallo's (2016) examined the relationship between parents' level of education and English learners' abilities on narrative story retells. Particularly, the authors were interested in finding out if maternal level of education, measured by SES, predicted English language learners' vocabulary, syntax, and narrative story retell fluency. Using a simple multiple linear regression, the results indicated that students of parents with more education outperformed peers whose parents had less education. In further support of these findings, Kim, Curby and Winsler (2014) hypothesized that dual language learners from a more affluent background would demonstrate improved language proficiency. The results confirmed that the level of education of parents was associated with student's rapid growth in English proficiency.

In a subsequent study, Ostayan (2016) used longitudinal *DIBELS Next* composite from 2011 – 2014 to predict native and ELL student scores from the beginning of kindergarten to the end of kindergarten. The study, consisting of 282 students from a suburban Title I school, hypothesized that native English speakers obtained higher composite scores and outperform ELL students at the beginning and the end of kindergarten. The analysis found significant variation in predicting English language proficiency. The results showed that there was a linear relationship between a student's level of language proficiency and their dynamic indicator of basic early literacy skills (DIBELS) composite scores at the beginning of kindergarten. Notwithstanding, after informed instructions and interventions provided to students identified as at risk, the DIBELS composite scores were the same for native and ELL students at the end of kindergarten. The author concluded that students must receive intervention strategies aligned with their language proficiency level as soon as they are evaluated. Equally important, Ostayan (2016)

recommended further research of ELL assessment practices as the number of ELL students

continued to grow and stay relevant in schools with growing socioeconomic pressure and

additional language needs within American public schools.

Building on Ostayan (2016) were Tong and colleagues (2014), who studied the joint

impact of two interdisciplinary interventions of science with English-reading embedded among

fifth-grade ELL students and English language literacy with science-embedded from

kindergarten to third grade in order to compare student performance across conditions of

learning to read (language growth) and reading to learn science concepts (reading growth). The

study was conducted because of the gap in the literature explaining how to assist former and

current ELL students acquire English language proficiency and develop science knowledge at the

same time to move from academic disadvantaged in science and reading to proficient. For the

analysis, the authors used a two-way and a four-way ANOVA on DIBELS and Woodcock

language proficiency battery-revised (WLPB-R) at the beginning of fifth grade to establish initial

equivalence among students in their respective conditions. Additionally, they used chi-square

test of independence to compare student performance across conditions after one year of science

intervention. To analyze the oral reading fluency in DIBELS and sub-tests in WLPB-R, the

authors used a four-way repeated measures ANOVAs with three between subject factors (i.e.,

condition in science intervention, condition in previous English intervention and gender), and

one within-subject factor (time). The results indicated high academic science and reading

achievements that were consistent and above the state standards. By the same token, students in

third grade who received science-embedded English language intervention developed their oral

fluency and outscored native English speakers on grade-based standard scores. The authors also

exposed that students who received science-embedded English language and reading literacy intervention continuously from kindergarten through third grade benefited the most from English language and reading literacy-embedded science in fifth grade. To conclude, the authors recommended an interdisciplinary approach with a focus on science and learning to read in third grade as a foundation for academic learning in science because ELL students struggled to understand the academic language used in classroom content areas.

Challenges with understanding much of the language in the curricula materials and classroom content areas raised concerns for ELL students' preparation for college. Kanno and Gromley (2015) used a national representative sample of 10th graders making transition to post-secondary education to investigate ELL students' 4-year college pathways. The study consisted of 12, 450 students divided into three language groups including English language learners, English-proficient linguistic minority students (EPs), and native speakers of English (NS). The results of multi-group analyses reported that 19% of ELL students advanced to 4-year colleges compared to 35% of EP students and 45% of NS students. The challenge for ELL students remained at the college planning stage, in particular the lack of qualifications and aspirations conditioned ELL students to abandon the 4-year college pathway at disproportionally high numbers.

Another barrier was identified as the lack of ambition. ELL students started school with modest ambitions. However, by the time they reached tenth grade, their aspirations dropped to 58% expecting to obtain a 4-year college degree. Aspiring to advance to 4-year colleges, graduating from high school with 4-year college pre-requisites, and applying to colleges were essential stages that ELL students had to navigate that were particularly challenging for them to

reach. All things considered, the combination of racial and ethnic minority coupled with ELL

status put students at notable disadvantage in college planning and decreased the chances of ELL

students' educational outcomes (Kanno & Gromley, 2015).

Student–Teacher Ratio

In an effort to increasing students' educational outcomes, the need for a combination of

providing extra resources and lowering class size was prioritized. Bosworth (2014) used robust

statistical models to estimate class size effects. The investigation of class size effects on student

achievement was important because there were conflicted results on the subject in the literature.

Bosworth claimed that many studies of class sizes that do not control for class composition

suffer from omitted variables' bias. As such, the author used rich data on fourth and fifth grade

students in North Carolina public schools' system to overcome problems related to omitted

variables' bias. The results collaborated predicted theory and empirical literature (Bascia &

Faubert, 2012; Breton, 2014; Konstantopoulos & Traynor, 2014; Krassel & Heinesen, 2014;

Mosteller, 1995; Schwartz, Schmitt & Lose, 2012) suggesting that lower class sizes have positive

effects on student achievement. The results also showed that female students and those on free

and reduced-price lunch benefited more from lower class sizes than the average student. Lower

class sizes provided an opportunity for teachers to differentiate the instruction and used the extra

time to support individual or small group of students to maximize educational outcomes.

The primary objective of reducing classroom size was to increase student–teacher

contact. However, the contribution of teachers to student outcomes remained debatable. Yeh

(2017) re-examined the fundamental theory that teachers made strong contributions to student

performance. The author compared a model that explained the persistence of the achievement

gaps between Whites and minority students as a tendency for minorities to enroll in lower quality

schools and teachers with a model that explained the persistence of achievement gaps as a

psychological phenomenon. Yeh used path analysis to compare the two models using three

longitudinal data sets including the early childhood longitudinal study of the kindergarten class

of 1998—1999, class of 2010—2011, and the national education longitudinal study (NELS) for a

4-year cohort of eight grade students surveyed in 1998, 1990 and 1992. The findings

contradicted the fundamental theory that the contribution of teachers to student performance was

the strongest factor influencing student achievement. In lieu, a strongest factor was the degree to

which students had self-confidence and believed in their own performance. Additionally, Barrett

and Toma (2013) examined the effects of classroom size on effective teachers and found out that

effective teachers contributed to student outcome regardless of large classroom size. This

implied that family background equiped students with relatively high levels of interests and self-

determination (Yeh, 2017).

Equity in Education

Notwithstanding conflicted studies on the value of shrinking classroom size to enhance

student achievement, more recent empirical literature (Galloway & Ishimaru, 2015; Garver,

2017; Kornhaber, Griffith & Tyler, 2014; Turner & Spain, 2016; Villegas, Strom & Lucas, 2012;

Wager & Foote, 2013; Yavuz, 2016) stressed the need for educational equity policies to close the

achievement gaps between White and Black students. It was important to note that equity was

different from equality. While the United States Constitution guarantees equality to all citizens,

equity fostered a practice by which citizens are sensitive to the imbalances in what they are

giving to each other (Carter, 2009). In recent literature, educational equity was defined as a

philosophical construct that challenged the status-quo in a way that led to a fair and just distribution of educational resources to resolve a social problem context (Pollack & Zirkel, 2013). In other words, educational equity concept borrowed its meaning from social equity, a social contract to promote fair equality of opportunity in an inclusive way and served as guiding principle by which public administrators enacted policies for the common good (Guy & McCandles, 2012). For the most part, deficit in equity contributed to persistent inequalities in educational outcomes between White and Black students.

The underachievement of Black students, especially in urban school settings, required understanding and solutions. Ford and Moore III (2013) argued that the root of the problem included but was not limited to family SES, cultural background and neighborhood conditions. Despite the underachievement of Black students, the situation was neither permanent, unchangeable, nor hopeless as long as policymakers took bold actions to address the problem. Ford and Moore III explained that achievement of Black students was feasible if policymakers and educators were prepared to become culturally competent, provided support to families, and empowered students to improve their self-confidence.

To understand the causes of underperformance of Black students, McKown (2013) developed social equity theory and pointed out that it described social processes that contributed to racial—ethnic achievement gaps. McKown contended that SET predicted the relative influence on the achievement gaps at different ages. The study results upheld that racialethnic achievement gaps were the result of the combination, across age contexts, of unequal outcomes through direct and signal influences. By direct influences, McKown explained that students from well off families were expected to perform better in school regardless of their racial groups as

compared to disadvantaged students. Likewise, signal influences sent the message that schools that delivered high-quality instruction were associated with high-performance to the extent disadvantaged students tended to enroll in schools with systematically different outcomes. In a sense, the unequal allocation of resources, which Mckown argued was discriminatory, contributed to educational inequalities between racial groups.

In recent years, some school districts have been applying strategies designed to tackle inequalities in education. For example, Gill (2014), a superintendent of the Antioch Unified School District in California, wrote that staff at Antioch Unified met with stakeholders to refine priorities, develop systemic programs, and allocate resources to make sure Black students were served to the best of their abilities. The District also targeted Black students for advanced placement (AP) courses in science, technology and engineering to create a pathway to access high paying jobs upon completion of high school or post-secondary education. Overall, Gill (2014) reported that the district provided targeted and focused attention to Black students to develop a sense of self-confidence to make sure student successes were happening in all classrooms.

Another successful example came from North Carolina. Robertson, Smith and Rinka (2015) surveyed 23 North Carolina high schools that made significant improvement on their high school graduation rates over 4-year period. The study was conducted to compare the effectiveness of policy changes and interventions. School administrators who responded believed academic supports, which included individual and small group tutoring, literacy programs, freshman academy, and college preparatory programs, were by far the most effective interventions and a driving force for graduation rates surge. In addition, policy changes about

tardiness, late work, and suspension received considerable credit for the increase in students'

participation. The other well rated interventions included classroom environment in which

students felt culturally belonging and planned transition to middle school. This study exposed

that the policy changes in credit recovery programs helped students who would have dropped out

of traditional high school "make up their missing credits and still graduate" (Robertson et al.,

2015, p. 16).

Generally speaking, closing the achievement gap was the main focus for many school

districts across the nation. At the same time, school districts had different pathways to achieving

the results they envision. Kornhaber et. al. (2014) examined the role and meaning of equity

within Common Core at a level beyond zip code by using qualitative data from Common Core

policy entrepreneurs. Kornhaber and colleagues identified three conceptual frameworks by

which educational policies and programs were implemented in schools to address the problem of

achievement gaps, mostly between White and students of color. Kornhaber and colleagues

elaborated that one dominant concept was the equal conception that provided all learners with

equal access and educational resources regardless of their backgrounds. Another concept was the

equalization of resources. By equalizing conception, schools took extra efforts to distribute

resources in a compensatory way so each student's individual needs were met. At the same time,

Kornhaber and colleagues argued that schools had to go beyond the educational system to find

the causes of achievement gaps through expansive conception by engaging communities and

other stakeholders to determine external factors that hindered students' social and academic

successes.

Expansive conception was aligned with what Ornstein et al. (2014) referred to as comprehensive ecological intervention, a tool that school districts used to equalize resources in a comprehensive and multidimensional effort to improve the school, home, and neighborhood environments of students. Given these points, Gill (2014) emphasized that a fresh way of thinking outside the box was a key to help create environmental conditions susceptible to support and encourage all students, particularly historically disadvantaged students, most of whom come from low backgrounds with discrimination experiences. Pollack and Zirkel (2013) further recommend strong leadership attention "to the underlying property interests that fuel the opposition to equity reforms and to the majoritarian narratives" (p.307). Along similar lines, Ford and Moore III (2013) as well as Kornhaber et al. (2014) proposed a support system that was inclusive but went beyond in-school learning and included a community-based approach in order to develop new capacities to collaborate and expand educational opportunities to Black students.

In further support to the education of the whole child through community-based approach, Yavuz (2016) conducted a longitudinal study in a school that served approximately 90% of students eligible for free and reduced-price lunch to investigate how school leaders worked collaboratively with community leaders to improve college readiness access for a cohort of students (2009—2013). In an effort to boost historically underprivileged students' college aspirations, school leaders involved stakeholders and developed a comprehensive delivery system of programs designed to address the needs of students such as individualized learning support, individual and group counseling, after school tutoring, instant decision, access to rigorous curriculum, home visits, and college exams and application preparatory. Using post-secondary enrollment rates in 4-year and 2-year colleges, military, vocational, and technical

schools as indicator, the findings indicated that the percentage of students enrolling in college during their first year after high school jumped to 20% over students who did not participate in comprehensive programs. In addition, the study showed statistically significant results between post-secondary enrollment and home visits, parental involvement and education, and instant decision. These findings were aligned with Loza, Brezer and Peters' studies (as cited in Yavuz, 2016) and indicated that designing comprehensive programs to elevate historically underprivileged students' aspiration to college required leadership and stakeholders' collaboration in a community-based approach where inputs of each team member were given the utmost consideration in order to bring about social change that transcended racial divide.

The Role of Educational Equity Policies in Social Change Context

Santamaria (2014) examined ways in which minority leaders in K-12 and higher education environments used their influence to address the issue of social justice in a social change context. In this yearlong inquiry, the author used critical race theory (CRT) to get perspectives of historically marginalized educational leaders of color in the quest of understanding the way in which they applied theory to practice in the face of educational inequities, and the role educational leaders of color played to promote multicultural education to meet the diversity needs of their institutions. The inquiry results illustrated that all six participants practiced multiculturalism through the critical race theory lens. In this context, participants demonstrated a unique awareness of social justice and educational equity in a sense that they were more receptive to strategic change designed to benefit historically marginalized students. Another common characteristic of critical race theory was the ability of building consensus when meeting with stakeholders and "consciousness of stereotype treatment" (364)

faced with in mainstream settings. In essence, participants expressed that their leadership practices were grounded in their own experiences of actively engaging in scholarly discourse to contextualize their knowledge which enabled them to lead courageous conversations about race, social justice, inequity with individuals and groups in a formal or informal setting in order to promote social change.

It was important to realize that education remained a reliable vehicle for social change. Chang (2013) compared the Highlander education in the Appalachian Mountains in the United States with study circles in Sweden. Highlander education form focused on empowering people to achieve social and economic justice in order to balance "the unequal social order" (p. 706) through a transformation of social structure with political and social activism. Study circles, in a similar manner, promoted a culture of dialogue to preserve a democratic society in Sweden. Chang argued that the comparison of these two types of education was necessary because of their different historical and cultural contexts. The findings indicated that similarities included the validation of learner's experience in a democratic learning environment and the connection to social movements "as a way to achieve social change" (p. 709). The differences, on the other hand, were shaped by their assumptions about social change. Whereas Highlander stressed the role of education as a force to achieve social justice and the liberation of local communities, study circles promoted the idea of progressive education to achieve individual development through gradual social change. In either case, both Highlander and study circles advocated for community issues in their learning models, but they applied different philosophies and strategies to accomplish social change.

The strength of education to shape social justice was well documented in recent literature (Barajas-Lopez & Ishimaru, 2016; Galloway & Ishimaru, 2015; Harris, 2015; Santamaria & Jean-Marie, 2014). For instance, Nygreen (2016) examined parent led grassroots organization efforts to educate and mobilize immigrant parents on the issues of education justice and equity. Based on two years of ethnographic field study, the study results pointed out that parent organizers identified three approaches including a social theory, a theory of change, and a theory of knowledge, with the goal of empowering historically marginalized communities who were excluded from educational decision-making. The theory of social justice provided marginalized groups with an anti-deficit stance to counter systemic injustice and counter-narrative by which dominant cultures tended to shame and blame minority parents for the failure of their children. The theory of change emphasized that "liberation for the oppressed can only come through struggle led by oppressed themselves" (p. 2018). The theory of knowledge posited that all communities, particularly historically subordinated, silenced, and marginalized, had legitimate knowledge for constructing a more just society. In essence, a community-based education organization challenged the neoliberal paradigm that presented educational reforms as means to closing achievement gaps by raising students' test scores. In a sense, community educational organizers went beyond the imperative of closing achievement gaps and instead advocated for educational justice, central to social change and the transformation of a society.

In further contribution to these findings, Barajas-Lopez and Ishimaru (2016) explored untapped insights of African Americans, Latinos, Asian American and immigrant parents on how the school system should educate children. The study drew from feminist and critical race theories (Barajas-Lopez & Ishimaru, 2016) and hypothesized that the dominant culture

disregarded with minority lived experiences to produce contribution to educational policy discourses. The findings demonstrated that non-dominant parent voices were usually silenced in American educational system to the extent that educators lacked minimum cultural competency to understand minority parents' perspectives about daily school life. Barajas-Lopez and Ishimaru suggested that educators and policy makers had to pay attention to non-dominant family experiences and depart from educational status-quo to embrace a more progressive way that cared about social justice and equity (Harris, 2015) to represent the diversity of all students.

Implications of Past Research on Present Research

The benefit of adopting and implementing educational equity policies in school districts was discussed in the literature. The current research regarding the effects of educational equity policies on graduation rates for Black students had opened the door towards understanding the influence of educational equity policies on closing the achievement gaps between White and Black students. Specifically, when looking at wide graduation rates gap, Olszewski-Kubilis et al. (2017) pointed out that economically disadvantaged and underprivileged students who received supplemental instructions in specific programs met the curriculum requirements and were placed in AP courses. By continuing this line of thought and delving deeper into the rationale of adopting educational equity policies and their influence on high school graduation rates for Black students, this research filled in this gap in the literature.

Summary

This chapter presented an overview of the literature as related to achievement gaps by which Black students continue to lag behind White students, which results in lower graduation rates for African American students. Reviewed literature examined the effects of student's

poverty in American public schools and its impacts on high school graduation. It was revealed that students from high poverty neighborhoods were associated with academic underachievement. Moreover, the chapter reviewed literature on the impact of student's disability and indicated that students with disabilities receiving most of their instruction in general education setting have the same probability of graduating on time as typical peers. However, those receiving their instruction in self-contained classrooms and low income students with disabilities are considered at risk. LEP students have similar probability of graduating on time if they received interventions continuously from Kindergarten through third grade. Student–teacher ratio's objective is to reduce class size in order to increase student-teacher contact. Furthermore, a literature review on equity in education suggested a comprehensive ecological system that goes beyond schools to include community stakeholders in order to address the needs of historically disenfranchised students. The role of educational equity policies in social change context emphasized the validation of learner as vehicle to bring about social change. In the final analysis, the implications for past and present research provided a deeper understanding on the role of educational equity policies in closing the education divide in America.

Chapter 3 provides the quantitative research method for this dissertation.

Chapter 3: Research Method

Purpose of the Study

The purpose of this quantitative study was to determine whether the duration of exposure to educational equity policies, the percentage of economically disadvantaged students, the percentage of students with disabilities, and the percentage of LEP students were a predictive measure of high school graduation rates for Black students in large school districts within a 4-year adjusted cohort. The independent variables consisted of the duration of exposure to educational equity policies, the percentage of economically disadvantaged students, the percentage of students with disabilities, and the percentage of LEP students. The dependent variable was as high school graduation rates for Black students within a 4-year adjusted cohort.

This chapter includes an explanation for using a quantitative analysis. It also presents the nature of the study, size of the population, sampling method, and instrumentation. A description of all ethical considerations, threats to validity, and the process on how data were collected and analyzed.

Research Design and Rationale

A quantitative approach was used to identify the significance of the relationship between the predictor variables and the dependent variable. Findings from the literature identified educational equity policies, student's SES, disabilities, and limited English proficiency factors as predictive measures of high school graduation rates. A quantitative approach to this research was selected over qualitative and mixed methods research because it was the most effective in identifying the extent to which the independent variables predicted the outcome in the dependent variable while considering a large amount of secondary data in the public domain.

Under this circumstance, a criterion group approach, also known as ex post facto design, was proper for this study as there was an existing condition in the independent variables. Tuckman and Harper (2012) asserted that, despite the inability of the researcher to manipulate the independent variables, the ex post facto design was suitable in social sciences because it allowed the investigator to establish the degree to which a relationship existed between variables. In a more general sense, a quantitative approach was consistent with identifying patterns involving several predictors using the dependent variable.

Investigating the correlation between the influence of the length of time an educational equity policy has been implemented on high school graduation rates for Black students is a relatively new topic in education and in public policy and administration. Studies revealed that school districts that made policy changes and implemented equitable interventions to focus on Black students had better results (Gill, 2014; Robertson, Smith & Rinka, 2015; Yavuz, 2016). To illustrate, in a study examining the benefit of collaboration between school professionals to improve Black students' access to AP courses, Davis et al. (2013) found that students who received group and individual academic support later participated in AP courses, a more rigorous curriculum with increased chances of graduating on time. Also, Black students who benefited from equitable support developed an academic success mindset and made significant improvements to close the achievement gap with White students.

While the benefit of equity in education has gained traction, public policy and administration and education leadership fields lacked this exploration. This existing research expanded on Davis et al. (2013), Robertson et al. (2015), and Yavuz (2016) and focused on equity-centered policies practice that provided Black students with rigorous academic

opportunities through equity lenses. Henceforth, this study explored the influence of educational equity policies on closing the education divide between Black and White students in large school districts.

Nature of the Study

Each year, states must report educational data to the United States Department of Education. The Department of Education compiles data and publishes the results under *ED Facts Data Files* on its website to report on the condition of education in America. According to Santy (2018), in the regulatory 4-year ACGR data set, states reported disaggregated ACGR for students who graduated early or on time with a regular high school diploma. The formula used to calculate the 4-year ACGR for SY 2015 – 2016 was the number of cohort members who earned a regular high school diploma by the end of SY 2015 – 2016 divided by the number of first ninth graders in fall 2011 (starting cohort) plus students who transferred in, minus students who transferred out, emigrated, or died during SY 2012 – 2013, 2013 – 2014, 2014 – 2015, and 2015 – 2016 (Snyder, de Brey & Dillow, 2016). The ACGR is a relatively new high school completion metric. It was first collected during 2010 – 2011 school year. According to McFarland (2016), states calculated ACGR for individual schools and districts using a detailed data tracking on each student overtime.

Included in the data were statistics on American Indian/Alaska Native, Asian/Pacific Islander, Black, Hispanic/Latino, White, two or more races/multiracial students, economically disadvantaged, students with disabilities, and LEP students. To calculate the percentage of economically disadvantaged students, I used the number of economically disadvantaged students within the 2012 – 2016 high school cohort divided by the total number of all students in the

school who formed the adjusted cohort. The same method was used to compute percentages for student with disabilities and LEP students. The 4-year ACGR database was a trusted archival record and property of the United States government, which provided a continuum of disaggregated statistics on high school graduation rates.

Research Questions

The research questions and hypotheses are listed below for review:

Research Question 1

What is the difference in means of high school graduation rates for Black students between duration of exposures to educational equity policies within a 4-year adjusted cohort while controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students?

> $H_0$1: There is no significant difference in means of high school graduation rates for Black students between duration of exposures to educational equity policies within a 4-year adjusted cohort.

> $H_1$1: Black students with four years of exposure to educational equity policies will be associated with a numerically largest mean level of high school graduation rates for Black students within a 4-year adjusted cohort.

> $H_2$1: Black students without exposure to educational equity policies will be associated with a numerically smallest mean level of high school graduation rates for Black students within a 4-year adjusted cohort.

Research Question 2

To what extent does the duration of exposure to educational equity policies predict high school graduation rates for Black students in large school districts within a 4-year adjusted cohort while controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students?

H_0 2: The duration of exposure to educational equity policies controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students is not significant predictive measure of high school graduation rates for Black students in large school districts within a 4-year adjusted cohort.

H_1 2: The duration of exposure to educational equity policies controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students is significant predictive measure of high school graduation rates for Black students in large school districts within a 4-year adjusted cohort.

Methodology

Population

The population comprised of large school districts nationwide. According to the U.S. Department of Education (2017), large school districts have an enrollment of more than 15,000 students. As a result, there were 547 large school districts in 45 states. All subjects included in this study met the screening criteria for being a kindergarten to twelfth grade (K-12) large districts with or without an educational equity policy in place and enrolling six or more Black students within SY 2012 – 2016. Some large school districts met the screening criteria, but their

data were not available in SY 2015—2016 ACGR. As a result, they were not included in this study. To that end, 466 large school districts met the screening criteria for this study.

This study used a census sampling strategy because data were collected on every member of the population. Due to the availability in the public domain of this United States government data collection, no sample drawing was used. By using a census approach, significant sampling bias is removed.

Definition of Variables

The dependent variable was graduation rates for Black students in large school districts. It was a ratio measurement, and it was defined by the percentage of Black students who successfully earned a high school diploma within a 4-year adjusted cohort. Equally important, the independent variable of the duration of exposure to educational equity policies was a normal metric variable with five scales. It was defined by the length of time an educational equity policy has been in implemented between SY 2012 – 2016. In addition, the independent variable of economically disadvantaged students was a ratio measurement and was defined by the percentage of economically disadvantaged students within a 4-year adjusted cohort. Furthermore, the variables of percentages of students with disabilities and LEP students were ratio measurements and defined by respective percentages in relation to the total number of students who formed the adjusted cohort.

Data Collection

Each year, the NCES publishes online data on the American education system through the *Digest of Education Statistics* as soon as they are completed. *The Digest of Education Statistics* compiles statistical data covering a broad field of American education from

kindergarten to graduate school level. The publication contains various information ranging from the number of schools and colleges to teachers, enrollments, and graduates. In addition to educational achievements, the publication provides data on finances, federal funds for education, libraries, and international comparisons of education. Further, supplemental information on population trends, government finances, and socioeconomic trends provide a background for evaluating education data (NCES, 2016). The NCES data is freely accessible to the public to be used responsibly and for the sole purpose of statistical analysis, research and reporting. By the same token, the United States Department of Education preserves a database for K-12 educational programs in the effort of putting data at the center of comprehensive policies, management and budgeting decisions (U.S. Department of Education, n.d.). This study used the regulatory 4-year ACGR data that was available in the public domain through the United States Department of Education to extract the dependent variable as well as the independent variables of economically disadvantaged, students with disabilities, and LEP students. The data is freely accessible at https://www2.ed.gov/about/inits/ed/edfacts/data-files/index.html#acgr. The independent variable of the duration of exposure to educational equity policies was drawn from large school districts' websites under Boards' policy manuals.

More and more school boards of large school districts had adopted educational equity policies to remove educational barriers for historically disenfranchised and marginalized students (Ford & Moore III, 2013). An equity policy is a fundamental governing principle in educational context based on law and reflected in every other policy to achieve a more desirable educational outcome. The formulation and adoption of a school board policy requires a majority vote from school board members. School board meetings and voting processes comply with all provisions

of the open meetings and open records laws in all states and on federal level. In most cases, school board policies were included in the policy manual and made available to the public through school districts' websites. The superintendent or chancellor, acting as chief executive officer, developed procedure rules for the implementation of school board policies. I did not need permission to collect and use the data because, under the law, it was accessible to the public. To identify large school districts with or without educational equity policies, I systematically surveyed all large school districts' policy manuals to find out if a large school district had not or had adopted an equity policy and for how long. I was the sole data collector for this laborious and long process.

Data Analysis

The independent one-way ANOVA provided descriptive statistics to answer the first research question and reported statistical significance of the results. A multiple linear regression was used to answer the second research question and assessed the relationship between the independent and dependent variables to establish whether a linear relationship existed between all the variables and the relative contribution of each predictor to the outcome (Fields, 2015).

For this ex post facto research design, a predictive model of multiple linear regression provided statistical significance in exploring the extent to which the duration of exposure to educational equity policies predicted high school graduation rates for Black students. Multiple linear regression was the most fitting test to answer the second question of this study because it measured the variation of the model and the relative contribution of each predictor in the outcome variable (Field, 2015). Using the Statistical Package for the Social Sciences (SPSS) version 24 for Windows (IBM SPSS Statistics, 2015), a multiple linear regression test was used

to determine the association between the independent and the dependent variables in order to affirm or reject the hypotheses.

The independent variable of the duration of exposure to educational equity policies was a normal metric scale variable with five levels within a 4-year adjusted cohort. In SPSS, it was labeled *Educational Equity Policies.* This variable was gauged using a scale of zero to four. The format of a five-level scale was coded as follow:

0. Large school districts without educational equity policies within 4-year adjusted cohort

1. Large school districts with 1 year of educational equity policies in place within 4-year adjusted cohort

2. Large school districts with 2 years of educational equity policies in place within 4-year adjusted cohort

3. Large school districts with 3 years of educational equity policies in place within 4-year adjusted cohort

4. Large school districts with 4 or more years of educational equity policies in place within 4-year adjusted cohort.

Adding predictors created more reliable results and explain the variations in the outcome variable (Field, 2015). Field also asserted that a predictor that makes "significant contribution to the predictive power of the model is retained and another predictor is considered" (p. 322). One predictor this study added was percentage of economically disadvantaged students. I selected this variable because much of the research I reviewed recognized poverty as a factor that influenced graduation rates. Specifically, Gordon and Cui (2014), Rebell (2012), and Johnson Jr. (2010)

found that poverty impeded students' educational attainment. In like manner, the percentage of economically disadvantaged students, as measured by number of students eligible for free and reduced-price lunch, has a strong association with household income (Day et al., 2015; Ransdell, 2012) and is a signal of a student's low SES. Olszewski-Kibilius et al. (2017) argued that socioeconomic condition was major contributor to Black students' underachievement. The independent variable of percentage of economically disadvantaged students was labeled economically disadvantaged in SPSS.

Another predictor added for analysis was percentage of students with disabilities. This predictor was added because of the impact a student's disability may have on a student's ability to graduate on time. Additionally, students from ethnic minority are more likely to be placed in a special education classroom (Zhang & Katsiyannis, 2012). Lerner and Johns (2015) explained that students with intellectual disabilities, those who receive most of their instructions in self-contained classrooms, and student with disabilities from low SES have low probability of graduating from high school. However, students with disabilities exposed to programs focused on improving student engagement had equal chances of graduating on time with typical peers (Wilkins et al., 2016). In SPSS, this variable was labeled as students with disabilities.

The last predictor added to the study was percentage of LEP students. This variable was added because of the changing demographic in American public schools. Research showed that parent's level of education had an influence on limited English language student's achievement (Alt, Arizmendi & DiLallo, 2016). The majority of newly immigrants in the United States are non-English speaker. Nonetheless, there was significant variation in predicting English language proficiency for ELL students who received instructions and interventions at the beginning of

Kindergarten (Ostayan, 2016). The results showed that ELL students previously identified as at risk had the same outcome as native students at the end of kindergarten. The author's recommendation was to start interventions as soon as the student is identified. In SPSS, this variable was identified as LEP students. Fields (2015) explained that additional predictors account for different variances in the dependent variable. Therefore, predictors cannot be correlated to avoid compromising the results. Finally, the dependent variable of graduation rates for Black students was labeled graduation rates in SPSS.

Statistical Assumptions

The ANOVA assumptions of normal distribution, equal variances assumed, and independence of samples were checked and satisfied. The normality test indicated that each group was drawn from a normally distributed population with a skewness and kurtosis <|2| (Cramer & Hewitt, 2004; Doane & Seward, 2011, Schmider et al., 2010). The test of homogeneity of variances reported a nonsignificant Levene's F test, $F(4, 461) = 1.96, p = .09$ (Field, 2015). The independence of samples assumption was checked and satisfied because all groups were independent.

The multiple linear regression test had eight main assumptions that had to be identified before analyzing the data. The first two assumptions were related to the study design in a sense that the study had a continuous dependent variable, and there were two or more independent variables. This study met these preconditions.

The remaining six assumptions were tested using SPSS to determine how the data fitted the regression model. All assumptions were checked and satisfied. For example, the assumption of independence of observations in multiple regression was checked using the Durbin-Watson

statistics, and the assumption of linearity between the dependent and each of the independent variable was analyzed by plotting a scatterplot of the studentized residuals against the predicted values (Field, 2015). The assumption of homoscedasticity or equal error variances assumed that the residuals were equals for all values of the predicted dependent variable (Green & Salking, 2014). To check for heteroscedasticity, I plotted the studentized residuals against the unstandardized predicted values to check if the assumption of homoscedasticity was violated.

A primary concern when including more than one predictor is multicollinearity (Field, 2015). Field explained that multicollinearity existed when one or more predictors were linearly correlated. To identify multicollinearity, I used SPSS collinearity diagnosis, namely variance inflation factor (VIF) that indicated the relationship between predictors. In like manner, the outlier assumption stipulated that there were some unusual points reflected on the regression line. Field (2015) pointed out that outliers "can bias an estimate parameter" (p.166) and have negative affect on the results. To detect outliers, casewise diagnostics and studentized deleted residual was performed using SPSS. I examined whether any of the standardized residuals were greater than ±3 standard deviations, which was a cut-off for ruling out if an observation was an outlier. Finally, the multiple linear regression's assumption of normality of residuals underlined using the normal probability plot (P-P) of the regression normal distribution and the histogram plot of the standardized residuals to justify if the dependent variable is normally distributed in the population for each predictor (Pallant, 2016).

Threats to Validity

The leading threat to validity was that this research used archival data. The data for the dependent and the control variable was previously collected on each individual student overtime

by large school districts and reported to NCES for analysis on the condition of education in America. As a result, construct validity limitations are related to the assessment tool that each school district used to initially collect their data. The information was transferred from the initial assessment tool, through school districts and filtered into NCES at the U.S. Department of Education.

While the instructions to collect data were sent to large school districts with clear directions, it could still be possible that some employees of large school districts who recorded the data interpreted questions differently. For the sake of this research, it was assumed that each data collector interpreted the questions correctly to create a valid data source. The United States government used this data to report on the condition of education in America to Congress and the public for SY 2015 – 2016. To that end, this data set was trusted, valid and applicable to the current research.

Furthermore, while I meticulously reviewed all large school districts' policy manuals to identify large school districts with or without educational equity policies prior and between 2012 – 2016, it could still be possible that some large school districts' officials responsible to update policy manuals did not do so as required by the public meetings and open record law. This research assumed that all policy manuals contained accurate and updated information that provided valid data sources.

Ethical Considerations

I coded data to prevent the ability to identify any large school district. No informed consent was necessary because all data were available in the public domain. However, any identifying information was coded or removed from the data. I did not contact any large school

districts whose data was part of this collection. Confidentiality protection was ensured by filtering the data through a routine top to bottom coding which prevented the high and low codes from potentially distinguishing a large school district record. Data were kept secure by storing them on a password protected laptop computer and backed up on a password protected USB drive. The USB drive was kept in a locked file cabinet and kept separate from the laptop computer for 5 years.

Summary

This chapter began by introducing the purpose of this study, which was to determine whether (1) the duration of educational equity policies, (2) the percentage of economically disadvantaged students, (3) the percentage of students with disabilities, and (4) the percentage of LEP students are predictive measures of graduation rates for Black students. It also provided the rationale of using an ex post facto research design because there were existing conditions in the independent variables. The research questions and hypotheses were re-introduced. The central question was to investigate whether the duration of educational equity policies, percentage of economically disadvantaged, percentage of students with disabilities, and percentage of LEP students were predictive measures of high school graduation rates for Black students. In the methodology section, the population consisted of 466 large school districts and a census sampling approach was used.

The chapter defined the variables. The dependent variable was a ratio measure and was defined as high school graduation rates within a 4-year adjusted cohort. The independent variable of duration of educational equity policy was a normal scale variable with 5 levels. The

independent variables of percentage of economically disadvantaged students, percentage of

students with disabilities, and percentage of LEP students were ratio measurements.

Secondary data was collected from the regulatory ACGR, SY 2015—16 to extract the

dependent variable, and the independent variables of economically disadvantaged students,

students with disabilities, and LEP students. The duration of educational equity policies data was

collected from large school districts' websites under Boards' policy manuals. To analyze the

data, an independent one-way ANOVA and multiple linear regression were used to answer the

research questions. Using SPSS, statistical assumptions were checked and satisfied.

The major threat to validity was the usage of secondary data. However, the United States

government used this data set to report on the condition of education to Congress. Ethical

considerations were evaluated, and confidentiality protection was ensured based on the

independent review board (IRB) guidelines. Chapter 4 presents multiple linear regression

descriptive statistics and findings.

Chapter 4: Results

The purpose of this study was to determine if specific variables were predictive measures of high school graduation rates for Black students. Overwhelming evidence revealed that Black students had lower graduation rates compared to Whites students. For instance, the ACGR for SY 2015 – 2016 was 84%, the highest it has been since this indicator was first measured in 2010 – 2011. However, when graduation rates were examined using student ethnic groups, this indicator showed that 88% of White students graduated on time, compared to 76% of Black students (NCES, 2018).

Research Questions and Hypotheses

The reviewed literature indicated that Black students benefited from educational equity policies designed to meet their specific needs (Dansby & Dansby-Gilles, 2011; Ford & Moore, 2013; Hartney & Flavin, 2014; Graham, 2007; Kena et al., 2016; Korhaber et al., 2014; Yavuz, 2016). Recent studies also revealed that as Black students graduated from high school, they were more likely to have financial independence in adulthood (Chetty et al., 2016; Snyder, de Brey & Dillow, 2016). The purpose of this study was to determine the extent to which the duration of exposure to educational equity policies—controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students—were significant predictive measures of high school graduation rates for Black students in large school districts within 4-year adjusted cohort. The independent variable of duration of exposure to educational equity policies was a scale variable with five levels. Additionally, the control variables of (a) the percentage of economically disadvantaged students, (b) the percentage of students with disabilities, and (c) the percentage of LEP students were ratio

measurements. The dependent variable of high school graduation rates for black students was a ratio measurement as well. To provide a response to the central problem the following research questions and hypothesizes were developed.

Research Question 1: What is the difference in means of high school graduation rates for Black students between duration of exposures to educational equity policies within a 4-year adjusted cohort while controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students?

H_0 1: There is no significant difference in means of high school graduation rates for Black students between duration of exposures to educational equity policies within a 4-year adjusted cohort.

H_1 1: Black students with 4 years of exposure to educational equity policies will be associated with a numerically largest mean level of high school graduation rates for Black students within a 4-year adjusted cohort.

H_2 1: Black students without exposure to educational equity policies will be associated with a numerically smallest mean level of high school graduation rates for Black students within a 4-year adjusted cohort.

Research Question 2: To what extent does the duration of exposure to educational equity policies predict high school graduation rates for Black students in large school districts within a 4-year adjusted cohort while controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students?

H_0 2: The duration of exposure to educational equity policies controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of

LEP students is not significant predictive measure of high school graduation rates for Black students in large school districts within a 4-year adjusted cohort.

H_1 2: The duration of exposure to educational equity policies controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students is significant predictive measure of high school graduation rates for Black students in large school districts within a 4-year adjusted cohort.

Data Collection

This study received Walden University's institutional review board (IRB) approval on August 21, 2018 (Approval Number 08-21-18-0376700). An online review of the data started on August 22, 2018. The analysis was based on archival data, *4-year ACGR* for school year (SY) 2015 – 16. This database is publicly available on the U.S. Department of Education website. This massive U.S. government data set contained data for the dependent variable and the independent variables of percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students.

In the United States, school boards are required by law to publish adopted policies and make them available to the public. All participants in this study had published policies on their websites under policy manuals. No permission was needed to collect and use data on educational equity policies. The United States Constitution guarantees equal opportunity for all citizens. However, the principle of equity transcends Constitutional rights of equality; instead, equity-centered practice breaks barriers to access services and allocates resources to correct the imbalance in order to resolve a social problem (Carter, 2009; Pollack & Zirkel, 2013). Once

adopted, an equity policy becomes the foundational principle for policy designs in public or private organizations.

To collect educational equity policies data, I methodically surveyed all 532 large school district policy manuals to determine if a school district had an educational equity policy in place and for how long. School districts were coded as normal metric variable on a scale from zero to four. The first group was comprised of school districts without educational equity policies and was assigned a value of zero. The second group included large school districts with 1 year of educational equity policies and was assigned a value of one. In meantime, values of two, three, and four were respectively assigned to third, fourth, and fifth groups that constituted of large school districts with 2, 3, and 4 years of educational equity policies in place.

However, some large school districts did not meet the screening criteria of enrolling more than six Black students, for the magnitude of the reported ranges was determined by the size of the subgroups for privacy concerns (NCES, 2018), and were removed from the study. Furthermore, there were 42 missing large school districts in the U.S. Department of Education database. As a result, they were excluded as well because I could not collect data on them. By and large, 466 large school districts met the screening criteria and had their data available in SY 2015—2016 4-year ACGR dataset. Overall, the study consisted of 425 large school districts without educational equity policies in place, six large school districts with 1 year of educational equity in place, five large school districts with 2 years of educational equity policies in place, three large school districts with 3 years of educational equity policies in place, and 27 large school districts with 4 or more years of educational equity policies in place. In this case, Black

students were exposed to educational equity policies in 41 large school districts within a 4-year

adjusted cohort. I was the sole data collector.

Analysis Plan

An Excel spreadsheet was created from the archival data that included the classification

of the independent variable of the duration of exposure to educational equity policies with five

groups, the identification of the control variables of percentage of economically disadvantaged

students, percentage of students with disabilities, percentage of LEP students, and the

identification of the dependent variable of graduation rates for Black students. Large school

districts were numbered from 1 to 466. The Excel spreadsheet was then downloaded into SPSS

24 for analysis. Using SPSS 24, I tested for statistical assumptions of primary analyses. The

independent between-groups ANOVA evaluated the homogeneity of variances, provided

descriptive statistics and determined the robustness of the model. The significance of the

relationship between each predictor and the dependent variable was determined at p value of $<$

.05 level. The ANOVA analysis examined the first research question and a multiple linear

regression was conducted to analyze the second research question.

Tests of Statistical Assumptions

The assumptions of normality, homogeneity of variances, multicollinearity, linearity,

homoscedasticity, outliers, and independence of residuals were evaluated. To test the assumption

of homogeneity of variance, the Analysis of Variances (ANOVA) was conducted and the results

reported a non-significant Levene's F test, $F(4, 461) = 1.96$, $p = .09$ (Field, 2015). In addition,

the assumption of normality was checked and satisfied with a skewness of -.82 and a kurtosis of

1.04 for large school districts without educational equity policies in place. Moreover, a skewness

of .60 and a kurtosis of -1.47 for large school districts with one year of educational equity in place, a skewness of .59 and kurtosis of -.02 for large school districts with two years of educational equity policies in place and a skewness of -.27 for large school districts with three years of educational equity policies in place. Furthermore, for large school districts with four years of educational equity policies in place, a skewness of .09 and kurtosis of -.54 were verified. The general guidelines for normal distributions require a skewness and kurtosis $<|2|$ (Cramer & Hewitt, 2004; Doane & Seward, 2011; Schmider et al., 2010). As illustrated above, all five groups distributions were sufficiently within norms for the purposes of conducting ANOVA test. More importantly, the one-way ANOVA is by nature a robust test against the assumption of normality (Field, 2015).

For the following analyzes, I used bootstrap statistical approach, with 1,000 samples, to help combating the influence of assumption violations. Multicollinearity was evaluated by viewing the correlation coefficients among the predictor variables. All bivariate correlations were small to medium and did not raise concerns of multicollinearity, as can be seen in Table 1.

Table 1

Pearson Correlation Coefficients Among Study Predictor Variables

Variable	Educational Policies	Economically Disadvantaged	Students w/ Disabilities	LEP	Graduation Rates
Educational Policies	1.00	.053	.083	.089	-.124
Economically Disadvantaged	.053	1.00	.334	.584	-.314
Students w/ Disabilities	.083	.334	1.00	.133	-.380
Limited Eng. Proficient	.089	.584	.133	1.00	-.108
Graduation Rates	-.124	-.314	-.380	-.108	1.00

Note. $N = 466$

Equally important, collinearity statistics results showed tolerance between .592 and .986 and a variance inflation factor (VIF) between 1.01 and 1.68 for the predictors. Multicollinearity occurs when two linear variables are strongly correlated. Field (2015) asserted that the VIF determined whether a strong relationship existed between the predictors. The general guidelines stated that a VIF greater than 10 raised cause for concerns. In meantime, a tolerance below 0.1 indicated serious problems of correlated variables (Bowerman & O'Connell, 1990; Myers, 1990; cited in Field, 2015). The results for collinearity assumption test are shown in Table 2.

Table 2

Multicollinearity Assumption Test

Variables	Collinearity Statistics	
	Tolerance	VIF
Educational Equity Policies	.986	1.014
Percentage of Economically Disadvantaged Students	.592	1.689
Percentage of Students with Disabilities	.878	1.139
Percentage of LEP Students	.651	1.537

Finally, I tested for statistical assumptions of normality, linearity, homoscedasticity, outliers, and independence of residuals. Normality, linearity, homoscedasticity, outliers, and independence of residuals were evaluated by examining the Normal P-P Plot of the regression standardized residual (Figure 1), the histogram (Figure 2), and scatterplot of the regression standardized residuals (Figure 3). The examinations indicated there were no serious violations of these assumptions. Pallant (2016) asserted that the tendency of the points to lie in a reasonably straight line (Figure 1), diagonal from the bottom left to the top right, provided supportive evidence the assumption of normality was not violated. The histogram and the scatterplot of the regression standardized residuals did not reveal major cases outside the +/-3.3 range; supporting

the assumption of normality has been met. To conclude, the lack of a clear or systematic pattern

in the scatterplot of the regression standardized residuals (Figure 3) supported the tenability of

the remaining assumptions (linearity, homoscedasticity, outliers, and independence of residuals)

being met. However, 1,000 bootstrapping samples were computed to combat any possible

influence of assumption violations and 95% confidence intervals based upon the bootstrap

samples are reported where appropriate.
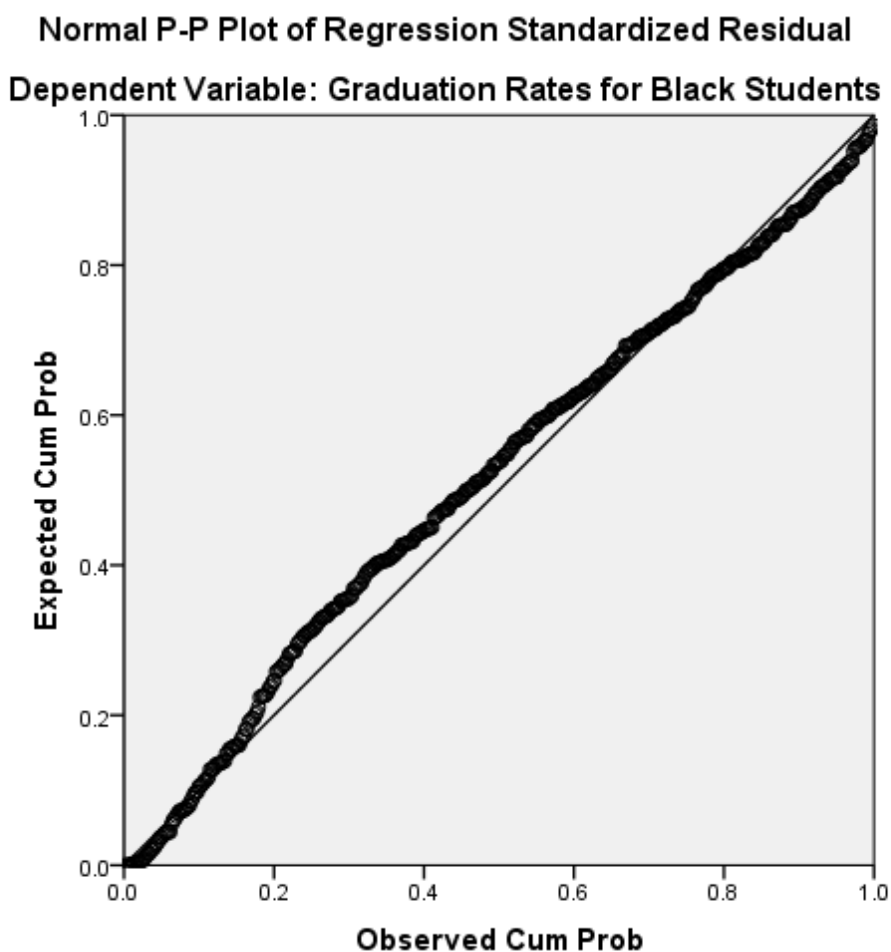
Figure 1. Normal P-P plot of regression standardized residual.
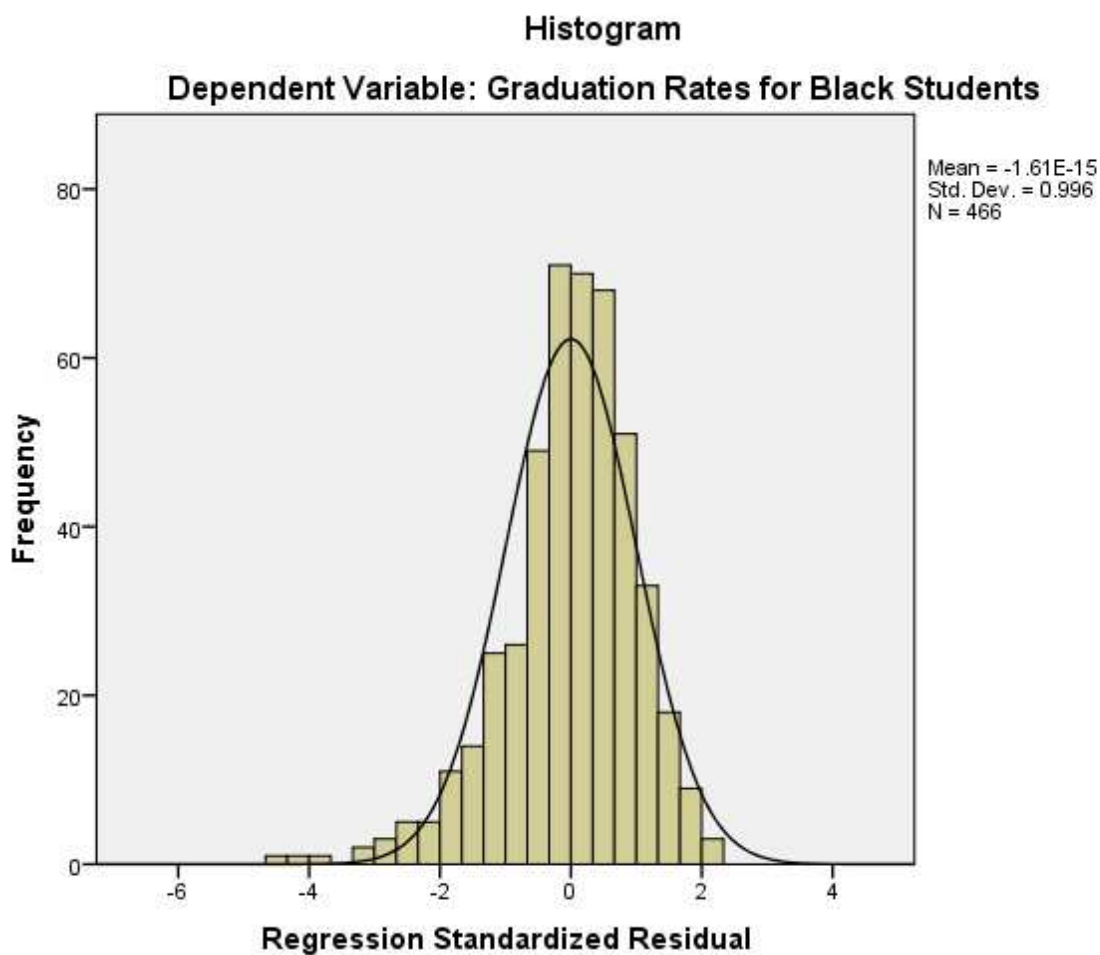
Figure 2. Histogram plot of the regression standardized residuals.
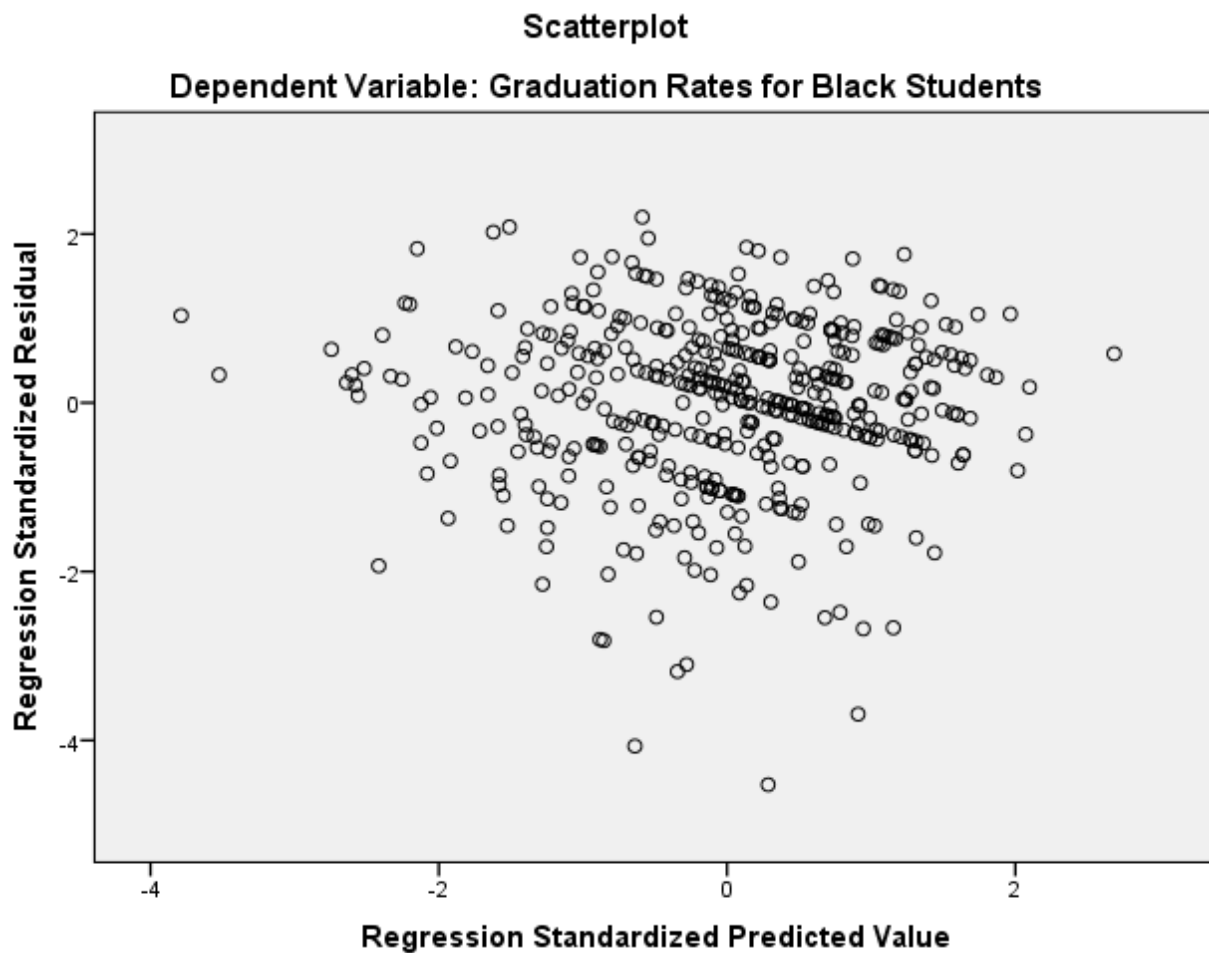
Figure 3. Scatterplot of the standardized residuals.

Results

Research Question 1. In order to test the hypothesis that the duration of exposure to educational equity policies had an influence on high school graduation rates for Black students, a between-groups ANOVA was performed. The ANOVA yielded a statistically significant effect $F(4, 461) = 2.49$, $p = .04$, $d = .71$. Under these circumstances, the null hypothesis of no differences between the means of high school graduation rates for Black students was rejected, and the effect sizes associated with the statistically significant effects were considered large

based on Cohen's (1992) guidelines. The results indicated that Black students who were not

exposed to educational equity policies were associated with the numerically largest mean level of

high school graduation rates ($M = 79.73$) within a 4-year adjusted cohort. The descriptive

statistics associated with high school graduation rates for Black students across the five

graduation rates groups are reported in Table 3.

Table 3

Descriptive Statistics for the Analysis of Variance (ANOVA)

Variables	N	M	S.D.	S.E.	Bootstrap 95% CI (*M*)
Zero Year of Educational Equity Policies	425	79.73	9.56	0.46	78.81, 80.65
One Year of Educational Equity Policies	6	73.50	16.54	6.75	56.13, 90.86
Two Years of Educational Equity Policies	5	77.60	5.77	2.58	70.43, 84.76
Three Years of Educational Equity Policies	3	70.33	11.01	6.35	42.97, 97.69
Four Years of Educational Equity Policies	27	75.48	8.11	1.56	72.27, 78.69

Note. $R^2 = .02$, $p = .04$.

The disparity between the standard errors (S.E.) can be explained by the extremely

unequal sample sizes between groups. The National Center for Educational Statistics reported

523 large school districts for SY 2015 – 2016. However, 42 large school districts did not have

their graduation rates data reported in the AGCR data set, and 33 large school districts did not

meet the screening criteria for this study. While large school districts with four or more years of

educational equity policies were 27, there was a significant lower number of large school

districts with one, two, and three years of educational equity policies in place. This extremely

unequal sample sizes may have contributed to the weakness of the model with 2% of variance

accounted for by the length of time an educational equity policy has been in place.

To assess the nature of the difference in means between the five groups further, the

statistically significant ANOVA was followed up with five Fisher's least significant difference

(LSD) post-hoc tests. Fisher's LSD test was used because the null hypothesis of no difference in means between groups was rejected (Hayter, 1986). Fisher's LSD computed pooled significant difference in means from all groups and provided the smallest significant difference between the means of zero and four years of educational equity policies as if these means had been the only ones to be compared (Williams & Abdi, 2010). The results indicated that the difference in means between zero year of exposure to educational equity policies and four years of exposure to educational equity policies was statistically significant, $p = .02$. The remaining difference in means between groups were not statistically significant. Given these unexpected results, Black students who were not exposed to educational equity policies were associated with the numerically largest mean level of high school graduation rates within a 4-year adjusted cohort while Black students associated with four or more years of educational equity policies were associated with the numerically smallest mean level of high school graduation rates within a 4-year adjusted cohort. Therefore, the first and second alternative hypothesizes were rejected. A visual representation of means, alpha values, and 95% confidence intervals are presented below.

Table 4

Fisher's Least Significant Difference Post Hoc Test

Educational Equity Policies (I)	Educational Equity Policies (J)	Diff. in Means (I-J)	*Sig.*	*95% CI (M)*
Zero Year of E.E. Policies	One Year of E.E. Policies	6.23	.11	-1.56, 14.03
	Two Years E.E. Policies	2.13	.62	-6.40, 10.66
	Three Years of E.E. Policies	9.40	.09	-1.59, 20.38
	Four Years of E.E. Policies	4.25	.02	.48, 8.01
One Year of E.E. Policies	Two Years of E.E. Policies	-4.10	.48	-15.58, 7.38
	Three Years of E.E. Policies	3.17	.64	-10.24, 16.57
	Four Years of E.E. Policies	-1.98	.64	-10.54, 6.57
Two Years of E.E. Policies	Three Years of E.E. Policies	7.27	.30	-6.58, 21.11

	Four Years of E.E. Policies	2.12	.65	-7.11, 11.35
Three Years of E.E. Policies	Four Years of E.E. Policies	-5.15	.38	-16.69, 6.39

Note. Dependent Variable: High School Graduation Rates for Black Students

E.E. = Educational Equity

A visual depiction of the means and 95% confidence interval is presented in Figure 4. It can be observed that high school graduation rates for Black students tended to increase as a function of non-exposure to educational equity policies.
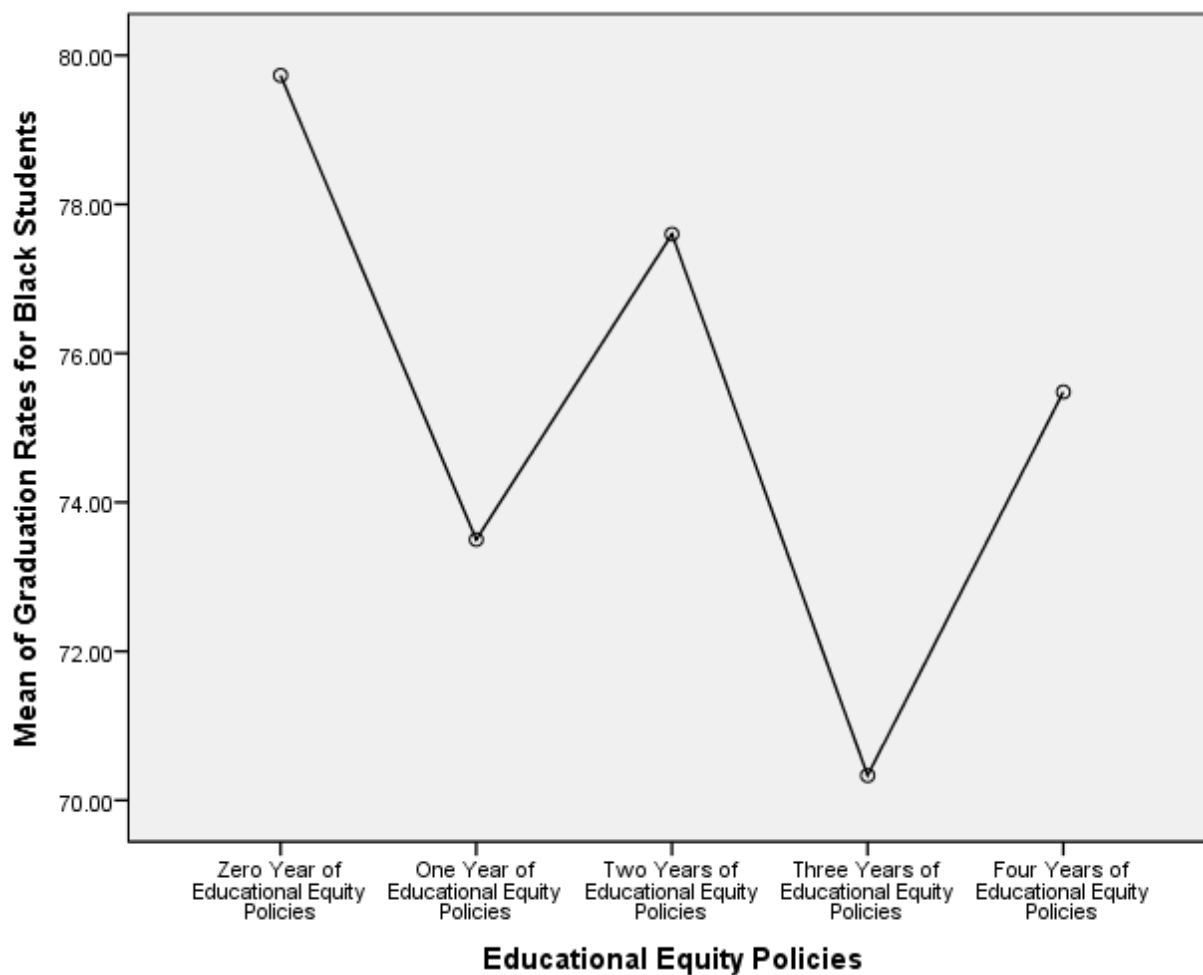

Figure 4. Means plots.

Research Question 2. A multiple linear regression was conducted to determine whether the duration of exposure to educational equity policies controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students were significant predictors of graduation rates for Black students enrolled in large school districts within a 4-year adjusted cohort. With the addition of covariates, the results of the regression analysis indicated that 20% of the variances were accounted for by the predictors, and the model was statistically significant predictor of high school graduation rates, $F(4, 461) = 28.38$, $p = .01$. However, the duration variable had a negative regression relationship with the dependent variable and statistically significant, $p = .02$. To put it another way, with a negative *Beta* ($\beta = -.110$), the duration of exposure to educational equity policies variable was not a significant predictor of high school graduation rates for Black students. Based on this analysis, the finding affirmed previous outcome for the first research question of this study and failed to reject the null hypothesis. The regression analysis summary for predictor variables are displayed in Table 5.

Table 5

Regression Summary for Predictor Variables

Variables	b	S.E.	β	t	p	B 95% CI
Constant	94.50	1.53		61.764	.01	91.49, 97.50
Educational Equity Policies	-.927	.416	-.094	-2.228	.02	-1.74, -.11
Economically Disadvantaged	-.117	.024	-.265	-4.896	.01	-.16, -.07
Students with Disabilities	-.895	.134	-.287	-6.662	.01	-1.15, -.63
LEP Students	.101	.055	.095	1.833	.06	-.01, .20

Note. $N = 466$, $R^2 = .20$, $p = .01$ and Durbin Watson $= 1.616$.

Meanwhile, the covariate of percentage of economically disadvantaged students had a negative regression relationship with the dependent variable but statistically significant (β = -.265, p = .01). For statistical interpretation, this value indicated that as percentage of economically disadvantaged students increased by one standard deviation (standard deviation for economically disadvantaged students variable was 21.97), graduation rates for Black students decreased by -.265 standard deviations. The standard deviation for high school graduation rates was 9.71 which constituted a change of -2.57 graduation rates (-.265 x 9.71). Therefore, for every increase by 22% of economically disadvantaged students, high school graduation rates for Black students decrease by 3%. This interpretation is true only if the effects of the duration of exposure to educational equity policies, percentage of students with disabilities, and percentage of LEP students are held constant (Field, 2015). These results lent support to previous studies that examined the effects of low SES and its implications on educational and economic outcomes for historically marginalized and disenfranchised students in adulthood (Chetty et al., 2018; Davis & Welcher, 2013).

Furthermore, the covariate of percentage of students with disabilities was associated with a negative relationship with high school graduation rates for Black students but statistically significant (β = -.297, p = .01). This value indicated that high school graduation rates for Black students tended to decrease as a result of increase in enrollment of students with disabilities. Specifically, as percentage of students with disabilities increased by one standard deviation (standard deviation for students with disabilities variable was 3.22), high school graduation rates for Black students decreased by -.297 standard deviations. The standard deviation for high school graduation rates was 9.71, so this constituted a change of -2.88 graduation rates (-.297 x

9.71). Henceforth, for every increase by 3% of students with disabilities, 3% decrease in high school graduation rates can be expected. According to Field (2015), this interpretation is true only if the effects of duration of exposure to educational equity policies, percentage of economically disadvantaged, and percentage of limited English proficient are held constant. Although the control variable of LEP students had a positive relationship with the dependent variable (β = .095), this variable was not statistically significant, p > .05, so it was excluded in further consideration for interpretation.

Summary

The purpose of this study was to evaluate the influence of the duration of exposure to educational equity policies had on high school graduation rates for Black students while controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students. I used the ANOVA test to examine the difference in means between five groups. Assumptions surrounding the ANOVA were assessed with no cause for concerns of violations. The model as a whole was statistically significant, $F(4, 461) = 2.49$, $p = .04$, $d = .71$. Thus, the null hypothesis of no differences between the means was rejected, and the effect sizes associated with the statistically significant effects were considered large based on Cohen's (1992) guidelines. The results indicated that Black students who were not exposed to educational equity policies were associated with a numerically largest mean level of high school graduation rates $(M = 79.73)$ while Black students exposed to four or more years of educational equity policies were associated a numerically smallest mean level $(M = 75.48)$ of high school graduation rates within a 4-year adjusted cohort. This was not the expected outcome given the present state of scholarship emphasizing the adoption and implementation of educational equity

policies to close the achievement gaps between White and Black students as discussed in reviewed literature.

Additionally, I used a standard multiple linear regression test to investigate the contribution of each independent variable in predicting high school graduation rates for Black students. Assumptions associated with multiple linear regression were assessed and no serious violations were detected. The model as a whole significantly predicted high school graduation rates for Black students, $F(4, 461) = 28.380$, $p = .01$, and 20% of variance was accounted for by the predictors. The findings revealed that the regression of the duration variable was negatively related to the dependent variable ($\beta = -.094$). This was not expected based on reviewed literature in Chapter 2. However, this new finding is consistent with the ANOVA analysis for the first research question of this study. Equally important, despite its negative relationship with the dependent variable, the control variable of percentage of economically disadvantaged students was significant and provided a useful information. This study reaffirmed that low SES, as measured by percentage of economically disadvantaged students, tended to decrease high school graduation rates for Black students in large school districts.

Furthermore, the control variable of students with disabilities had a negative relationship with high school graduation rates but statistically significant. The finding indicated that as the enrollment of students with disabilities increased, high school graduation rates decreased by the same percentage. However, this finding may be a result of coincidence. The control variable of LEP students was not statistically significant which ruled out its contribution to the dependent variable. Possible explanation for these findings will be explored in the following chapter, Chapter 4, including implications for further research given these results.

Chapter 5: Discussion

Introduction

The purpose of this study was to determine the influence of duration of exposure to educational equity policies on high school graduation rates for Black students, controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students. According to several studies, educational equity policies played a significant role in increasing high school graduation rates (Galloway & Ishimaru, 2015; Garver, 2017; Kornhaber, Griffith & Tyler, 2014; Robertson et al., 2015; Turner & Spain, 2016; Villegas, Strom & Lucas, 2012; Wager & Foote, 2013; Yavuz, 2016). At the same time, the dynamics of low SES had been documented and proven to have significant implications on Black students' school experiences (Ransdell, 2012; Wodtke et al., 2011). This study focused on examining the benefits of educational equity policies to increase high school graduation rates for Black students while controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students.

The achievement gaps continue to widen to the extent that the difference in means of high school graduation rates between White and Black students is statistically significant (Bohrnstedt, et al., 2015). Given the adoption and implementation of educational equity policies in some large school districts, I hoped to provide some recommendations on how to increase high school graduation rates for Black students. The identification of independent variables associated with graduation rates was aimed at helping to gain knowledge in order to make evidence-based decisions on the need for adopting and implementing effective, educational, equity-centered policies to close the achievement gaps between ethnic groups.

Findings

This study used secondary data from the U.S. Department of Education that contained

critical information on ACGR for SY 2015—2016. Since 2004, state education agencies (SEAs)

provide the Department of Education with educational data to facilitate the preparation of a

yearly report on the condition of education to the United States Congress. Before reporting, the

Department of Education conducts various checks to validate the data resulting in

communication with partnering SEAs. This process has made it easier to analyze and report

elementary and secondary data at the federal, state, and local levels (U.S. Department of

Education, 2018). Moreover, this study collected educational equity policies data from local

education agencies (LEAs). Using the LEAs' websites, policy manuals were methodically

surveyed to determine if a LEA did not have or had an educational equity policy in place and for

how long.

Educational Equity Policies Variable

Based on reviewed literature, the independent variable of educational equity policies was

selected for analysis to determine its influence on high school graduation rates for Black

students. The first research question was developed to find out whether there was a difference in

mean scores of high school graduation rates for Black students through the duration of exposure

to educational equity policies within a 4-year adjusted cohort. A statistically significant ANOVA

served to reject the null hypothesis of no difference in means (Table 3). The most revealing

information indicated that large school districts without educational equity policies in place were

associated with the largest increase in high school graduation rates for Black students. To put it

in another way, Black students who were not exposed to educational equity policies were

associated with the numerically highest mean level of high school graduation rates compared to Black students who were exposed to educational equity policies.

Fischer's LSD posthoc tests followed up to evaluate the nature of the difference in means between the five groups. The post hoc tests demonstrated that the difference in means between zero year of exposure to educational equity policies ($M = 79.73$) and four years of exposure to educational equity policies ($M = 75.48$) was statistically significant, $p = .02$. Other mean differences between groups were not statistically significant. According to Williams and Abdi (2010), Fisher's LSD computed pooled significant difference from all groups and provided the smallest significant difference between the means of 0 and 4 years of exposure to educational equity policies as if these means had been the only means to be compared. To that end, large school districts without educational equity policies in place were associated with the numerically largest mean level of high school graduation rates for Black students ($M = 79.73$), while large school districts with four years of educational equity policies were associated with the numerically smallest mean level of high school graduation rates for Black students ($M = 75.48$) within a 4-years adjusted cohort.

These surprising findings rejected the null hypothesis and both alternative hypothesizes. In fact, the results were the opposite of hypothesized difference in means between zero year of educational equity policies and four years of educational equity policies groups. Alternative hypothesizes stated that Black students enrolled in large school districts without educational equity policies in place would be associated with a numerically smallest mean level of graduation rates while Black students exposed to four years of educational equity policies would

be associated with a numerically largest mean level of graduation rates. This present study concluded the opposite.

This study posed another question to evaluate the extent to which the length of time an educational equity policy has been in place predicted high school graduation rates for Black students when controlling for percentage of economically disadvantaged students, percentage of students with disabilities, and percentage of LEP students. The multiple linear regression analysis results indicated that the duration of exposure to educational equity policies variable was statistically significant ($p = .01$) with a negative regression relationship to the dependent variable ($\beta = -.094$). As a result, the null hypothesis was maintained. Notwithstanding the negative regression, the duration of exposure to educational equity policies variable remained consistent with the results in the first research question of this study. The negative contribution of educational equity policies to the outcome contradicted several previous studies and conventional wisdom about the contribution of educational equity policies to increase high school graduation rates for Black students.

Economically Disadvantaged Students Variable

Despite a negative relationship with the dependent variable ($\beta = -.265$) and statistically significant ($p = .01$), the control variable of percentage of economically disadvantaged students' variable provided a critical information. The analysis predicted that as percentage of economically disadvantaged students increased by 22%, high school graduation rates for Black students decreased by 3%. The findings lent support to previous studies (Chetty et al, 2016; Davis & Welcher, 2013) that illustrated a correlation between low SES, students' educational achievement and economic mobility in adulthood.

Students with Disabilities Variable

The control variable of students with disabilities was associated with a negative relationship with the outcome variable (β = -.297) and statistically significant, p = .01. This value indicates that an increase by 3% of students with disabilities, high school graduation rates for black students decreased by 3%. Nonetheless, reviewed literature pointed to a growing number of ethnic minority students in special education in American public schools (Zhang & Katsivannis, 2012). At the same time, the literature pointed out that students with disabilities had similar probability of graduating on time with their classmates, except for students with intellectual disability and students in self-contained classrooms. Nonetheless, the probability of graduating on time for low-income students with disabilities is low compared to high SES students with disabilities (Schifter, 2016).

LEP Students Variable

The control variable of LEP students had a positive relationship with the dependent variable (β = .095). However, its alpha value was not statistically significant (p > .05). The nonsignificant result of this variable indicated that it did not have significant contribution to the outcome variable. Therefore, the variable of LEP students was not a contributing factor of high school graduation rates for Black students.

<div align="center">

Interpretations of Findings

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In the first place, a statistically significant ANOVA (p = .04) revealed that Black students enrolled in large school districts without educational equity policies were associated with a numerically largest mean level (M = 79.73) while Black students exposed to four or more years of educational equity policies were associated with a numerically smallest mean level (M =

75.48) of high school graduation rates within a four year adjusted cohort. The effects sizes (71%) associated with statistically significant effects were considered large based on Cohen's (1992) guidelines. The independent variable of the duration of exposure to educational equity policies was not significant predictor of high school graduation rates for Black students because of its negative regression. These findings contradicted several studies discussed in the literature review. For instance, regarding the need of increasing graduation rates for minority students, Robertson et al. (2015) argued that underprivileged students who participated in specially designed programs to prepare them for a more rigorous curriculum improved their graduation rates by 14.7 percent. Nonetheless, the analysis of this study found that educational equity policies designed to provide additional tools to struggling Black students did not influence their high school graduation rates.

In like manner, the percentage of economically disadvantaged students' variable had a statistically significant negative relationship with dependent variable. The statistical analysis indicated that an increase by 22% of economically disadvantaged students resulted in a decrease by 3% of high school graduation rates for Black students. Despite a negative relationship with the outcome, the results affirmed previous studies that linked low SES to educational underachievement and economic mobility in adulthood (Chetty et al., 2018; Ransdell, 2012; Milner, 2013; Palardy, 2015; Papy et al., 2015).

The variable of students with disabilities was negatively correlated with the dependent variable and a negative *beta* value (of $\beta = -.297$). This value indicated that for every increase by 3% of students with disabilities, there was an expectation of 3% decrease in high school graduation rates for Black students. However, the literature reported similar probability of

graduation for students with or without disabilities, except for students with intellectual disabilities, students in self-contained classrooms, and low SES students with disabilities. Based on this information, students with intellectual disabilities, students receiving more than 80% of their instruction in self-contained classrooms, and low SES students with disabilities were more likely to not graduate from high school. Given the complexity surrounding the educational environments for students with disabilities by which 54% of students with disabilities receive their instruction in the general education classroom for 80% or more of the day (Lerner & Johns, 2015), I expressed reservation on further interpretations of the finding of this variable.

Research Question 1

The literature review indicated that educational equity policies with embedded interventions such as attendance and tardy monitoring, family engagement and support, academic enhancement, credit recovery, graduation coaching, and supplemental programs were significant factors in improving high school graduation rates for Black students. The between-groups ANOVA was used to calculate the difference in mean scores of high school graduation rates between duration of exposures to educational equity policies within a 4-year adjusted cohort. As illustrated in Table 3, the results in this study were surprising and contradicted previous literature. Important to realize that Black students in large school districts without exposure to educational equity policies were associated with a numerically largest mean level of high school graduation rates with a mean difference of 4.66 compared to Black students in large school districts exposed to educational equity policies for four or more years. By and large, the inconsistency between the findings of this study and research discussed in the literature invites

for further research to capture the significance of the adoption and implementation of educational equities policies in many school districts across the country.

Research Question 2

At the same time, the independent variables analyzed for the second research question were intended to predict graduation rates for Black students. A multiple linear regression analysis indicated that the regression of the duration of exposure to educational equity policies was negatively associated with high school graduation rates for Black students ($\beta = -.094$, $p = .02$). The finding showed that this variable did not make a significant contribution to the outcome. While this new finding reaffirmed the results of this study's first research question, it remained in contradiction with widely held beliefs and discussed literature.

On the other hand, the control variable of percentage of economically disadvantaged students was analyzed for this question. The regression analysis showed that this variable was statistically significant with a negative regression. As a result, there was an inverse relationship between high school graduation rates for Black students and percentage of economically disadvantaged students ($\beta = -.265$, $p = .02$). The most compelling evidence indicated that for every increase in 22% of economically disadvantaged students, an expected decrease of 3% in high school graduation rates for Black students was predicted. This finding seemed consistent with Wodtke et al., (2011) and Chetty et al. (2018) who argued that failure to graduate from high school was a combination of exposure to high-poverty environments, academic unpreparedness over time, and contributed to social and economic mobility with negative implications in adulthood.

Limitations, Delimitations, and Recommendations for Future Research

As in any statistical research, there were limitations related to the design and methodology. Henceforth, this study was limited in nature and the data set. The SY 2015 – 2016 *4-year ACGR* dataset contained data on several variables, but only four variables were relevant for this study. As a result, this study was limited on the selection of the independent variables to predict high school graduation rates for Black students. The independent variable of the duration of exposure to educational equity policies was extracted from large school districts' websites for analysis. The limited number of for large school districts with educational equity policies in place ($N = 43$) may have not captured the significance of the influence educational equity policies had on high school graduation rates for Black students. This study suggests an equal large number or close in each group to determine the contribution of the duration of exposure to educational equity policies variable.

The control variable of percentage of economically disadvantaged students was statistically significant. Despite having a negative relationship with the outcome variable, the finding derived from this variable was consistent with previous studies that examined the impact of low SES on students' educational achievement (Chetty et al. 2016 & 2018; Davis & Welcher, 2013, Vodtke et al., 2013). This study defined SES through the lenses of economically disadvantaged students who received free and reduced price-lunch at school. Chetty et al. (2018) used de-identified longitudinal data generalizable to the entire U.S. population to investigate race and economic opportunities. Chatty and colleagues' findings demonstrated that Blacks boys living in high-poverty neighborhoods with greater disfranchisement were likely to be unemployed with lower incomes in adulthood increasing their chances of being incarcerated.

The effects of low SES on Black students have been documented over time. With a recent technological tool, Opportunity Insights, based at Harvard University, this study recommends school districts to access publicly available data to inform decision making for programs susceptible to the needs of students in their school boundaries. Opportunity Insights contains updated data on neighborhoods' household incomes, individual income, employment rate, incarceration rate, high school graduation rate, and college graduation rate. Chetty and colleagues created this tool for policy makers and the public to access the information needed in order to proactively develop effective policies to improve educational opportunities by targeting specific subgroups of students with chronic educational underachievement resulting from living in high-poverty environments (Chetty et. al, 2019).

The theoretical foundation of this study was aligned with much of the reviewed literature. Schneider & Ingram (1993) pointed out that the social construction of targeted populations theory had a political power to influence the policy agenda and the selection of policy tools to reshape the conditions of disadvantaged groups to resolve some long-standing inequitable distribution of resources. In Schneider and Ingram's social construction of target populations theory, the convergences of power in creation of four categories was explained. In the first group, members were advantaged such as the elderly, businesses, veterans, scientists and so forth. Members of this group were positively constructed and possessed strong political influences. The second group consisted of dependents who were positively constructed but lacked political power to mobilize an action for their benefits. Members of this group included mothers, young children, Black students, economically disadvantaged students, student with disabled, LEP students, and other disadvantaged groups. Unlike members of the advantaged

group substantial political influence, dependents were considered as noninfluential in political discourse. The third group were contenders such as the rich, big unions, minorities, and elites who had strong political domination. However, they were negatively constructed. Members of this group possessed the power to influence elected officials, but they had tendencies of competing for opposing or different interests. The last group belonged to deviants. Based on their past actions, deviants were negatively constructed and weak. This group was constituted of criminals, drug addicts, and gang groups. Society often viewed members of deviant group as underserving, dishonest, and stupid (Schneider & Ingram,1993).

Drawing from Schneider and Ingram's theoretical framework, this study examined one subgroup in the dependents category, Black children who have been historically disenfranchised and marginalized, to determine whether the selection of educational equity policies tools had a significant influence on their high school graduation rates. As discussed in previous chapter, the results were unexpected given current focus on equity-centered practices in many large school districts nationwide to improve high school graduation rates and close the achievement gaps. Within this framework, this study recommended further research on the independent variables analyzed with more additional control variables to provide a response that will rationalize the choice of this tools to close the educational divide in American public schools.

A clear delimitation was related to the screening criteria of being a large school district with or without educational equity policies in place and enrolling six or more Black students within SY 2012 – 2016. Based on this screening criteria, school districts with an enrollment bellow 15,000 students were excluded. In this fashion, most rural and small urban school districts were not included in the study. For example, discussed literature pointed to how West

Virginia improved graduation rates with a combined gain of 19.7% in twelve rural school districts (Wilkins et al., 2014). This delimitation restricted the generalization of the findings of this study to large school districts only. Future research may use different screening criteria to include rural and small urban school districts to generalize the findings to one of the U.S. census regions or the entire country population.

Another restraint was the lack of in-depth qualitative analysis to assess the meaning of an emerging phenomenon regarding the benefits of exposing Black students to educational equity policies. It may be possible that Black students enrolled in large school districts with educational equity policies in place were making improvements in rigorous curriculum but not enough to show a statistically significant measure in high school graduation rates. In fact, Dansby and Dansby-Giles (2011) collected first generation college students' experiences in high school during which participants stressed that a wholistic approach based on provisions of rigorous curriculum, and courageous leadership in implementing equitable programs were driving force behind their successful completion of high school. Using in-depth exploration of students, parents, educators, and administrators' experiences with open ended questions, future studies could uncover a phenomenon that mirrors the influence of the length of time an educational equity policy has been in place.

Strengths

Notwithstanding the limitations, this study demonstrated strengths in its data collection and analysis. For instance, one of its strengths came from using a census to reduce sampling errors and could be generalized to a large population. Chetty et al. (2018) used census sampling strategy in studying the sources of income inequalities through racial lenses. The census offers a

complete enumeration of the population and detailed information about small sub-group within the population (Australian Bureau of Statistics, 2013). Additional strengths were attributed to the analysis plan and statistical results. To answer the first research question, the design comprised of using the independent between-groups ANOVA, a robust test, to determine the statistically significant difference in mean scores between groups. The One-way ANOVA statistical assumptions were tested with no concerns for violations. The statistically significant ANOVA test was followed up with Fischer's LSD post hoc test and validated the difference in means between zero year of exposure to educational equity policies and four years of exposure to educational equity policies groups. It was found that Black students without exposure to educational equity policies had high graduation rates by a mean difference of 4.66 compared to Black students exposed to four years of educational equity policies within a 4-year adjusted cohort. For the second research question, a multiple linear regression test provided statistically significant contribution of each predictor to the outcome variable. Equally important, the multiple linear regression met all statistical assumptions (normality, multicollinearity, linearity, homoscedasticity, outliers, and independence of residuals) as detailed in Chapter 4.

Implications for Social Changes

This study provided new insights to the fields of public policy and educational policy. School districts exploring ways in which to improve high school graduation rates for Black students and other minority students can use this new information to shift from the need of adopting and implementing educational equity policies to addressing income inequality. The major policy implication for social change derived from this study supports revitalizing underserved and historically marginalized communities and low-income neighborhoods from

which a large percentage of economically disadvantaged students come. Based on this study's empirical evidence, school districts' efforts of adopting and implementing educational equity policies to close the achievement gaps between White and Black students may only have been treating the symptoms of the disease.

Testing the hypothesis that students from lower-poverty neighborhoods exceled in schools and had better economic outcomes in adulthood, Chetty et al. (2016), reported the results of a longitudinal experiment by which randomly selected low-income families from higher-poverty neighborhoods were given housing vouchers to move to lower-poverty neighborhoods. The moving to opportunity experiment revealed that children under 13 years of age who were exposed to better environments significantly improved graduation rates, attended college, and earned 31% higher on average relative to a mean of $11,270 in their mid-20s. This study concurred with Chetty and colleagues on the needs of educating the whole child. In that respect, the current research also contradicted proponents of school choice advocating for public education funds allocation through vouchers to pay for public schools outside a student's school district boundaries, private schools charter schools, home schools, or any other learning environment of parents' choice. As Jasperson (1993) noted, the voucher system has been around for many years, but its constitutionality has been challenged in many parts where it has been used. This study lent support to Chetty and colleagues who have documented that children from low-poverty neighborhoods exposed to better environments exceled in schools, had better economic outcomes in adulthood, and were less likely to be incarcerated.

From social construction of target populations theory perspectives, elected officials were sensitive to power and pressure from the public. Schneider and Ingram (1993) contended that the

theory became relevant in political science logic because elected officials had to pay attention to the public demands and the goals that might be achieved. However, citizens living in underprivileged communities had limited influence on the political class. In an election year, for example, policy directed at disadvantaged communities were high on the agenda to attract the votes. Nonetheless, the target populations had no control over the agenda and the benefits were delivered with greater burdens, making it "illogical from the perspective of policy effectiveness" (Schneider & Ingram, 1993, p. 338).

With that in mind, people living in high-poverty areas need allies from powerful segments of the population to advance targeted policies to shape their negatively constructed status. For instance, most would agree that increasing high school graduation rates for Black students is a worthy goal to end the cycle of poverty and shutdown the school to prison pipeline for the Black boys. For this reason, mounting public pressures on elected officials to enact policies designed to improve lives of economically disadvantaged students could be justified as contributing to a reduced cycle of poverty and promoting a positive economic mobility in adulthood. In their capacities, public officials can make distinctions, "thereby subdividing a particular group into those who are deserving and those who are not" (Schneider & Ingram, 1993, p. 334).

For too long, the United States government has been providing direct subsidies to large corporations by justifying it for job creations in communities. Schneider and Ingram argued that such funds could be directed toward public sector agencies with low-cost management in order to invest in the communities through job creations in various projects in the sense that there will be more positive outcomes from the policy initiative. Schneider and Ingram went above and

beyond job creation opportunities and suggested that other policy options could provide benefits to unemployed or low-income people including a redistribution of wealth to the poor to increase the demand for products. The expenditures for the policy would be justified on improved historically disenfranchised and marginalized communities, reduced infant mortality rate, increased high school graduation rates, and achieved better individual economic outcomes in adulthood to construct a more perfect union. However, such policy will require the backing of powerful segments of the population with a history and inclination of combating any beneficial policy directed at disenfranchised groups in the American society. This study recommends elected officials and policy makers to proactively explore effective policies to address income inequalities, provide citizens in high-poverty environments with housing opportunities, good paying job opportunities, access to health care as a right, unemployment benefits and equal redistribution of resources to build vibrant neighborhoods in which families are stable and have prepared their children to meet schools' rigorous curriculum and related challenges in order to graduate from high school on time and become economically self-sufficient in adulthood.

Conclusion

This study yielded results that contradicted the literature and commonly held beliefs on the influence of educational equity policies to improve high school graduation rates for Black students. It was revealed that Black students in large school districts without exposure to educational equity policies were associated with a numerically largest mean level of high school graduation rates while Black students exposed to four or more years of educational equity policies were associated with a numerically smallest mean level of graduation rates within a 4-year adjusted cohort. This was not the expected outcome and opened the door to future research

on the influence of educational equity policies in the efforts of increasing high school graduation rates for Black students. Additionally, the independent variable of the duration of exposure to educational equity policies was not a significant predictor of high school graduation rates for Black students. Despite having a statically significant alpha value, the duration of exposure to educational equity policies variable had a negative regression relationship with the outcome variable, which signaled its non-contribution to the results.

Meanwhile, the control variable of percentage of economically disadvantaged students was statistically significant with a negative relationship to the dependent variable as well. However, the statistical interpretation of the results for this variable predicted a 3% decrease in high school graduation rates for Black students for every 22% increase of economically disadvantaged students within 4-year adjusted cohort. The information uncovered here reaffirmed previous research findings (Chetty et al., 2016; Chetty et al., 2018; Davis & Welcher, 2013; Wodtke et al. 2016) that documented the impact of low SES, racial amenity, the implications of students' exposure to high-poverty environments and their effects on high school graduation rates and economic mobility in adulthood.

The control variable of students with disabilities was negatively correlated with the outcome variable with a negative *Beta* value. This value indicated that an increase by 3% of students with disabilities resulted in 3% decrease of high school graduation rates for Blacks students. However, I expressed reservation in interpreting the finding of this variable because of the complex nature of disability category classifications and environments in which students with disabilities receive their instructions (Lerner & Johns, 2015). The control variable of LEP students was not statistically significant; therefore, it was excluded from further interpretations.

If these findings served a school district or an elected official with a roadmap in developing effective educational policies to increase high school graduation rates for Black students and other minority student groups, these expectations have transcended the time I invested in this research.

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