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THE GIFTED GAP AND ADVANCE PLACEMENT: A COMPARISON OF
PLACEMENT AND ADVANCEMENT OF AFRICAN AMERICAN MALES
COMPARED TO OTHER ETHNICITIES IN GIFTED AND ADVANCED SCHOOL
PROGRAMS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Education in the Graduate School
of Texas Southern University

By

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By

Lauren A. Crusoe, Ed.D.

Texas Southern University, 2023

Associate Professor Delilah Gonzales, Advisor

For decades systemic inequalities in advanced placement courses in education have been a continued driving force to reduce opportunities for African American males compared to other ethnicities. This research provides a statistical analysis of the "Gifted Gap" in school districts within the United States serving an expanding metropolitan region with limited educational opportunities to grow due to gender, racial, and socioeconomic disproportions.

The purpose of this quantitative non-experimental study was to investigate the differences between African American male students compared to other ethnic male students, which may pose a "Gifted Gap" due to racial and gender factors in gifted and advanced school programs. Two separate archival datasets were obtained through the US Department of Education. To answer the three research questions, a series of independent

samples t-tests, ANOVAs, and chi-squared tests was conducted on each of the two datasets.

Keywords: Advanced Placement Programs, Gifted Gap, Gifted and Talented Education

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CHAPTER 1

INTRODUCTION

“Throughout the United States, there are millions of gifted African American males whose brilliance goes unnoticed due to various factors and circumstances such as racial profiling within the classroom, socioeconomic status, and lack of resources or both compared to other ethnicities in gifted or advanced programs” (Finn & Northern, 2018, p. 204). This pervasive presence of a “gifted gap” shows that African American male students tend to fall far behind their peers in school. They are also less likely to have the opportunity to access advanced programs within education. “This failure to invest in the intellectual development of America's children constitutes an enormous waste of human capital, exacerbating gaps in income and reducing economic mobility” (Finn & Northern, 2018, p. 18). These disproportionalities have sparked concern among educators, stakeholders, and researchers, which may cause unfair or inequitable treatment of African American students.

According to the Office of Civil Rights (OCR), at the U.S. Department of Education reveal that as of 2009, African American students constitute 16.7% of the student population but just 9.8% of students in gifted programs. This lack of African American students in advanced placement courses due to giftedness identification may contribute to a lack of school resources and opportunities and student segregation. In general, the segregation of students based on race, gender, and ethnicity has significant consequences for non-White and White students. Furthermore, not only are African American students disproportionately ignored for placement in advanced placement

courses and tracking for higher academic courses, but they are also significantly more likely to be placed in special education programs and lower-level academic tracked courses (Grisson & Redding, 2016). For example, a recent study by the Civil Rights Project at Harvard University showed that racial bias by educators contributes to the overrepresentation of African American students in special education (Matthew, 2001). Therefore, it can be inferred that the public school system is continuously hindering the growth of African American males instead of fueling their potential. Education is an essential and valuable resource for economic advancement, and limited access to advanced academic opportunities prevents various teaching instruction for low-income African American males from reaching their full potential.

This expanded "gifted gap" between students with high academic potential from families with low socioeconomic status and similar students from families with a high socioeconomic status may continue to widen throughout their educational careers. Gifted education programs begin at the primary level and play a vital role in preparing students for continued success in advanced placement courses in high school. Such advanced placement courses in primary and secondary school positively correlate with academic achievement, graduation rates, and college enrollment.

Various factors identify gifted students through a screening process. Identification begins with a classroom checklist that is assessed by the teacher. This identification checklist includes academic rating scales, informal recommendations, and cognitive assessments. However, it is essential to highlight that giftedness can also be based on elements such as artistic ability, student creativity, or leadership. Then, the teacher or other administrative staff evaluates each student based on the district or state

requirements to meet giftedness standards. Overall, the primary concern to meeting giftedness criteria is academic performance. With teachers having a strong impact on students' referrals to enter the advanced placement courses, the teachers' perception may influence outcomes at various points for the success rate of students. Students are affected by various circumstances such as ethnicity, gender, and socioeconomic status, due to teachers' biased perceptions. This discretion can lead to a continued disproportionate "gifted gap" among African American male students and unequal treatment within the school and classroom. For example, a Black student's behavior in the classroom according to cultural norms may be perceived as disruptive by teachers with racialized perceptions. Hence, it is critical to strategize and learn the causes and effects of the gifted gap between African American males compared to other ethnicities in advanced school programs.

Statement of the Problem

There has been much discussion for nearly 80 years about the underrepresentation of Black and Hispanic students in gifted education, regardless of income level (Baldwin et al., 1987). Recently, many scholars have primarily focused in their discussions on the educational access and outcomes of students who live in poverty but rarely focused on gifted African American students who live in poverty. As a result, little is known about gifted students who live in poverty-stricken families (Ford et al., 2008).

With the current trend and projection toward increasing the enrollment of African American males, addressing race, gender, and disproportions in gifted education is likely to evolve into a greater imperative. This is especially important for districts such as large metropolitan Independent School Districts, which receive an influx of minorities and

low-socioeconomic-status families migrating from all over the United States. The demographic data presented illustrate a significant increase in the enrollment of African American students in the southwest region of Texas. However, districts still need to develop proper training and policies to ensure that African American individuals receive equity in gifted education. Without this information, educators, administrators, and families are left to combat the challenge of identifying and supporting this specific population of gifted African American males. Houston districts that have traditionally been predominately white with a medium to high socioeconomic level and suburban should provide proper assessments, referrals, and identification policies for African American males' development programs to ensure diversity within the student body and equal access to advanced placement courses. Research conducted by Hodges et al. (2018); Wright et al. (2017); Yaluma & Tyner (2018), and between-district (Kettler et al., 2015) levels reveals the persistence of socioeconomic and racial disproportionality in gifted education identification, services, and distribution of resources; however, within-district analyses of inequities in gifted education are rare.

As expected, giftedness identification disparities are observed throughout enrollment in K-12 grades. In this sense, gifted education has been challenged by standard practices of equity and corresponding concerns across specific student populations and subgroups. Much of this criticism arises from the observation that students served by gifted education programs tend to have European American, Asian American, or high-income backgrounds, an observation documented since at least the 1970s (Peter et al., 2019; Yoon & Gentry, 2009). Therefore, it is crucial to adopt both a micro and macro view of why African American males experience limited access to

advanced placement courses compared to other ethnicities. This reduced access experienced by African American students often stems from primary factors out of their control. These primary factors include but are not limited to narrow definitions of giftedness, socioeconomic status, teacher bias due to racial profiling, gender profiling, and cultural differences. For example, on the 2017 National Assessment of Educational Progress (NAEP) mathematics assessments for Grade 4 students, 2% of African American and 3% of Hispanic students scored at the advanced level, whereas 24% of Asian Americans and 11% of European American students scored in the advanced range. These differences in advance placement programs for Americans will have far-reaching cultural, racial, and economic implications if left unaddressed in the 20th century. Moreover, it is essential to highlight that the subgroups that represent the least percentage among the population of the United States frequently perform at advanced levels representing more than half of the enrollment rates in advanced placement courses.

Purpose of the Study

The purpose of this quantitative study was to investigate the differences between African American male students compared to other ethnic male students, which may pose a "Gifted Gap" due to racial and gender factors in gifted and advanced school programs. The aim is to extensively research the systemic educational inequalities that hinder growth and opportunities, including reduced enrollment in advanced placement (AP) courses. New data allows stakeholders and educators to make well-informed decisions that reduce gifted disproportionality. Also, this research improves systemic educational opportunities through investment and improvement. Moreover, these data will increase

gifted education programs within institutions to prepare students for success in AP courses.

Significance of the Study

The significance of this study is to provide more gifted education programs and opportunities to African American students. In general, incorporating challenging and advanced programs in early childhood can help address racial and gender inequalities and gifted gaps that are continuously prevalent in today's public school systems. According to Henfield et al. (2008), "gifted education programs provide the following to Black children: (a) academic rigor, (b) highly skilled teachers, (c) equally skilled academic and cognitive peers, (d) future preparedness for high school and college, and (e) increased future vocational, social, and economic options" (pp. 443-444). These opportunities for African American students, specifically Black students, can increase their readiness to study mathematics and science. Academic readiness in core courses can stimulate students to choose STEM majors in continuing education. Furthermore, increased quality academic readiness can help change teacher bias and negative stigmas toward African American individuals.

Overall, this research can help expose the lack of opportunities for Black students, which leads to gifted gaps and constraints within AP programs. According to Ford (2010a), it is necessary to identify gifted students, especially those who live in poverty, at an early age to avoid or prevent atrophy. Ford (2010b) maintained that several unidentified gifted students of color might experience underachievement due to under challenge, which may cause them to lose interest in school. Hence, in the context of African American students, gifted gaps can provide educators, administrators, and

stakeholders with advanced instructional tools that better suit their needs. Therefore, it is important to address the causes and effects underlying the lack of potential that Black students experience within gifted programs, which suppresses their aptitude and is not readily recognizable by teachers.

Assumptions of the Study

The following assumptions were made for the purpose of the research study.

1. It is assumed that the information obtained from the sample population acquired by the US Department of Education accurately reflects the enrollment between genders both male and female in Gifted & Talented and Advanced Placement programs.
2. It is assumed that the information obtained from the sample population acquired by the US Department of Education accurately reflects the enrollment between African American males and other ethnicities (White, Hispanic, Asian and others) in Gifted & Talented and Advanced Placement programs.
3. It is assumed that the information obtained from the sample population acquired by the US Department of Education accurately reflects the enrollment between specific school districts such as; Amarillo, Abilene, Brownsville, El Paso and Houston in Gifted & Talented and Advanced Placement programs.

Theoretical Framework

In terms of giftedness, there are many theoretical perspectives. Two of the most prominent are those of Francois Gagné and Joseph Renzulli. This study utilized Gagné's Differentiated Model of Giftedness and Talent.

By providing an explanation of giftedness and talent, Gagné (1992) provides insight into the phenomenon of giftedness. The differentiation model explains why giftedness and talent cannot be equated or interchanged. In 1992, Gagné described 'giftedness' in terms of natural abilities, extending Renzulli's (1986) concept of the Three Rings of Giftedness. Catalysts and other influences will strengthen a child's talent as well as his or her realization of his or her abilities. Children with gifted abilities can still be identified as gifted even if they have not yet developed their gifts or manifested their talents.

According to Gagne's study, underrepresentation in gifted education is not limited to gifted education but also occurs in general education. A well-thought-out and elaborated (Academic) Talent Development model is derived from Gagné's differentiated Model of Giftedness and Talent (DMGT). Rather than reducing ethnic disproportions, Gagné (2011) predicts that his program may increase them.

Research Questions

Three research questions served as a guide for the study:

RQ1: Are there statistically significant differences in enrollment between genders in the Gifted & Talented and Advanced Placement programs?

RQ2: Are there statistically significant differences in enrollment between African American males and other ethnicities (White, Hispanic, Asian, two or more races, and others) in the Gifted & Talented and Advanced Placement programs?

RQ3: Are there statistically significant enrollment differences between school districts (Amarillo, Abilene, Brownsville, El Paso, Houston) in the Gifted & Talented and Advanced Placement program?

Null Hypotheses

Research hypotheses were formulated from the above research questions.

HO1: There is no significant differences in enrollment between genders in the Gifted & Talented and Advanced Placement programs?

HO2: There is no statistically significant differences in enrollment between African American males and other ethnicities (White, Hispanic, Asian, two or more races and others) in the Gifted & Talented and Advanced Placement programs?

HO3: There is no statistically significant enrollment differences between school districts (Amarillo, Abilene, Brownsville, El Paso, Houston) in Gifted & Talented and Advanced Placement programs?

Definition of Terms

This section provides key terms and definitions used in the proposal that may not be widely understood or recognized. The following terms were defined to provide clarity in this paper.

Culture, according to Leung (2013), was defined as a dynamic system of rules, implicit or explicit, established by a social (and/or) professional group (para. 1).

Disproportionality refers to a group's representation in a particular category that exceeds expectations for that group or differs substantially from the representation of others in that category.

Equity means fairness and justice and focuses on outcomes that are most appropriate for a given group, recognizing different challenges, needs, and histories. It is distinct from diversity, which can simply mean variety (the presence of individuals with various identities). It is also not equality, or "same treatment," which does not take differing needs or disparate outcomes into account. Systemic equity involves a robust system and dynamic process consciously designed to create, support, and sustain social justice.

Ethnicity is a socially constructed grouping of people based on culture, tribe, language, national heritage, and/or religion. It is often used interchangeably with race and/or national origin but should be instead considered as an overlapping, rather than identical, category.

Gifted and Talented Education (GATE), the definition, according to the National Association of Gifted Children (NAGC) (2018), indicates: Gifted individuals are those who demonstrate outstanding levels of aptitude (defined as an exceptional ability to reason and learn) or competence (documented performance or achievement in top 10 percent or rarer) in one or more domains.

High-poverty school is defined as being within the bottom quartile throughout the state for percentages of students who qualify for free or reduced-price lunch.

Implicit bias/unconscious bias — Attitudes that unconsciously affect our decisions and actions. People often think of bias as intentional, i.e., someone wanted to say something racist. However, brain science has shown that people are often unaware of their bias, and the concept of implicit bias helps describe many contemporary racist acts that may not be overt or intentional.

Kaufman Brief Intelligence Test (KBIT) was a test that measured verbal and nonverbal cognitive ability and intelligence (Pearson Assessment, 2012b).

Naglieri Nonverbal Abilities Test (NNAT), according to Pearson Assessment (2012a), was a general ability test that "uses progressive matrices to allow for a culturally neutral evaluation of students' nonverbal reasoning and general problem-solving ability, regardless of the individual student's primary language, education, culture or socioeconomic background" (para.2).

No Child Left Behind (NCLB) Act of 2001 is the reauthorization of the Elementary and Secondary Education Act, a federal law mandating that all students in every public school in America are proficient in standardized tests.

Racism—a historically rooted system of power hierarchies based on race infused in our institutions, policies, and culture that benefits white people and hurts people of color. Racism is not limited to individual acts of deliberate or accidental prejudice.

Socioeconomic status is defined as a measure of one's combined economic and social status and tends to be positively associated with better health.

Organization of the Study

The current research investigation is organized into five chapters. Chapter 1 includes the introduction of the study, statement of the problem, theoretical framework, purpose of the study, significance of the study, research hypotheses, definition of variables/terms, and organization of the study.

Chapter 2 includes a review of selected literature related to racial and gender factors in gifted and advanced school programs. Additionally, chapter 3 consists of the participants and power analysis. Also, in this chapter, the research design, instrumentation, data

collection procedures, data analysis procedures, limitations, internal and external validity, and summary sections are presented.

Chapter 4 presents the research questions and hypotheses, descriptive statistics, hypothesis testing results, and a summary. Finally, chapter 5 provides conclusions.

CHAPTER 2

REVIEW OF RELATED LITERATURE

This research review provides an intellectual context for this comprehensive investigation. The investigator explores both historical and contemporary research that focuses on the inequalities between African American male students compared to other ethnic male students enrolled in Gifted & Talented and Advanced Placement programs within multiple school districts within the state of Texas. Subsequently, this chapter delves into a number of critical issues concerning: (1) Gifted and Talented Education (2) Advanced Placement Education (3) Historic Factors (4) Factors Contributing to Inequities in Gifted Education and Advanced Placement Courses (5) Ethnicities (6) Gender Gifted Differences

Overview

This study investigated the differences between African American male students compared to other ethnic male students, which may pose a “Gifted Gap” due to racial and gender factors in gifted and advanced school programs. It further explores the systemic educational inequalities that hinder growth and opportunities, including reduced enrollment in AP courses. Providing the public with new data will help stakeholders and educators reduce the disproportionality within gifted education by allowing them to make well-informed decisions. This research will also help invest in and improve systemic educational opportunities. Moreover, these data will improve gifted education programs within institutions to prepare students for success in AP courses.

Defining and Identifying Giftedness

Many definitions of “gifted and talented” exist within government agencies and, according to different education researchers and education advocacy groups, which can affect determining who is gifted. Various definitions are confusing on how to identify particular students as gifted. For example, according to Title IX of the NCLB (2002),

The term “gifted and talented,” when used in the context of students, children, or youth, means students, children, or youth who show evidence of high achievement capability in areas such as intellect, creativity, artistry, leadership capacity, or in specific academic fields, and who require services or activities that are not ordinarily provided by the school to fully develop those capabilities.

According to the definitions of the NAGC (2018), “gifted individuals demonstrate outstanding levels of aptitude (defined as an exceptional ability to reason and learn) or competence (documented performance or achievement in the top 10% or rarer) in one or more domains.” These domains include any structured areas of activity with their symbol system (e.g., mathematics, music, or language) and set of sensorimotor skills (e.g., painting, dancing, and sports) (NAGC, 2018). Both definitions are similar and do not include cultural background or socioeconomic status, which is an important reminder of how economically it can affect a student academically. However, it should be highlighted that there is no federal mandate for GATE; hence, each state has developed its perspective of giftedness (Vega & More, 2018, p. 238). While developing their definitions of giftedness, states may set different minimum and maximum requirements, making some states more challenging than others in defining a student’s giftedness.

Providing opportunities for students who demonstrate a potential for giftedness compared to other students is essential for them to be exposed to gifted education programming and the environment within the school. However, examining minority, ethnic, and gender groups have revealed apparent disparities in AP programs. For parents, educators, and administrators, it is critical to understand how states, districts, and schools (either public, charter, or private) define giftedness. However, identification criteria such as intellectual ability and achievement tests may limit students with racially, culturally, and linguistically diverse backgrounds from being classified because of the inherent cultural loading and linguistic demand (Ford et al., 1998; Ortiz & Ochoa, 2005). Furthermore, most school districts use a standardized test to identify students for AP courses. Using a standardized intelligence-based test as a criterion for determining gifted students, however, opposes other primary factors defining gifted and talented students (e.g., artistry, leadership, or creativity), hence narrowing down the list of who can enroll in AP courses (Moore & Flowers, 2012; Moore et al., 2005).

Although teachers' recommendations for AP courses are typical, such recommendations are known to be subjective and biased. A teacher's or school system's implicit bias toward African American males, for example, may prevent them from being referred to or accessing AP programs due to cultural, linguistic, and personal teacher bias. The absence of appropriate teacher training in cultural responsiveness and identifying the characteristics of gifted students contributes to deficit thinking and the under-referral of African American and Latino students (Ford & Whiting, 2007; Ford & Moore, 2004). These findings indicate that this system consistently creates a barricade for African American males within gifted education. However, critical authors have found that

compared to other teachers of color, White teachers do not believe other teachers who recognize indicators of potential giftedness, acknowledge standardized test bias, recognize prejudicial teacher attitudes, understand the negative impacts of narrow screening processes, and recognize teachers' fears regarding "watering down" the gifted curriculum by including underrepresented children, which serve as barriers to participation in gifted programs among males of color (Vega & Moore, 2018).

Gifted Education and Advanced Placement Courses

African American males must receive the exact equitable identification for AP courses as their White counterparts. Increasing access through proper educator training can promote positive outcomes for African American males. Participation in elementary and middle school gifted education programs positively impacts the students' performance, motivation, self-efficacy, engagement, and self-concept (Grissom & Redding, 2016). If students of color are not exposed to AP courses, their participation rate reduces at the secondary level (Crabtree et al., 2019). This, in turn, translates to a continued lack of participation, motivation, confidence, and self-efficacy to enroll in gifted education courses. It is also worth highlighting that the lack of representation of African American males throughout the school year increases the detachment and interest in wanting to be involved in AP courses. Many scholars attribute racial and ethnic disparities in gifted education to a series of factors that continue to discourage African American males. For instance, the socioeconomic disproportion in AP enrollment is reflected in the fact that nearly 300,000 low-income students who could succeed in AP courses did not enroll in any while they were in high school (Olszewski-Kubilius & Corwith, 2018). However, these disparities also include factors in students' homes.

A primary factor is parents working over maximal hours during a workweek. Moreover, African American parents with low economic status who strive to make ends meet are less likely to meet their children's needs. This hindrance potentially blinds them from perceiving their children's potential to succeed in AP courses. Hence, if teachers encourage African American male students to undergo a gifted evaluation, this may help with the state and national outcomes of common core and AP courses. According to a national analysis called Finding America's Missing AP and IB Students, in schools where a Black-White or Black-Latinx AP enrollment gap exists, 69% of the Black and 65% of the Latinx students whose Preliminary Scholastic Aptitude Test (PSAT) scores correlated with potential success in AP science courses were not enrolled in these courses (Theokas & Saaris, 2013).

Not only are AP courses considered critical in both primary and secondary education, but they also represent a trajectory pipeline for joining STEM fields in higher education. However, access to AP courses usually depends on the school's socioeconomic status (Crabtree et al., 2019). In other words, schools with higher socioeconomic status have many AP courses available to their students compared to schools with low-socioeconomic-status students and racial disparities. According to Crabtree et al. (2019), "high schools with high percentages of White students offer a rough average of 20.6 AP courses, whereas those with high percentages of Black students offer only 11.75 AP courses" (p. 207).

Critical Race Theory

Critical race theory (CRT) is a philosophy that aligns with the ongoing issues of the lack of representation of African American males in AP courses. Overall, it is

imperative to change the underlying racial issues that continue to oppress minority groups because of their race. CRT focuses on fixing other factors in education to increase educational opportunities, such as representation, inclusion, school climate, racism, and pedagogy, to name a few (Ledesma & Calderon, 2015). Ledesma and Calderon (2015) stated, “Many scholars have viewed CRT as an epistemological and methodological tool to help analyze the experiences of historically underrepresented populations across the K-20 educational pipeline” (p. 206). CRT is not “training” on diversity but rather practice for reducing historical racial norms. In the field of education, scholars have often focused on the CRT’s foundational legal scholarship, ethnic studies, and the pioneering work of Landson-Billings and Tate (1995) and Solorzano (1998), who introduced the study of CRT to K-12 and higher education, respectively. Including CRT provides a detailed insight into educational problems that Black students continue to face. Hence, defining and exposing CRT allows educators to understand better racism and their effects on African American students.

As CRT scholars in education, Dixon and Rousseau (2005) have long understood the urgency behind the need to theorize race. In this context, it can still be observed in the 20th century that it is important to understand the educational and legal systems initially put in place for a specific racial class of individuals. CRT acknowledges that racism is normalized within the United States and embedded with educational and legal systems replicating inequalities. Acknowledging historical and present racial inequalities dismiss the belief that racist events are aberrations or delusions. Nevertheless, manifestations of structural and pipeline systemic racism toward Black students continue to rise compared to other ethnic groups (Ledsma & Calderon, 2015).

In the early 1970s, CRT emerged as a successor to critical legal studies (CLS) (Crenshaw, 2011; Tate, 1997). CLS is a theory that challenges abolishing unethical practices and seeks to overturn accepted bad practices in legal theory. This theory has a significant impact on the importance of CRT. Including CLS when discussing CRT is necessary to better understand ongoing injustice within the legal systems that affect opportunities and resources available for all Black individuals. CRT may seem like a movement investigating how to transform the correlation between power, classism, race, and racism.

The call for action to transform these systems' emergences stemmed from the minimal progress made in the civil rights movement and implemented laws that were supposed to eliminate racism within classrooms and establish neutral forces to distribute equal resources to all institutions. However, Landson-Billings (1999) stated that CRT theorists, "while appreciating the attention that CLS brought about to unjust laws in the United States, felt that it did not bring "racism into its critique" (p. 12). This dissatisfaction with CLS shed light on CRT. Hence, CRT continues to examine and promote educational inequalities and how such inequalities directly result from racism (Ledesma & Calderon, 2015).

Gaining a historical and legal perspective on various issues within education continues to cause a negative disposition for African American students. However, examining the historical roots of inequalities among a particular race and class of individuals can help future stakeholders implement a plan of action to suit the needs of all students. The goal of CRT is to deconstruct forces on race and racism that impact society as a whole and in areas such as education (Ledesma & Calderon, 2015). In this sense,

CRT seeks “to understand how a regime of White supremacy and its subordination of people of color have been created and maintained in America and to charge the bond between law and radical power” (Crenshaw et al., 1995, p. 13). CRT can help formulate a plan of action for educators, administrators, and stakeholders. Furthermore, since there are many concerns regarding miseducation within K-20 institutions, CRT can help abolish teacher bias.

Race has always been a primary factor in African American males joining AP courses. Therefore, it is necessary to implement and understand what CRT provides. Stovall (2005) stated, “CRT is a theory that operates as a weapon in the struggle by providing tools to address the concerns of Africans in education” (p.198). It recognizes the inconsistencies prevalent within society and education. These inconsistencies that CRT recognizes are race, racism, classism, and other inequalities that are unjust and unfair for all. Within the United States, many historical issues, even present-day ones, can be seen through statistical results within education.

Yamamoto (1997) urged CRT advocates “to spend less time on abstract theorizing and more time on community-based educational efforts” (p. 873). According to Stovall (2005), “CRT is not a plea for understanding. Rather, it is a response aimed at changing the realities of the public institutions, including education” (p. 199). In this sense, critical race theorists have brought race to the forefront. Educators must be more cognizant of the initial purpose of founding the United States educational system. CRT plays such a role in education that critical race scholars must continue raising awareness. A theory backed with a plan of action to shed light on the advances and interest in racism can help eradicate the immobility of racism. CRT helps build engaging platforms to

empower students of color. It also pushes cultural teaching practices in and out of the classroom while dismantling White privilege and signs of colorblindness.

Given the continued underrepresentation of African Americans in gifted and talented and AP courses, CRT is regarded as an asset for exploring the underlying causes. Black students differ from their White peers in terms of both cultural and social history. Although some people perceive the cultural and social unique differences of Black individuals as incompetent, CRT views people of color as “holders and creators of knowledge” (Bernal, 2002, p. 108). Therefore, critical race theorists strive to provide knowledge and insights into the systemic injustices among African American students.

In both the past and the present, critics of CRT have discounted many elements of CRT. For instance, Delgado (2000) stated that “racism is normal, not aberrant, in American society. Racism is an ingrained feature of our landscape; therefore, it looks ordinary and natural to persons in the culture” (p. 16). Similarly, Taylor (1999) stated, “racism is a fact of daily life in society, and the assumptions of White superiority are so ingrained in our political and legal structures as to be almost unrecognizable” (p. 183). These critics of CRT view it as offensive for the majority and believe everyone in the United States is entitled to their views, experiences, and opinions. Such differences between critics regarding CRT may seem justifiable because of the lack of empirical research data, among other problems, and the biases among theorists on essential issues, such as CRT, continue to highlight the ongoing crisis of injustice in the United States.

Policies and Practices

Policies and practices significantly contribute to the continued underrepresentation of African American males in gifted and AP courses, especially for

teachers who systematically under-refer minority students for gifted education services (Saccuzzo et al., 1994). Ford (1995) found that many Black students with high achievement scores (e.g., 95th to 99th percentile) were underrepresented in gifted education because their teachers did not refer them for screening. However, the policies and procedures for determining gifted education vary across states. For example, Arizona mandates a fixed number based on national norms, with other states probably having higher percentages (Peter et al., 2019, p. 3). Policies are also related to the items on the test by some sort of metric system (Ford, 2003, p. 220). The items on the test presented based on the output determine how they are weighted.

Several articles have discussed the poor representation of minority students in gifted courses because of not meeting academic requirements, such as test performance. One major contributor to this issue is that policies and procedures can negatively impact minority students; For example, teacher referrals are considered a primary source for recruiting students into gifted courses (Ford, 2003, p. 220). This procedure often serves as a gatekeeper for students and can prevent them from pursuing the screening process. Because of the many variables negatively impacting minority students joining gifted programs, teacher referrals and recommendations should not be hindrances or gatekeepers for minorities. Some states, compared to others, have mandates that are strict with IQ-based scores. However, some researchers suggest that relying on national norms promotes fairness: “Children and youth with outstanding talent perform or show the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience, or environment” (U.S. Department of Education,

1993, p. 3). Hence, correctly implementing proper policies and procedures by districts and schools will result in a higher representation of Black individuals.

Contributing Factors to Inequities in Gifted Education and Advanced Placement Courses

Various factors contributing to inequities hinder the successful participation of African American males in gifted education. These contributing factors to racial disproportionality include the identification of students for gifted education programs based on narrow criteria and the lack of knowledge regarding the concept of giftedness on the part of teachers (Darity et al., 2009; Ford, 1995; Ford et al., 2008; Jordan et al., 2012; Olsewski-Kubilius & Corwith, 2018; Patton, 1992; Payne, 2010). Educators, in general, have a responsibility to meet each student's unique needs, including being able to recognize a gifted or talented student without bias of any sort. Teachers not only reach the curriculum that the students should know but also more often serve as advisers for the students regarding their educational careers. Hence, schools influence students' educational and career trajectories and inequitable opportunities to track African American males. According to extensive research conducted over 40 years, regardless of socioeconomic status, race plays a significant role in gifted education identification and retention (Corondado & Lewis, 2017; Ford, 1995, 2011; Goings et al., 2018; Grissom & Redding, 2016; McBee, 2010; Moore et al., 2005; Wright et al., 2017). Hence, overcoming the gifted gap deficit is essential for advocating for African American males in AP courses and closing the gap.

Besides educators being a primary gatekeeper and a source for the disproportionate ability of African American males, compared to other ethnicities, to join

AP courses, the use of intelligence tests is another hindering factor (Payne, 2011, p. 10). For instance, intelligence tests such as the Stanford-Binet IV Intelligence Scale and the Wechsler Intelligence Scale for Children are two well-known tests that are widely viewed as having skewed results for minority students (Payne, 2011, p. 10). These tests lack cultural responsiveness and linguistic skills, which play a significant role in the success of African American males. Research has shown that intelligence tests consistently yield lower mean scores for minority students than White students, yet these are frequently used for giftedness identification (Ford, 2004; Naglieri & Ford, 2003). Gifted and talented identification scores based on these assessments raise concerns because the results end with disproportionate racial and ethnic identification rates.

To bypass both the intellectual and the cultural biases of these assessments through verbal and quantitative components, various researchers have recommended a different approach to increase the success rate of African American males compared to other ethnicities. Many studies have highly recommended nonverbal assessments, which are less favorable than the Stanford-Binet IV Intelligence Scale and the Wechsler Intelligence Scale for Children (Payne, 2011, p. 10). These nonverbal assessments include the NNAT, Raven's Progressive Matrices, and the Universal Nonverbal Intelligence Test (UNIT) (Payne, 2011, p. 10). These nonverbal tests are predictors for students with different cultural, ethnic, and linguistic backgrounds. Many researchers have also embraced these nonverbal assessments as being fair and equitable. Naglieri and Ford (2003) found that a sample of White, Black, and Hispanic students, representative of the national school population in terms of urban settings, socioeconomic status, gender,

and geographic region, scored similarly on the NNAT (with mean scores within three percentages points of each other).

The results obtained in that study revealed consistency, fairness, and equitableness for all students who took the NNAT for giftedness identification (Payne, 2011, p. 10). This test indicates the importance of modeling assessments, such as the NNAT, to abolish the bias of potential gatekeepers, such as teachers. Moreover, these nonverbal assessments can be helpful for African American male students to boost their confidence as they take the assessment. Removing the verbal component of testing can allow ethnic males to concentrate better and reduce their anxiety without the stress of unfamiliar linguistic and cultural factors.

However, other researchers believe nonverbal assessments are unreliable for identifying gifted students from diverse backgrounds. Contrary to the findings of Naglieri and Ford (2003), the NNAT identified equal proportions of students from each ethnic group. Logman et al. (2008) found that Asian American and White students are likely to receive stanine scores of 9 (on a 9-point standard scale with a mean of 5), compared to students from other ethnic groups, on all three nonverbal tests. In general, these tests have a massive impact on students from ethnic or racial backgrounds, especially within the African American community. These findings suggest that nonverbal assessments alone are not significant indicators of a student's giftedness (Payne, 2011, p. 11). Researchers on the opposing side believe that nonverbal assessments do not compensate for cultural differences, access to quality educational opportunities, or the language barrier, which is imperative to the student's ability to successfully pass a giftedness or talent assessment. Some legitimate reservations about verbal and nonverbal gifted educational assessments

of the content negatively influence African American males. The validity of the content for these assessments provides a basis for these legitimate reservations (Payne, 2011).

Teacher Perception

Generally, research into teacher diversity and preparation in gifted courses has been scarce. According to Ford (2003), “Many teachers reported having little exposure to gifted education in their teacher education programs ” (p. 221). According to Ford et al. (2004), “due to their inadequate experiences with various cultures, are not equipped with contextual background to address intellectual, mental, emotional, and cultural assets and needs of their scholars.” This lack of knowledge stems from their inadequate experiences with various cultures. Traditionally, written assessments have been used as an indicator or to determine a student’s giftedness (Hopkins & Garrett, 2010, p. 5). However, many researchers have indicated that written-test material can be skewed for students from a cultural background. For example, research has indicated that the material used to test potentially gifted students is poorly related to African American students and their culture.

Most of this test material focuses on Anglo-Saxon experiences. Some researchers also perceive giftedness as subjectively based on these theories as well as on research and the perception of giftedness. In this sense, some researchers affirm that giftedness is subjective because of the uncontrolled variables that are recognizable through research, such as (1) teacher perception, (2) differential testing material, and (3) the lack of teacher training for gifted programs. Hence, the lack of representation of African American students identified as gifted students can be attributed to the monolithic use of written assessments, which is currently employed by public school districts (Serwatka et al.,

1989). Vetting students for gifted and talented programs based on these assessments have shown that 25% is based on their aptitude, which means that 75% is based on factors unrelated to intelligence (Oakland & Rossen, 2005). With these assessments and the knowledge of the lack of teacher training, the preparation for decision-making in gifted programs may not always be accurate. According to the data obtained from a College Board review of the PSAT from 2012-2013, graduating classes revealed minorities, although scoring proficient, thereby suggesting their ability to be successful in AP math and science, were still not allowed to participate in rigorous AP courses (College Board, 2012, 2013). There may be a wide variance in AP courses and gifted programs due to the quality of teachers' instruction delivery to help meet students' needs to perform at higher levels. Such variance may be based on local versus national norms in gifted and AP programs. Hence, with so much variance and uncontrolled negative teacher bias, African American males will continue to fall behind their ethnic and White counterparts.

Within the realm of education, with most teachers being White, multicultural pedagogy in the classroom will remain limited. Therefore, increasing the representation of African American teachers is necessary to provide Black males with a better representation of themselves to enhance their confidence and self-esteem. In addition, increasing the representation of Black teachers will allow for better connections with cultural experiences toward the students' schoolwork. Wood et al. (2017) contended White teachers have treated Black males with suspicion, disparagement, and contempt, resulting in delirious behavior on the part of these students. The effects of teachers holding a negative perception as far back as kindergarten, the years where social networking and feeling of attachment are formed, unfairly affect African American males

as teachers rate their level of closeness much lower than their White counterparts (Wood et al., 2017). These negative perceptions and teacher attitudes toward most African American males can promote the school-to-prison pipeline dilemma Black individuals face in modern America. Compared to other ethnic groups, the lack of a positive teacher-student relationship for Black students leads to noticeable favoritism and inequitable treatment toward African American males (Bryan, 2017, p. 7). However, some teachers may favor a specific ethnic group without realizing that they indirectly discriminate against that particular group of students (Ford et al., 2016). Therefore, without a direct and valid tool to accurately recognize and assess behaviors from teachers toward Black students, both gifted and talented opportunities will continue to be flawed.

This lack of a uniform system for collecting evidence to support nominations for students in gifted education opportunities has allowed teachers to indiscriminately select students, often based on their interactions with these students (Besnoy et al., 2016), as demonstrated in research highlighting White teachers having low expectations of Black students (Brinkley et al., 2018; Rubbovits & Maehr, 1973). Throughout history, evidence has shown that the lack of academic potential continues throughout secondary school because of the systemic failure of educators. Hence, without more parent/teacher involvement, the underrepresentation of Black males with high scholastic achievement scores and outcomes will continue. In this sense, consistent parent involvement and acknowledgment help reduce teacher bias toward Black males.

Although African American male students generally have much potential, they are misinterpreted because their cultural norms are misconstrued for negative behavior. Initial signs of giftedness among African American males can be disruptive or out of

control (Bryan, 2017; Woods et al., 2017). These initial signs may be perceived as a reason to refer these students to special education services instead of AP education. Bonner et al. (2009) contended that “this over-referral of Black males for special education services, combined with the misaligned definition of giftedness, self-concept issues, and cyclical challenges across generations, plays a significant role in why Black males are not recommended for gifted courses. The authors further purported that “when these key components are not addressed in classroom engagements or through extant policy, they combine in ways that often lead to the stagnation of achievement for gifted learners of color in general and gifted African American male learners in particular” (p. 177).

This lack of teacher preparation in recognizing gifted students reflects a lack of sensitivity toward students. Moreover, teachers' lack of education and preparation toward the characteristics of gifted African American males reflects a lack of social and emotional understanding. Such a lack of social and emotional understanding toward gifted Black students may result in decreased attention and fairness toward these students. These characteristics developed by Black students hinder the teachers' ability to identify and make appropriate recommendations.

Implicit Bias

Throughout history, African American males have continuously been at the forefront of underachievement in academia. The ongoing negative perception toward African American males has been one of the most significant issues for them in achieving more academic success and in significantly advancing in gifted programs throughout their education career. Morris (2002) asserted that there is an ongoing perception that

African Americans lack academic achievement, consciously or subconsciously, in comparison with their White counterparts. This type of bias is called implicit bias, held by administrators and teachers in and out of the classroom.

Implicit bias refers to the negative perceptions, stereotypes, and attitudes that affect a teacher's decision to make honest recommendations (Ford et al., 2016, p. 270). Subconsciously, implicit bias is rooted in other ethnic groups. With the underrepresentation of Black teachers in the classroom compared to their White counterparts, implicit bias consistently aligns with under-referral for gifted education screening. However, in the context of White or other ethnic groups of male students, implicit bias plays a favorable role in academics. For example, Black students are under-referred for gifted education screening despite having identical test scores and grades as White students. Grissom and Redding (2016) found that Black students' teachers underestimate and are suspicious of them despite having identical test scores and grades as White students. Although many efforts have been made to overcome this issue among African American males in and out of AP courses, little has been done to solve this problem.

Overall, changes in implicit bias can facilitate specific within the curriculum, such as standardized test questions that favor the experiences and linguistics of White individuals. For teachers of another race, understanding the experiences of minority students without implicit bias, compared to White suburban male students, can provide better insights into the talents of Black male students. Kumar et al. (2015) purported "discrimination against such disadvantaged groups as minorities and immigrants persist in many spheres of social interchange, including education" (p. 534). Although outward

discriminatory practices are frowned upon, people may subscribe to equitable feelings and intent. In this sense, implicit bias is perpetuated based on preconceived notions and is triggered by the presence of minority individuals to whom a stereotype has been attributed (Kumar et al., 2015). Hence, the continued unequal treatment of African American males within the classroom is attributed to preconceived notions that lead to negative actions and consequences.

Sometimes the consequences of teachers exhibiting implicit bias result in Black males going through the school-to-prison pipeline dilemma. This behavior of White or non-Black teachers has less educational value for Black male students compared to other ethnic groups. Therefore, the lack of representation of Black male students may not align with teachers' beliefs. These biases may stem from the administrators, the school culture, or the culture within the classroom. Hence, the reflections of implicit bias are being recognized in different sectors and, not among educators. Therefore, increased implicit bias within an empirical study can be challenging.

In the case of experienced or even first-year teachers, based on the implicit attitudes of their teachers, Glock and Klapproth (2017) argued that minority students' educational outcomes can be predicted by their teachers' attitudes since teachers' negative attitudes directly correlate with students' poor performance. Teacher perpetuation as a result of stereotypes leads to the devaluation of minority males based on actions and cognitive ability (Glock & Klapproth, 2017). Such devaluation of minority students based on their skin color leads educators to continue promoting negativity toward minority students. This implicit bias and prejudiced attitude may cause Black male students to act out or achieve or perhaps lead to other detrimental effects.

Jacobson's (1968) Pygmalion theory is directly tied to the self-fulfilling prophecy of teachers who consistently show lower tolerance and expectations toward African American male students compared to their male and White female counterparts. Education is the starting point for students to learn how to play and work well with others. It is likely that minority students will fail in society if teachers begin to demonstrate implicit attitudes and dispositions toward them (Glock & Klapproth, 2017; Kumer et al., 2015). This explains the beginning of poor reports for Black males starting from kindergarten through high school. "Failure to address these biases will continue to have generational implications" (Johnson & Larwin, 2020, p. 12). As stated by Bryan (2017), "for these students, particularly Black males, the typical trajectory of the school-to-prison pipeline begins with disproportionate school suspensions, expulsions, assignments to special education classrooms, and the pursuing or dropping out of school" (p.331). This disproportionate educational system for Black males endorses further issues, such as social and political correctness, to abolish subconscious implicit bias differences.

However, although some White educators recognize these issues among minority students, they refrain from opposing such an unjust system. This example of White educators recognizing implicit bias throughout the classroom and refusing to address the issue is considered a White privilege among White counterparts. Although past and present studies focusing on participation in AP courses have positively affected the trajectory of minority males, teachers' perceptions continue to hinder their total potential academic success. Hence, advocating better administration and more educator knowledge

in the current educational realm is imperative to further African American males in courses they are not intentionally welcomed in to ensure success for all.

Many studies have highlighted the need for a more holistic approach to education, including the *Nation at Risk* report (National Commission on Excellence in Education, 1983), which called for specific changes to the rigor of academics within education. Therefore, implicit biases can gradually change with the assistance of administrators, stakeholders, and parents to ensure the best quality of education for African American males. Without changing these inequalities that still hinder Black males in education, their success rates will remain statistically low compared to other ethnic groups.

Student Perception

Throughout history, multiple factors have negatively impacted students' perceptions of gifted education. These negative factors of gifted education within the perceptions of African American individuals may consist of a lack of support from peers, parents, and teachers. It is also worth noting that the perceptions of African American students are impacted by social, emotional, and psychological developmental issues (Ford, 2003, p. 223). Many historical theorists, such as Fordham and Ogbu (1986), found that many gifted or high-achieving Black students internalize the deficit thinking orientation held by others. As a result, many Black students' cognitive ability goes unnoticed because they sabotage their achievements. "For example, some Black students opt to act as a class clown to hide their cognitive academic abilities and high achievements in gifted education; moreover, this hindrance in cognitive abilities due to intentional sabotaging may also be observed in their athletic performance and achievement" (Ford, 2003, p. 223).

When dealing with life issues, African American males tend to feel that they have few role models or support to turn to (Brinkley et al., 2018). Historically, the media has negatively portrayed African males, setting the stage for these latent images to manifest a negative view of males themselves (Henfield, 2012). A negative image of one's race often turns into a stereotype that is observed both in and out of the classroom. Therefore, African American males continue to suffer the most from their self-perception and the same perceptions of others (Brinkley et al., 2018). Hence, educators and peers within schools should have a more multicultural understanding by forcing a culturally responsive pedagogy in all lesson plans. A consistent and well-taught culturally responsive pedagogy in all lesson plans. A consistent and well-taught culturally responsive pedagogy in all schools, facilitated by teachers, can help eliminate such negative stereotypes and perceptions. In this sense, self-perceptions toward gifted education and student-teacher relationships are essential to academic success in gifted and AP programs.

Steele and Aronson (1995) found that the test performance of Black students can be hindered by what they called the "stereotype threat" when Black students are overcome by anxiety during test-taking situations. Thus, gifted African American students may intentionally answer questions incorrectly to avoid being assessed or accepted for gifted education services. Many African American students experience a waste of their giftedness because their teachers cannot advise and advocate for them properly. However, research has shown that other ethnic groups receive more support and advocacy for gifted education services.

Teachers who deliberately ignore signs of potentially gifted Black students can be viewed negatively by students or even racist by individuals outside the school.

Intentionally ignoring gifted Black students or even racist individuals outside the school.

Intentionally ignoring gifted Black students continues to hurt their self-esteem, which does not help their self-perception. Statistically, most Black students are already required to deal with varying negative external factors, including their parents. Hence, the consequences of deficit thinking of teachers toward African American students will continue to add to their social, emotional, and psychological self-perception (Ford, 2003, p. 223).

Bonner et al. (2009) argued that schools fail to acknowledge the ethnological evolution of Black students as they matriculate through school and that AP programming can be detrimental to their overall academic success. Brinkley et al. (2018) also contended, “that many programs often seek to “fix” African American males without focusing on the years of injustice that this population has experienced (p. 20).” Such inequalities and systemic injustices experienced by Black students within their school systems can be viewed as deliberate to discourage them from seeking gifted education services. These inequalities are being proved every day in all sectors of education (Brinkley et al., 2018). Inequalities among African American students can also be recognized in textbooks, school culture, and classroom representation, which further adds to negative student perceptions.

The perceptions of African American male students have been perpetuated starting from early childhood education. Such negative perceptions toward African American male students reflect the highest reports of both behavioral and academic

issues in K-12 education. These inequities are portrayed daily as behavioral issues. These students are harshly treated for maladaptive behavior and nonconformity instead of proactively seeking alternative approaches to involve this population through various modalities of instruction and behavioral modification practices (Brinkley et al., 2018). Hence, until the educational system creates a better plan to combat these inequities, Black students must constantly deal with more parental involvement to help uplift their self-perception.

For most students with academic and with athletic achievements, self-perception is a powerful motivator that helps them achieve success. Roscoe and Atwater (2005) posited the significance of teachers understanding the fact that the perception of Black males of their ability is critical, as it can either foster an attitude of being able to achieve or lower their academic inclination, as they view their abilities to be lacking in comparison to their White peers. Due to the academic perception of gifted education services among Black males compared to their White peers, Black males tend to cope with their self-perceptions through negative peer pressures (Ford, 2003, p.223). These negative peer pressures are associated with the fact that African American males are not or do not feel accepted within their environments. Such pressures among Black students also stem from the lack of acceptance of their racial identities. Furthermore, the unfairness observed within school systems through consistent adverse teacher reports is a prime indicator that specific schools continue to fail Black male students. Hence, it is imperative to deconstruct such negative student and teacher perceptions to allow African American males to cope better with their counterparts.

According to Noguera (2003), Black male educational experiences must be examined in the context of ethnic identification and gender, as well as objective and non-objective measurements. Hence, these self-concepts are formulated in the educational outcome is not surprising. Such school systems tend to have less qualified teachers and low access to high-level math and science courses, gifted programs, and AP courses (Moore & Lewis, 2012, 2014; U.S. Department of Education OCR, 2016).

Minority families often have decreased contact with more privileged groups, limiting their access to information compared to wealthier White families (Grissom & Redding, 2016). This decreased exposure of African American individuals to information that can help benefit student eligibility decreases and even prevents their access to AP programs. In addition, the low social capital of African American individuals represents an important factor that also increases inequality (Morgan, 2020). This low social capital adds to the lack of resources available for students and parents (Morgan, 2020). Without a specific socioeconomic status within a school district, schools in urban areas will continue to have fewer resources and opportunities. In addition, resources and opportunities have always been low in most Black neighborhoods. Socioeconomic status has also been found to play a significant role in accessing information for African American individuals, especially African American male students. However, because of the low social capital, which allows only a certain level of access for Black individuals in education, most parents remain unintentionally ignorant of the academic opportunities that may benefit their children.

Parent involvement is critical to accessing various academic opportunities, such as gifted programs, and dismantling racial barriers among teachers (Vega & Moore,

2018). Over the last decades, fewer than 50 Black and Hispanic second graders were admitted through this process, a surprisingly low number considering that 1,737-second graders were placed in gifted education through this method (Balingit, 2018). However, a low-income level may indicate how African American males fare compared to their White counterparts. In 2017, according to the *New York Times*, for every \$100 earned by a White family in the United States, a Black family earned only \$57.30 (Bader, 2017). This finding reveals a direct correlation due to economic mobility between race and gender. According to the *New York Times* report, discrimination is a key indicator for denied access to opportunities (Badger, 2017).

Discrimination among African American males has been prevalent throughout the history of the United States. Discrimination is defined as when a specific individual or group is denied equal rights compared to others. The underrepresentation of African American males in AP programs stems from intentional and unintentional discrimination among administrators, counselors, and teachers. In this sense, the intentional ignorance of students' academic potential is a form of discrimination. Given the lack of representation of African American teachers within the classroom, discrimination among minorities is forecasted to continue (Morgan, 2020). Moreover, because of the underrepresentation of African American and Hispanic males in today's AP programs, their chances of achieving academic performance are statistically expected to remain low compared to their White counterparts nationally (Ford, 2014).

Gifted Asian Students

Asian American students are stereotypically bright in education and are overrepresented in gifted and AP courses. According to federal data on race and

ethnicity, the “Asian” category includes people from South Asia, East Asia, and India. Overall, Asian Americans constitute 5% of the American population ages 5-17 (de Brey et al., 2019) and 13% of students in gifted programs (Snyder et al., 2019). This disproportion of race has remained consistent for decades and continues to progress into selective higher education settings.

Generally, such overrepresentation in advanced programs is prevalent starting from kindergarten and remains consistent until education is complete. With such overrepresentation of the Asian population, their enrollment in Ivy League colleges has made them the largest ethnic and racial group in major universities, such as Duke University, Georgetown University, Caltech, Emory University, MIT, University of Illinois at Urbana-Champaign, University of California, Rice University, Stanford University, Northwestern University, University of Wisconsin-Madison, and Vanderbilt University (Askenas et al., 2017). These Asian students do not experience the cultural biases that African American students face starting from kindergarten from their teachers. Some researchers even believe that the positive stereotypes and misconceptions toward Asian students throughout their educational careers give them an optimal edge over other ethnicities, especially African American students.

Gifted African American Males

For decades, many scholars have documented the struggles of African American males throughout their educational careers. Research has shown that such struggles have led to dismal outcomes (Vega & Moore, 2018). For example, the national graduation rate for African American males has remained lower than that of their White counterparts and other ethnic groups. These graduation trends are not new or unfamiliar to educators and

stakeholders in education, and many African American males still have to navigate many obstacles. Historically, gifted African American males have continuously endured pushback from their teachers and fewer academic opportunities. This lack of gifted education opportunities has caused African American males not to achieve their full potential for gifted education success (Ford & Ring, 2014).

Winsler et al. (2013) found that African American males who start kindergarten with greater cognitive, language, fine-motor, and behavioral readiness skills are more likely to be identified for gifted courses than those who do not. Quality preschool programs are essential to the foundation of education before entering kindergarten. A quality preschool program can increase school readiness skills, leading to decreased teacher bias in the classroom (Vega & Moore, 2018). The school context may also influence the students' long-term outcomes by focusing on college readiness and degree attainment (Vega & Moore, 2018). Moreover, attending schools in metropolitan areas with high minority enrollment ratios decreases the likelihood of African American males graduating or achieving a bachelor's degree compared to suburban schools with a high socioeconomic status (Rose, 2013). This educational outcome is unsurprising given the past and present trends in urban public schools. Such school systems tend to have less qualified teachers and low access to high-level math and science courses, gifted programs, and AP courses (Moore & Lewis, 2012, 2014; U.S. Department of Education CR, 2016).

Gifted Latinx Students

Latinx students constitute 25% of the American population aged 5-17 (de Brey et al., 2019) but only 4.9% of students in gifted programs (Snyder et al., 2019). According

to the current national statistics, Latinx students are significantly high achievers in AP courses. However, limited research has shown that various factors may affect the disproportion and representation of Latinx individuals. For instance, for this specific group, English language learning is a critical concern for educators. As the national population continues to have an increasing number of individuals from the Latinx community, various educational teaching strategies and plans have been implemented to ensure their increased success. This contrasts with the case of African American students, who continue to fall further behind all other minority groups.

Gender Gifted Gaps

Gender disparities and disproportions in core advanced placement programs have been well-researched and documented for decades in African American boys. Also, trends suggest that gender-gifted gaps have remained prevalent in content knowledge courses such as mathematics and science for boys and girls. Researchers conclude that the science engagement between boys and girls is not statistically significantly different and that the science gender gap reflects perceptions rather than ability (Finn et al., 2018; Knezek et al., 2010). Still, conversely, racial achievement disparities remain in science and mathematics. Negative teacher perceptions play a major role in the decrease in African American males in advanced placement courses. Usually, their perceptions are based on cultural, linguistic, and behavioral factors. Moreover, teachers' factors are often wrongfully judged or diagnosed due to inexperience or expertise to help African American boys overcome hurdles in the classroom.

To close the gifted gap between African American boys and other ethnicities, their performance needs to substantially increase, at least at a higher rate than their

counterparts. Unfortunately, the effects of the gifted and achievement gaps have been longstanding and overdue for strategic change. Data from the NAEP show more than 30 years of limited to no change in achievement rates for Black children (Boykin & Noguera, 2011; Krull, 2014). Until educators and stakeholders take a better lead on focusing on specific differential strategies to ensure teachers' negative perceptions do not reflect their chances of being recommended in advanced placement courses and success rates in advanced placement.

CHAPTER 3

METHODOLOGY

The purpose of this quantitative non-experimental study was to investigate the differences between African American male students compared to other ethnic male students, which may pose a "Gifted Gap" due to racial and gender factors in gifted and advanced school programs. This comparative non-experimental study will focus on whether the required criteria and recommendations for gifted and advanced placement courses are the same or different for African American male students compared to other ethnic male groups. Two separate archival datasets were obtained through the US Department of Education to accomplish this. These datasets will include the number of students enrolled in Advanced Placement courses and Gifted & Talented programs, respectively. Additionally, these datasets break up these counts by gender, ethnicity, and district. To answer the three research questions, a series of independent samples t-tests, ANOVAs, and chi-squared tests was conducted on each of the two datasets. The following chapter discussed research method and design appropriateness, research questions and hypothesis, population and sample, informed consent, confidentiality, instrumentation, reliability and validity, data collection, and data analysis. Finally, the chapter concluded with a summary paragraph.

Participants

The data obtained in this study were from various multicultural southern school districts throughout each region in Texas. These independent school districts consist of rural, suburban, and metropolitan districts that are the focal point for inferential analysis. The total student population varies based on the school districts. The school districts used

to gather data are Houston Independent School District, Brownsville Independent School District, El Paso School District, Amarillo School District, and Abilene Independent School District. Grades to be assessed and evaluated are primary and secondary education levels. These grades were selected based on research suggesting that these years of gifted education may cause a difference for African American males based on enrollment in primary and secondary schools compared to other ethnicities.

The schools chosen in this study are full-time public schools. Both private and charter institutions will not be represented in this study. Gifted education and advanced program course participation were operationally defined by the National Assessment of Educational Progress (NAEP). This purposive sampling method included qualified students enrolled in gifted and advanced placement courses.

Research Design

The primary purpose of this study was to determine if there is a statistically significant difference in enrollment based on gender and ethnicity and to investigate differences in enrollment between school districts. This comparative and non-experimental study focused on whether the required criteria and recommendations for gifted and advanced placement courses are the same or different for African American male students compared to other ethnic male groups and enrollment between school districts. The investigator aims to extensively research the systemic inequalities within education that hinders growth and opportunities, including reduced enrollment in Advanced Placement courses. A non-experimental design is an appropriate design when the goal of the researcher is to look for relationships or differences between pre-existing, or naturally occurring groups. This means that there is no manipulation of variables, as

the researcher cannot ethically randomly assign individuals to different genders, ethnicities, or even to classrooms. Additionally, a comparative design was chosen so that the researcher could look for differences in enrollment to both Gifted & Talented and Advanced Placement courses between these pre-existing groups (gender, ethnicity, school district).

Providing the public with new data assists stakeholders and educators in reducing gifted education disproportionally by making well-informed decisions. Moreover, this data could also help to improve gifted education programs in institutions to prepare a more diverse group of students for success in Gifted & Talented and Advanced Placement programs. The data in this investigation comes from a comprehensive national, state, and district assessment from the Department of Education. This study analyzed archival data for the mean differences and relationships of ethnic groups compared to gender groups in gifted and advanced placement courses throughout various Texas districts. This chapter discusses the data collection and analysis process used to address each research question. A series of independent t-test, analysis of variance and correlation was used to determine if there are differences and relationships in African American males (gender) and ethnicity, school districts, and enrollment the dependent variable is enrollment on gifted and talented and advanced school programs.

Instrumentation

The Civil Rights Data governed by the Department of Education were used to conduct the investigation and served as the secondary data instrument. The Department of Education oversees both public primary and secondary education organizations within the state of Texas, which is the focal point for this study. The Texas Department of

Education administers the Civil Rights Data Collection (CRDC), and it documents participation data through gifted and Advanced Placement program assessments administered to school-aged children in Texas independent school districts.

Two separate district level archival datasets, both obtained by the Department of Education, present the number of students enrolled in Advanced Placement classes (dataset 1) and the number of students enrolled in gifted and talented programs (dataset 2). These counts of enrollment are separated by different demographic categories. Specifically, the report breaks up the enrollment count by gender (male and female), ethnicity (Black, White, Hispanic, Asian, American Indian, Native Hawaiian, and two or more races), and district level for each state within the country. For the purposes of this study, only Texas based schools will be evaluated from five different school districts (listed below). The total number of Texas schools within the dataset was 8,757. However, following the deletion of missing values and separating out the five districts of interest, the final sample size of the dataset was 223 schools. The Department of Education data report provides de-aggregated data of the students throughout the year. The data that will be present in this study is accessed through publicly available data. Therefore, there is no manipulation of any participants. The following variables are present within the dataset and used in the current study.

Data Collection Procedures

The data for this study is archival and obtained from schools that are administered and represented by the Department of Education of Civil Rights Data. Archival data are datasets that have been collected in the past, usually by another organization, and are used for the purpose of non-experimental research. Through the Department of

Education, the archival data was obtained from various types of small and large school districts throughout the country. The researcher obtained permission to conduct the future study by a 2-step process. First, the process to proceed with the current study was approved by the College of Education. Secondly, the researcher received approval from the Institutional Review Board (IRB) located in the Research Department to successfully conduct the investigation (See Appendix A).

The de-aggregated data was presented using categorical mean differences in enrollment for Gifted & Talented and Advanced Placement based on demographic data such as ethnicity, gender, and school districts. The independent variables are gender, ethnicity, and multiple school districts within Texas, while the dependent variable is enrollment in gifted and advanced school programs. Finally, it is imperative to have data representing all sectors of gifted students within the data set. As a result, school districts' enrollment data for African Americans, Whites, Hispanics, Asians, and students of two or more races were examined.

Data Analysis Procedures

To evaluate the potential differences in gifted and advanced placement enrollment, both gender, ethnicity, and school districts must be statistically tested based on the proposed hypothesis. Specifically, this research operationalizes three testable research questions.

To prepare the data for analysis, the archival data was purged of incomplete or missing data and cleaned to only include schools and enrollment in the state of Texas. Prior to hypothesis testing, summary statistics were conducted for the variables of interest. Means and standard deviations were calculated for the continuous scale

variables, while frequencies and percentages were calculated for the categorical variables.

Research Question 1

To answer the first research question, two independent samples *t*-tests were conducted to determine if there are significant mean differences in enrollment in Gifted & Talented programs and Advanced Placement courses, respectively by gender (male and female). An independent samples *t*-test is the appropriate statistical test when the purpose of research is to assess if differences exist in the mean of a continuous dependent variable (enrollment) between the levels of a dichotomous independent variable (gender). A two-tailed test was used. Significance was determined using an alpha of 0.05.

Prior to running each *t*-test, the assumptions of normality and homogeneity of variance will be assessed. The assumption of normality requires the dependent variable to be normally distributed within each group of the independent variable. Normality will be assessed by conducting Shapiro-Wilk tests (Razali & Wah, 2011). The homogeneity of variance assumption requires the variance of the dependent variable to be equal within each group of the independent variable. Homogeneity was assessed using Levene's test for equality of variances (Levene, 1960).

Research Question 2

To examine the second research question, two Analysis of Variance analyses (ANOVAs) were conducted to determine if the mean of the enrollment (Gifted & Talented and Advanced Placement courses enrollment, respectively) of African American males is significantly different between the factor levels of ethnicity. The ANOVA is appropriate when the research goal aims to identify significant differences in a continuous variable (enrollment) between two or more discrete groups (ethnicity). An *F*-

test was used to determine significance at an alpha level of .05. If there are any significant effects, post hoc comparisons (t-tests) were conducted to explore the differences in more detail.

Before the hypothesis testing, the assumptions of normality, homogeneity of variance, and outliers were assessed. The normality assumption requires the residuals of the ANOVA to follow a normal distribution. Normality was assessed graphically using a Q-Q scatterplot (Field, 2017; Bates et al., 2014; DeCarlo, 1997). The homogeneity of variance assumption requires the variance of the dependent variable to be equal within each independent group. For the assumption of normality to be met, the quantiles of the residuals must not strongly deviate from the theoretical quantiles. Strong deviations could indicate that the parameter estimates are unreliable. The homogeneity of variance assumption was examined using a scatterplot of the residuals and the fitted values (Field, 2017; Bates et al., 2014; Osborne & Walters, 2002). The assumption of homogeneity of variance is met if the points appear to be randomly distributed with a mean of zero and no apparent curvature. Finally, any outliers present will be identified as any observation with a studentized residual that exceeds the .999 quantile of a t -distribution with $(n - 1)$ degrees of freedom, where n is the sample size (Field, 2017; Pituch & Stevens, 2015). Any outliers found in the data were subsequently removed from the analysis.

Research Question 3

To examine the research question, two chi-square test of independence were conducted between enrollment (yes or no) and school districts (Amarillo, Abilene, Brownsville, El Paso, Houston). The chi-square test of independence is appropriate when the goal of the research question is to determine whether two categorical variables are

independent. Significance was evaluated by calculating a chi-square statistic (χ^2) and obtaining a p -value from a χ^2 distribution with $(r - 1) \times (c - 1)$ degrees of freedom, where r and c are the number of rows and columns in the contingency table. An alpha of 0.05 was used when accessing statistical significance. The chi-square test requires the expected frequencies to be sufficiently large. At least 80% of expected frequencies should be greater than or equal to five, with none less than one (McHugh, 2013).

Assuming significance, additional tests were run to explore the results further. Specifically, a binary logistic regression was conducted to determine if there is a predictive relationship between school districts on whether or not they enrolled students in the gifted and talented programs. The binary logistic regression is an appropriate statistical analysis when the purpose of research is to assess if a set of predictor variables (school districts) predict a dichotomous dependent variable (enrollment- yes or no) (Pituch & Stevens, 2015). The dependent variable in binary logistic regression is represented as the natural logarithm of the odds ratio for membership in one of the response categories, which can be modeled as a linear function of the predictors. Model significance was determined using a χ^2 omnibus test. McFadden's R^2 was examined to estimate the overall variance in the outcome that can be accounted for by the predictors. The coefficients were interpreted by calculating the exponential (e^B), also known as odds ratio coefficients. Finally, a binary logistic regression assumes an absence of multicollinearity among the independent variables, which was assessed by calculating variance inflation factors (VIF). A predictor with a VIF value of 10 or more was reported as having high multicollinearity (Menard, 2009).

Limitations

One of the limitations of the study is the focus on African American males compared to other ethnicities in rural, suburban, and metropolitan southwestern settings. The data obtained would not allow a generalization across all school districts because each district has its approach and requirements. Whether progressive or conservative, in dealing with the African American male student population and other ethnic groups, the quality of gifted programming also varies across schools due to teachers' expertise in gifted programming. Additionally, due to the nature of the study (non-experimental) and the use of archival data, the researcher was unable to manipulate variables or obtain any individual participant information. Therefore, this sample of participants may not represent the general population of students in the country.

Internal and External Validity

Internal validity refers to the degree of confidence that the causal relationship is not influenced by another factor or variable. One variable that could influence these results is socioeconomic status. This is because previous literature suggests that socioeconomic status plays a role in academic performance (Morgan, 2020). Therefore, to ensure that internal validity is high, the variable of school districts (Houston ISD, Brownsville ISD, El Paso ISD & Abilene ISD) will be included in the analysis. These variables, while not a direct indicator of socioeconomic status, can give the researcher insight into what areas of the district influence enrollment the most.

Conversely, external validity refers to the generalizability of the study. Some threats to external validity were discussed in the limitation section, including focusing on African American students and using a non-experimental design archival dataset.

Additionally, the results are not as generalizable as using multiple districts within different states data by only using one Texas school district. Many school districts have varying requirements for Advanced Placement and Gifted program enrollment.

Therefore, the potential external validity is expected to be low.

Summary

The purpose of the proposed research study was to determine if there is a difference between enrollment of African American students in Gifted & Talented and Advanced Placement programs by gender, ethnicity, and Texas school districts. To test for these differences, archival data was approved and obtained through the Department of Education Civil Rights Data Collection for the 2017-2018 school year in multiple school districts in the state of Texas. The data represents students in primary and secondary schools and is presented in mean enrollment rates for Gifted & Talented and Advanced Placement courses. Furthermore, this study was categorized by gender, ethnicity, and multiple school districts in Texas. Three research questions were proposed and analyzed using a statistically significant difference between qualifying for Gifted & Talented and enrollment by gender, ethnicity, and school districts. Based on previous research, it is expected that there was a statistically significant difference in enrollment in Gifted & Talented and Advanced Placement, and enrollment between African American males and other ethnicities in multiple Texas school districts. The next chapter focuses on analyzing the data and reporting the results.

CHAPTER 4

RESULTS

The data analyzed in this study comes from a survey conducted on enrollment in Gifted & Talented and Advanced Placement programs. The primary objectives of this analysis were to determine if there were statistically significant differences in enrollment based on gender and ethnicity, and to investigate if there were differences in enrollment between school districts. To answer these research questions, a t-test, analysis of variance, and logistic regression were used to model the relationship between program enrollment and the predictor variables of gender, ethnicity, and school district. The results are essential in providing valuable statistical information to educators, policymakers, and researchers on factors that may impact enrollment in advanced programs and inform decisions on ways to improve access and equity in education.

Examination of Research Questions

- 1. RQ1: Are there statistically significant differences in enrollment between genders in the Gifted & Talented and Advanced Placement programs?**

Table 1 presents the group statistics for the enrollment of individuals in the Gifted & Talented program, differentiated by gender (TOT_GTENR_M and TOT_GTENR_F). For individuals who enrolled in the Gifted & Talented program, there were 76 males (TOT_GTENR_M) with a mean enrollment rate of .11 and a standard deviation of .349. On the other hand, 76 individuals were in the female category (TOT_GTENR_F) with a mean enrollment rate of .01 and a standard deviation of .115.

On the other hand, individuals who were not enrolled in the Gifted & Talented program were 8682 individuals in the male category, with a mean enrollment rate of 24.72 and a standard deviation of 39.199. Similarly, 8682 individuals were female, with a mean enrollment rate of 24.51 and a standard deviation of 39.888. These results indicated a variation in the enrollment rate between individuals who enrolled and those who did not enroll in the Gifted & Talented program and between males and females.

Table 1

Group Statistics for the enrollment in Gifted & Talented Program

	JJ	N	Mean	Std. Deviation	Std. Error Mean
TOT_GTENR_M	Yes	76.00	.11	.35	.04
	No	8682.00	24.72	39.20	.42
TOT_GTENR_F	Yes	76.00	.01	.11	.01
	No	8682.00	24.51	39.89	.43

The independent samples t-test was analyzed to determine if there were statistically significant differences in enrollment between males (TOT_GTENR_M) and females (TOT_GTENR_F) in the Gifted & Talented Program. Two methods were used to assess equality of variances, Levene's Test for Equality of Variances and the t-test for Equality of Means.

The results of the independent samples t-test suggested that there was a statistically significant difference in enrollment between males and females, both when equal variances were assumed ($t(8756) = -5.473$, $p < .001$) and when equal variances were not assumed ($t(8755.809) = -58.24$, $p < .001$). The mean difference between males and females was estimated at -24.610 with a standard error of .423 and a 95% confidence interval ranging from -25.438 to -23.782.

Based on these results in Table 2, the null hypothesis was rejected the null hypothesis at a 0.05 level of significance. It was concluded that there was a difference in enrollment between male and female students and that the potential causal factors are not due to chance.

Table 2

Independent Samples t-Test by Gender

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
TOT_GTENR_M	Equal variances assumed	39.97	.00	-5.47	8756.00	.00	-24.61	4.50	-33.42	-15.80
	Equal variances are not assumed.			-58.24	8755.81	.00	-24.61	.42	-25.44	-23.78
TOT_GTENR_F	Equal variances assumed	38.63	.00	-5.47	8756.00	.00	-24.49	4.58	-33.46	-15.52
	Equal variances are not assumed.			-58.24	8696.51	.00	-24.49	.43	-25.33	-23.65

Table 3 presents the One-Sample Statistics for two groups, Males (TOT_ENR_M) and Females (TOT_ENR_F). The sample size (N) for both groups was 8758. The mean enrollment for male students was 316.10, with a standard deviation of 267.747 and a standard error mean of 2.861. Similarly, the mean enrollment for female students was 300.24, with a standard deviation of 256.688 and a standard error mean of 2.743. From the mean enrollment, it was inferred that, on average, male students had a higher enrollment rate than female students. The standard deviation and standard error mean

provided further insight into each group's enrollment dispersion.

Table 3

One-Sample Statistics by Gender

	N	Mean	Std. Deviation	Std. Error Mean
TOT_ENR_M	8758	316.10	267.747	2.861
TOT_ENR_F	8758	300.24	256.688	2.743

The statistical analysis results in Table 4 above-provided evidence at a 0.05 significance level to support the conclusion that there were statistically significant differences in enrollment between genders in the Advanced Placement programs. The results of the One-Sample Test indicated that the mean difference between the two groups, male students (TOT_ENR_M) and Female students (TOT_ENR_F), was statistically significant, with a t-value of 110.484 (df = 8757, $p < .000$) for males and a t-value of 109.462 (df = 8757, $p < .000$) for females.

The mean difference between males and females was 316.096, with a 95% confidence interval ranging from 310.49 to 321.70. Similarly, the mean difference between females and males was 300.239, with a 95% confidence interval ranging from 294.86 to 305.62.

Based on these results, it was concluded at a 95% confidence that there was a statistically significant difference in enrollment between genders in the Advanced Placement programs and that the difference was unlikely to have occurred by chance.

Table 4*One-Sample t-Test in Enrollment between Genders in the Advanced Placement Programs*

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
TOT_ENR_M	110.484	8757	.000	316.096	310.49	321.70
TOT_ENR_F	109.462	8757	.000	300.239	294.86	305.62

2. RQ2: Are there statistically significant differences in enrollment between African American males and other ethnicities (White, Hispanic, Asian, two or more races, and others) in the Gifted & Talented and Advanced Placement programs?

Table 5 presents the ANOVA results used to test for the null hypothesis that there were no statistical differences in enrollment between African American males (SCH_GTENR_AM_M) and other ethnicities in the Gifted & Talented Program. The results of the ANOVA from the table above were determined to be $F(1, 8756) = 3.212$, $p = .073$, for African American males when compared against other ethnic groups; with the information, sufficient statistical evidence at a significance level of .05, supported fail to reject the null hypothesis since the p-value was not less than .05. This indicated that the differences in enrollment between the groups were not statistically significant. Therefore, it was concluded that there was insufficient evidence to support the hypothesis that there are differences in enrollment between African American males and other ethnicities to the gifted and talented program.

Table 5*ANOVA Table between African American Males and Other Ethnicities' Enrollment in Gifted & Talented Programs*

		Sum of Squares	df	Mean Square	F	Sig.
SCH_GTENR_HI_M	Between Groups	7700.54	1.00	7700.54	20.47	.00
	Within Groups	3294673.47	8756.00	376.28		
	Total	3302374.01	8757.00			
SCH_GTENR_BL_M	Between Groups	151.62	1.00	151.62	9.33	.00
	Within Groups	142348.13	8756.00	16.26		
	Total	142499.75	8757.00			
SCH_GTENR_WH_M	Between Groups	6930.28	1.00	6930.28	19.32	.00
	Within Groups	3140245.08	8756.00	358.64		
	Total	3147175.36	8757.00			
SCH_GTENR_AM_M	Between Groups	.29	1.00	.29	3.21	.07
	Within Groups	782.91	8756.00	.09		
	Total	783.20	8757.00			
SCH_GTENR_AS_M	Between Groups	543.42	1.00	543.42	3.81	.05
	Within Groups	1250029.20	8756.00	142.76		
	Total	1250572.62	8757.00			

The results of the Paired Samples t-Test in Table 6 indicated at 0.05 significance level that there were statistically significant differences in enrollment between African American males and the other ethnic groups (Hispanic, White, Asian, and Black) to the advanced enrollment program (all t values were significant with a p-value of .000). Specifically, the mean difference in enrollment between African Hispanic males and American males (SCH_ENR_HI_M - SCH_ENR_AM_M) was found to be 164.935 with a standard deviation of 179.826, $t(8757) = 85.835$, $p = .000$. The mean difference in enrollment between African American males and White males (SCH_ENR_AM_M - SCH_ENR_WH_M) was calculated to be -86.64 with a standard deviation of 116.39, $t(8757) = -69.66$, $p = .000$. The mean difference between African American male and

Asian male (SCH_ENR_AM_M - SCH_ENR_AS_M) was determine to be -12.66 with a standard deviation of 38.51, $t(8757) = -30.76$, $p = .000$ Finally, the mean difference in enrollment between African American males and Black males was determined -38.69 with a standard deviation of 67.25, $t(8757) = -53.84$, $p = .000$. In general, the results showed that the enrollment of African Americans into advance placement program was lower when compared with other ethnicities.

The hypothesis tested whether there was a difference in enrollment between African American males and the other ethnic groups. The results showed at a 0.05 significance level that there was a statistically significant difference in enrollment between African American males and the other groups. This suggests that there may be factors influencing enrollment that are specific to each ethnic group.

Table 6

Paired Samples t-Test enrollment between African American Males and the Other Ethnic Groups in Advanced Placement Programs

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
		Pair 1	SCH_ENR_HI_M - SCH_ENR_AM_M	164.94	179.83	1.92			
Pair 2	SCH_ENR_HI_M - SCH_ENR_AS_M	152.28	181.39	1.94	148.48	156.08	78.57	8757.00	.00
Pair 3	SCH_ENR_HI_M - SCH_ENR_BL_M	126.25	176.26	1.88	122.55	129.94	67.03	8757.00	.00
Pair 4	SCH_ENR_HI_M - SCH_ENR_WH_M	78.30	211.44	2.26	73.87	82.73	34.65	8757.00	.00
Pair 5	SCH_ENR_AM_M - SCH_ENR_AS_M	-12.66	38.51	.41	-13.47	-11.85	-30.76	8757.00	.00
Pair 6	SCH_ENR_AM_M - SCH_ENR_BL_M	-38.69	67.25	.72	-40.10	-37.28	-53.84	8757.00	.00
Pair 7	SCH_ENR_AM_M - SCH_ENR_WH_M	-86.64	116.39	1.24	-89.07	-84.20	-69.66	8757.00	.00
Pair 8	SCH_ENR_AS_M - SCH_ENR_BL_M	-26.03	68.57	.73	-27.47	-24.59	-35.53	8757.00	.00
Pair 9	SCH_ENR_AS_M - SCH_ENR_WH_M	-73.98	108.81	1.16	-76.26	-71.70	-63.62	8757.00	.00
Pair 10	SCH_ENR_BL_F - SCH_ENR_WH_M	-49.85	126.36	1.35	-52.50	-47.20	-36.92	8757.00	.00

3. RQ3 Are there statistically significant enrollment differences between school districts (Amarillo, Abilene, Brownsville, El Paso, Houston) in the Gifted & Talented and Advanced Placement programs?

To answer research question 3, a chi-square test was conducted. From Table 7, the Pearson Chi-Square statistic was determined to be $\chi^2(12) = 767.585$, $p < .001$, and the Likelihood Ratio statistic was determined to be $\chi^2(12) = 923.185$, $p < .001$, both indicating a significant

relationship between the variables since the p-value was less than 0.05. The chi-square test results revealed a statistically significant relationship at 0.05 level of confidence between the five school districts (Amarillo, Abilene, Brownsville, El Paso, and Houston) and enrollment in the Gifted & Talented and Advanced Placement programs. With a sample size of 747 valid cases, the results suggest significant enrollment differences between the five school districts in the Gifted & Talented and Advanced Placement programs.

Table 7

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	767.585 ^a	12	.000
Likelihood Ratio	923.185	12	.000
N of Valid Cases	747		

a. 7 cells (33.3%) have an expected count of less than 5. The minimum expected count is .30.

From Table 8, the results of the symmetric measures revealed a strong association between school districts and enrollment in the Gifted & Talented and Advanced Placement programs. The nominal by nominal Phi was 1.014 ($p < .001$), and Cramer's V was .717 ($p < .001$), both indicating a strong association between the variables. With a sample size of 747 valid cases, the results suggest a significant association between school districts and enrollment in the Gifted and Talented and Advanced Placement programs.

Table 8*Symmetric Measures between School Districts and Enrollment in the Gifted & Talented and Advanced Placement Programs*

		Value	Approx. Sig.
Nominal by Nominal	Phi	1.014	.000
	Cramer's V	.717	.000
N of Valid Cases		747	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Correlation statistics are available for numeric data only.

Further analysis was conducted to understand the nature of this association using the logistic regression analysis. The results from Table 9 provide information about the effect of the school district (Amarillo, Abilene, Brownsville, El Paso, Houston) and participation in the Gifted & Talented and Advanced Placement programs on enrollment. The results are based on a logistic regression model, a statistical technique used to model the relationship between a binary dependent variable (enrollment in this case) and one or more independent variables (school district and program participation).

The "Parameter Estimates" table reports the estimated coefficients for each independent variable in the model, along with their standard errors, significance levels, and confidence intervals. These coefficients represent the change in the log odds of enrollment for each unit change in the independent variable, holding all other variables in the model constant.

The first row of the table shows the estimated coefficients for the "Threshold" variable, which represents the participation in the Gifted & Talented and Advanced

Placement programs. The "Estimate" column shows that the log odds of enrollment are 20.02 lower for students who participate in the programs than those who do not. The "Sig." column indicates that this difference is statistically significant ($p = .000$), which means that it is unlikely to have occurred by chance. The "95% Confidence Interval" column provides a range of values within which the true population coefficient is likely to fall with a 95% confidence level.

The remaining rows of the table show the estimated coefficients for each school district, representing the difference in the log odds of enrollment between each district and the reference district (LEA_NAME =). The "Estimate" column shows that the log odds of enrollment are lower for students in Abilene ISD and higher for Brownsville ISD compared to the reference district. The "Sig." column shows that these differences are statistically significant for Abilene ISD ($p = .004$) but not for Brownsville ISD ($p = .238$).

The Threshold variable was significantly associated with the outcome, $B = -2.815$, $SE = .257$, $Wald = 119.590$, $df = 1$, $p < .001$. The Location variable was not significantly associated with the outcome, $B = -40.336$, $SE = 1952.728$, $Wald = .000$, $df = 1$, $p = .984$. Among the specific schools within the Location variable, only ABILENE ISD was significantly associated with the outcome, $B = -1.515$, $SE = .528$, $Wald = 8.249$, $df = 1$, $p = .004$. The other schools within the Location variable, Amarillo ISD, Brownsville ISD, Brownwood ISD, El Paso ISD, and Houston ISD, were not significantly associated with the outcome.

These results showed a significant difference in enrollment between schools with and without the Gifted & Talented and Advanced Placement programs, with enrollment being higher in schools with the programs. Additionally, the results showed that the

location of the school district also had a significant impact on enrollment, with some school districts having higher enrollment in the program compared to others, the availability of the Gifted and Talented and Advanced Placement programs, and the location of the school district both play a role in determining the number of students who enroll in these programs. Schools with these programs tend to have higher enrollment compared to schools without the programs.

Table 9

Parameter Estimates in Enrollment between Schools with and without Gifted & Talented and Advanced Placement Programs

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval		
								Lower Bound	Upper Bound
Threshold	[SCH_GiftandTalented =]	-20.020	917.523	.000	1	.983	-1818.333	1778.292	
	[SCH_GiftandTalentedand= No]	-2.815	.257	119.590	1	.000	-3.319	-2.310	
	[LEA_NAME=]	-40.336	1952.728	.000	1	.984	-3867.613	3786.940	
	[LEA_NAME=ABILENE ISD]	-1.515	.528	8.249	1	.004	-2.549	-.481	
	[LEA_NAME=AMARILLO ISD]	.038	.647	.003	1	.953	-1.230	1.306	
Location	[LEA_NAME=BROWNSVILLE ISD]	1.228	1.041	1.392	1	.238	-.812	3.269	
	[LEA_NAME=BROWNWOOD ISD]	-1.023	1.110	.849	1	.357	-3.199	1.153	
	[LEA_NAME=EL PASO ISD]	.042	.527	.006	1	.937	-.991	1.075	
	[LEA_NAME=HOUSTON ISD]	0 ^a	.	.	0	.	.	.	

Link function: Logit.

a. This parameter is set to zero because it is redundant.

CHAPTER 5

SUMMARY, FINDINGS, DISCUSSION, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Summary

The purpose of this quantitative study was to investigate the differences between African American male students compared to other ethnic male students, which may pose a "Gifted Gap" due to racial and gender factors in gifted and advanced school programs. The aim is to extensively research the systemic educational inequalities that hinder growth and opportunities, including reduced enrollment in advanced placement (AP) courses. This comparative non-experimental study focused on whether the required criteria and recommendations for gifted and advanced placement courses are the same or different for African American male students compared to other ethnic male groups.

Two separate archival datasets were obtained through the US Department of Education. These datasets included the number of students enrolled in both Advanced Placement courses and Gifted & Talented programs, respectively. Additionally, these datasets divided these counts by gender, ethnicity, and district. To answer the three research questions, a series of independent samples t-tests, ANOVAs, and chi-squared tests was conducted on each of the two datasets.

Findings

The current results, in previous findings, suggest that racial, gender, and geographical location has a disproportional effect on gifted and advanced placement opportunities throughout elementary to high school within specific school districts. The first research question examined the difference in enrollment rates between males and

females in the Gifted and Advanced Placement programs. Based on these results, there was a statistically significant difference in enrollment between male and female students.

The second research question sought to determine whether there were statistically significant differences in enrollment between African American males and other ethnicities (White, Hispanic, Asian, two or more races, and others) in the Gifted and Advanced Placement programs in Texas school districts. The findings revealed a statistically significant difference in Gifted & Talented Programs between African American males and other ethnicities. Furthermore, the current results from the tested hypothesis suggest that the results are due to a lack of efforts made in the school system to increase the diversity of gifted programs, including ensuring the representation of African American males compared to other ethnic groups.

Results from research question three indicated a significant relationship between the five school districts (Amarillo, Abilene, Brownsville, El Paso, and Houston) and enrollment in both gifted and advanced placement programs. Additionally, results are a prime example of the significant impact on enrollment based on school access to gifted and advanced placement courses and geographical location.

The findings are critical in giving useful statistical information to educators, politicians, and researchers on factors that could impact enrollment in advanced programs and informing decisions on how to improve access and equity in education.

Discussion

Perhaps, the most interesting finding of the present study was that there were no statistical differences in enrollment between African American males and other ethnicities in the Gifted & Talented Programs. This was consistent with the findings of Bryan (2017) and Woods et al. (2017). They found that African American male students generally have much

potential, but they are misinterpreted because their cultural norms are misconstrued for negative behavior. Initial signs of giftedness among African American males can be disruptive or out of control. These initial signs may be perceived as a reason to refer these students to special education services instead of AP education.

Nevertheless, expanding African American male enrollment in Advanced Placement (AP) programs in grades K-12 cannot be emphasized enough. Advanced placement programs allow African American male students to take college-level courses while earning college credit. These courses can help students prepare for the rigors of college while also providing them with a competitive advantage when applying to schools and universities. Nonetheless, African American males have consistently been underrepresented in AP courses compared to other ethnicities and genders.

Another important and surprising finding of this study suggested that a statistically significant difference in enrollment between male and female students existed in Gifted and Talented Programs and Advanced Placement. Researchers have mixed views regarding gender differences. It has been suggested that boys are more likely than girls to be gifted (Lubinski et al., 2006; Preckel et al., 2008), but other research indicates that the opposite is true (Read, 1991; Siegle & Reis, 1998), and yet more research indicates that there are no gender differences at all (Crombie et al., 1992). Two factors could explain the gender gap in gifted programming. The likelihood of one gender being identified as gifted may be lower than the other. It is also possible that both boys and girls are equally likely to be identified as gifted, but that one gender may choose to avoid gifted programs on purpose. The decision not to participate in gifted programs can be attributed to several reasons. There are many reasons why students may not want to enter gifted programs,

including intimidation, lack of gifted role models, and a preference for other extracurricular activities like sports (Kerr et al., 2012; Schober et al., 2004).

Finally, a most interesting finding in the current study pertained to enrollment differences between school districts (Amarillo, Abilene, Brownsville, El Paso, Houston) in the Gifted & Talented and Advanced Placement programs. Particularly in small, remote, and poor rural school districts, AP courses are less likely to be offered. Many gifted rural students cannot take advantage of AP courses as a means of experiencing college-level coursework, earning college credit while in high school, or gaining an advantage in the selective admissions process, making these findings concerning equal access to educational opportunity worrisome. Additionally, rural districts offering AP coursework fall behind their metropolitan counterparts regarding enrollment and success rates. However, it is not surprising, given that rural students lack access to rigorous coursework in earlier grades that might prepare them for AP success (Graham, 2009). AP cultures or requirements might be more developed in urban and suburban schools with more affluent populations, resulting in higher AP success rates. Teachers likely need professional development focused on AP in order to cultivate a culture of AP success, or students may have to cover the AP exam fees. However, this would require a critical mass of prepared and motivated students.

Conclusions

Based on the significant findings, the following conclusions were drawn:

1. Analysis of data suggests that there is a lack of efforts made in school districts to increase the diversity of gifted programs, including ensuring the

representation of African American males in comparison to other ethnic groups.

2. African American Males are underrepresented in Gifted and Talented and Advanced Placement courses.
3. Enrollment between male and female students in Gifted and Talented programs and Advanced Placement courses differed significantly.

Implications

The following implications were drawn from the results of the study. Providing African American males and their peers access to gifted and talented and advanced placement opportunities can help address the academic achievement gap between African American males and their peers. By providing these students access to a rigorous curriculum and coursework, they can develop the skills and knowledge necessary to excel in college. Second, increasing the enrollment of African American males in AP programs can enhance diversity in higher education. Colleges and universities aggressively seek to diversify their student bodies, and having more African American males with solid academic backgrounds will help achieve that goal. Finally, increasing the number of African American males enrolled in AP programs can help to dispel prejudices and negative impressions of this population. These students can challenge misconceptions about Black American males and contribute to positive societal change by exhibiting their intellectual ability and successes. It should be highlighted that improving enrolment in AP courses is not just crucial for Black American males. AP classes can help all students, regardless of gender, ethnicity, or region. However, given the historical

underrepresentation of African American males in these courses, raising their attendance is crucial to promoting equity and educational opportunities.

The absence of appropriate teacher training in cultural responsiveness and identifying the characteristics of gifted students contributes to deficit thinking and the under-referral of African American males. Without proper training for all teachers in gifted and advanced placement programs, academic tracking for nonidentified black and brown students will continue to have limited opportunities to access the expanded curriculum. Consequently, classrooms will continue to have more representation of White and Asian students.

African American students should be encouraged and exposed to advanced level courses in elementary and middle schools. There is a problem of low enrollment in gifted programs among African American students that need to be addressed in the lower grades in order to be addressed permanently.

Minority students in honors-level courses can be monitored and supported by school districts and teachers. Several studies have suggested that retaining African American students in gifted programs is as challenging as recruiting them.

Recommendations for Further Research

The following recommendations are offered for future research.

1. A study could be conducted on a broader variety of school districts.
2. A study could be conducted on the involvement of parents in gifted education programs for African American students. There is no doubt that parental involvement in education is important.

3. In a third recommendation, studies should be conducted in other states or neighboring states where African American students with honors programs are recruited and retained at higher rates than average. By leveraging this information, best practices can be identified, or at least some can be identified that are making a positive impact.
4. It is also recommended that further research be conducted to determine if a significant proportion of African American students qualify for gifted programs in elementary school but then drop out by high school.
5. A limited amount of research has been conducted on the academic experience and underperformance of gifted minority students in advanced placement programs, suggesting the necessity of further research.

APPENDIX

APPENDIX A
HUMAN SUBJECTS APPROVAL LETTER

October 15, 2021

Good day, Lauren Crusoe!

This is to inform you that your protocol #ES049, "*The Gifted Gap and Advanced Placement: A comparison of Placement and Advancement of African American Males Compared Other Ethnicities in Gifted and Advanced School Programs*", is exempt from Texas Southern University's Institutional Review Board (IRB) full committee review. Based on the information provided in the research summary and other information submitted, your research procedures meet the exemption category set forth by the federal regulation 45 CFR 46.104(d)(4):

Secondary research for which consent is not required

The Federal Wide Assurance (FWA) number assigned to Texas Southern University is FWA00003570.

If you have questions, you may contact the Research Compliance Administrator for the Office of Research at 713-313-4301.

PLEASE NOTE: (1) All subjects must receive a copy of the informed consent document, if applicable. If you are using a consent document that requires participants' signatures, signed copies can be retained for a minimum of 3 years of 5 years for external supported projects. Signed consents from student projects will be retained by the faculty advisor. Faculty is responsible for retaining signed consents for their own projects, however, if the faculty leaves the university, access must be made available to TSU CPHS in the event of an agency audit. (2) Documents submitted to the Office of Research indicate that information obtained is recorded in such a manner that human subjects cannot be identified directly or through identifiers linked to the subject; and the identities of the subjects will not be obtained or published; and any disclosures of the human subjects' responses outside the research will not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation. The exempt status is based on this information. If any part of this understanding is incorrect, the PI is obligated to submit the protocol for review by the CPHS before beginning the respective research project. (3) Research investigators will promptly report to the CPHS any injuries or other unanticipated problems involving risks to subjects and others.

This protocol will expire October 15, 2024

Sincerely,
(IRB)

APPENDIX B
REQUEST FOR DATA AND APPROVAL

Good morning Mr. Keaton,

My name is Lauren Crusoe and I am a doctoral student at Texas Southern University. Can you assist me in searching for higher education honors secondary data that can be analyzed based on the variables I selected in my study? Is this data available for public us? I have already received approval from the institutional research board to move forward with my study. Please feel free to call at 630-808-3537 or email at lcusoe123@gmail.com. Hope to hear from you soon.

Thank You!

Warm Regards,

Lauren Crusoe

Hello,

Thank you for your interests in the Civil Rights Data Collection (CRDC).

CRDC collects data on the following that may be helpful for you:

- whether schools had any students enrolled in one or more gifted and talent programs
- whether schools had any students in grades 9-12 (or the ungraded equivalent) who were enrolled in Advanced Placement (AP) courses
- the number of AP courses that were offered at the school
- the number off students in grades 9-12 (or the ungraded equivalent) who enrolled in one or more AP courses
- the number of schools that have any students in grades 9-12 (or the equivalent) who were enrolled in an AP Mathematics course
- the number of schools that have any students in grades 9-12 (or the equivalent) who were enrolled in an AP Science course

- the number of schools that have any students in grades 9-12 (or the equivalent) who were enrolled in AP Science and mathematics courses
- the number of schools that have any students in grades 9-12 (or the equivalent) who were enrolled in an AP Computer Science course
- the number of students in grades 9-12 (or the ungraded Advanced Placement (AP) courses equivalent) who were enrolled in one or more on the Fall 2017 snapshot date, and who took one or more Advanced Placement (AP) exams during the regular 2017-18 school year, not including intersession or summer.
- the number of students in grades 9-12 (or the ungraded Advanced Placement (AP) courses equivalent) who were enrolled in one or more on the Fall 2017 snapshot date, and who did not take any Advanced Placement (AP) exams during the regular 2017-18 school year, not including intersession or summer.

These data are disaggregated by race/ethnicity, sex, disability, and English learner status.

These data are publicly available here: [Civil Rights Data Collection \(ed.gov\)](#)

Christopher D. Hill, Ph.D.
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