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Implications With Identifying Gifted Black Students: A Study Of Implicit Bias

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IMPLICATIONS WITH IDENTIFYING GIFTED BLACK STUDENTS:

A STUDY OF IMPLICIT BIAS

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A Dissertation Proposal

Presented to

The College of Graduate and Professional Studies

Department of Educational Leadership

Indiana State University

Terre Haute, Indiana

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In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

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by

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VITA

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ABSTRACT

The purpose of this quantitative study was to examine if implicit bias among Indiana educators might affect the identification of gifted Black students for programming. Educators, within school districts with high minority populations, were asked to provide a demographic survey and then take the Implicit Association Test (IAT). Survey data were then collected to determine if potential demographic information like gender, race, the possession of a high ability license, years of experience, highest collegiate degree, or their professional role had a statistical significance when compared to their IAT score. Using t-tests and one-way ANOVAs, demographic data were able to be interpreted against the participant's IAT score. Although a case for bias was revealed in the descriptive analysis, there was no significant difference that was found with Indiana educator demographic data.

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CHAPTER 1

INTRODUCTION

Education was once thought to be the great equalizer between the have and the have nots (Mann, 1848). However, within the realm of gifted, talented, and creative studies lies a special population of students whose brilliance has often been overlooked. National research has found that within the United States over the past 40 years, there has been a significant gap in the identification and retention of gifted students based on race (Crabtree et al., 2019). Further, the problem has been more pervasive and longstanding. Jenkins (1936) found that exceptionally bright Black students were not being identified as gifted. For over 80 years, now, this problem of inequity has been a concern within the gifted population (Ford et al., 2008).

Background of the Problem

The construct of giftedness first stemmed from Francis Galton, who in 1896, was one of the first people to mention human exceptionalities as a heritable trait (Dai, 2020). For the next 100 years, the definitions, application, and knowhow with gifted education would be inconsistent and wavering as different researchers identified giftedness in a multitude of ways. When the Soviet Union launched Sputnik in 1957, the American culture began to recognize above average students in a more consistent way. The Marland Report (1972) was the first national document in the United States to bring awareness to the field of gifted education. Although the recommendations in this report were not followed, states began to recognize this important

demographic of learners. In 1990, the federal government and every state had some sort of

legislation regarding gifted and talented students (Van Tassel-Baska, 2018). Although these

definitions and measures are still inconsistent to this day, gifted and talented youth were given a

platform on a widespread basis (National Association for Gifted Children [NAGC], 2019a).

The definition of giftedness, throughout the nation, is inconsistent and left as a state decision.

High Ability Student. Ind. Code §20-36-1-3. (2021)

> defines students with high ability in all grades, K–12, as a student who:
>
> Performs at, or shows the potential for performing at, an outstanding level of
>
> accomplishment in at least one (1) domain when compared to other students of the same
>
> age, experience, or environment; and is characterized by exceptional gifts, talents,
>
> motivation, or interests. (para. 1)

The definition of a gifted student is only one factor that goes into identifying talented Black

youth. Each district can also have a different process when it comes to identifying and retaining

their gifted students. These inconsistencies can feed into the disparity of Black achievement by

intentionally not serving these students or looking at multiple indicators of success. ProPublica,

an interactive database looking at racial disparities through the nation from 2016–2017 stated

that data show White students are three times more likely to be identified for gifted programs in

elementary and middle school grades as compared to Black students. Additionally, the inequality

continues into secondary school when White students are nearly twice as likely to be identified

to take Advanced Placement courses (Groeger et al., 2018; Hendrix, 2022).

Disproportionality can be attributed to a multitude of factors including narrow

identification criteria for school staff and an overall lack of knowledge regarding different gifted

populations (Darity & Jolla, 2009). Black students tend to be under referred for gifted services

due to a lack in teacher training and potential socioeconomic or racial biases (Ford, 1995) or when the benchmarks for gifted identification are based solely on achievement data (Grissom & Redding, 2016). A lack of identification from as early as kindergarten can have detrimental effects on Black students' opportunities, talent development, and lifetime opportunities.

Implicit bias has been identified as a potential element in the under-identification of Black students in gifted programming (Pearman & McGee, 2022). In social psychology, the idea of attitudes and awareness has been at the forefront of behavior analysis since the 1990s. Attitudes are thoughts or beliefs available for conscious inspection and social desirability (Karpinski & Hilton, 2001). Greenwald and Banaji (1995) started to bring awareness to a different type of attitude that lies below the conscious surface. This attitude, known as an implicit attitude, is seen as existing outside of one's control and reflecting the person's automatic reaction to people. This idea of reacting to people with unconscious beliefs ultimately shapes initial human behavior.

The curiosity between explicit and implicit behaviors sparked the creation of the Implicit Associations Test (IAT) that could be used to measure a person's single attitudinal construct (Karpinski & Hilton, 2001). The IAT is designed to measure the difference between how quickly individuals associate two different concepts. Even a subtle lapse in response time can be identified and pick up on unconscious biases that the individual would never be able to share in a self-reporting setting (Blanton et al., 2009). These constructs can be broken down into two different levels. At the conceptual level, the IAT looks at the differences between a person's implicit preference, for example Black versus White. The observed level looks at the differences between latencies when selecting their preferences between two variables.

Researchers argue that de facto segregation still exists, and that deficit thinking might come at a cost for potentially gifted minority students (Ford, 2003). By understanding that implicit biases are present, it is the first step in the right direction to promote an equitable education for our nation's talented Black children. However, such a study has yet to be looked at in terms of linking implicit bias with the under-identification of Black students within Indiana.

Statement of the Problem

The NAGC (2010) recognizes that culturally, linguistically, and economically (CLD) diverse students are underrepresented in gifted programming. The lasting effects of not identifying this subset of gifted children extends beyond their schooling years and can have a negative impact on their post-secondary income and economic mobility (Crabtree et al., 2019). Additionally, CLD students are more likely to experience racial segregation, poverty, and inadequate school course selections for advanced learners. A shift in thinking on behalf of educators and our school system needs to occur. During the identification process, the NAGC recommends culturally sensitive identification criteria. Instead of using a one-size-fits-most approach, a culturally sensitive identification protocol would look at multiple methods of identification with the understanding that giftedness can be harnessed in different ways for CLD students.

At the state level for the 2021–2022 school year, Indiana allocated $12.7 million towards high ability grants (Indiana Code §20-36-1-3, 2021). These funds were dispersed to districts to use toward at least one goal with measurable objectives and actions steps to achieve the goal. However, the suggested allowable expenditures still fall short when it comes to mentioning specifically the cultural inequities of the state's high ability programs.

Research and funding have missed the mark when it comes to addressing the inequity of gifted education services. One potential barrier in identification is implicit bias or deficit thinking on behalf of school personnel identifying students for gifted services. "Research suggests that whether a teacher is aware of his or her own bias, or it is embedded subconsciously within cognitive or affective schema, there may well be implications for children's education" (Clark & Zigmunt, 2014, p. 148). Using the Implicit Association Test designed by Greenwald and colleagues in 1998, educators can identify how their unconscious associations might limit the inclusion of Black students into gifted programs.

Purpose Statement

The purpose of this quantitative study design was to examine if there were unconscious biases held by Indiana educators that negatively impact the identification of gifted Black youth for programming. This study would determine if there was a statistically significant difference between select educator demographics who work with identifying gifted youth and the perceptions of potential biases that they may hold. By understanding if there are unconscious biases within those who hold power in identifying gifted students, this study would shine light on the issue so that schools would be able to focus on gifted identification in a more objective manner for all students. The independent/predictor variables in this study included gender, race, licensure type, years of experience, college education level, and educator position held. The dependent/criterion variable would be the implicit association composite score.

Significance of Study

Little progress has been made regarding a representative sample of gifted minority students in gifted classrooms since it came to light in the early 1930s. Minorities, and Black populations, are consistently underrepresented within school districts unless there is a diligent

effort to serve this unique subset (Marquardt & Karnes, 1994). By examining the implicit biases and deficit thinking among gifted educators in Indiana, schools can begin to look at how their own personal set asides may be preventing students from qualifying for gifted programing.

A persistent gap exists in looking specifically at educators' racial bias. In terms of previous research, studies within the United States are limited and smaller in scale (Chin et al., 2020). Through a straightforward and quantitative approach, using the Implicit Associations Test, this can be one way to begin to shed light and liberate an otherwise overlooked gifted population.

Research Design

I utilized a quantitative study by recruiting educators within Indiana that work with high ability students and collected their composite scores on the Implicit Associations Test. Participation was not limited to classroom teachers, but any educator in the capacity of working with or identifying gifted youth for gifted programming. This included school administrators, gifted coordinators, curriculum directors, and superintendents. Participants were recruited through an email list serve provided by the Indiana Department of Education of current district superintendents. Once superintendents or building principals gave approval for the study, educators within the district were emailed. The research was presented in an upfront and honest way depicting how this study aimed to look at potential implicit biases held by educators who work with gifted children in the pursuit to bring awareness to a consistently underrepresented young Black population. Qualtrics was used to collect sample data and then exported to SPSS for analysis. Both descriptive and inferential statistics were utilized to analyze the data and to see if there are any statistically significant measures when compared to the Implicit Associations Test.

Research Questions

Data were collected for the following questions:

1. What is the state of implicit bias prevalence in identifying gifted Black students in the state of Indiana?

2. Is there a statistically significant difference based on educators' gender, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

3. Is there a statistically significant difference based on educators' race, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

4. Is there a statistically significant difference based on educators' possession of a high ability license, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

5. Is there a statistically significant difference based on educators' years of experience, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

6. Is there a statistically significant difference based on educators' highest collegiate degree obtainment, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

7. Is there a statistically significant difference based on educators' professional role, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

Definitions of Terms

Black "having extremely dark skin; strictly applied to negroes and negritos, and other dark-skinned races, often loosely to non-European racessignifies non-White minority

populations" (Oxford English Dictionary, 1989, p. 156). Used as an alternative to African American to include more countries of origin and cultures (Agyemang et al., 2005, p. 1015).

Deficit thinking is "grounded in the belief that culturally different students are genetically and culturally inferior to White students. It is a belief that their culture—beliefs, values, language, practices, customs, traditions, and more—are substandard, abnormal, and unacceptable" (Ford, 2010b, p. 32).

Gifted and talented in the State of Indiana is a student who:

(1) Performs at, or shows the potential for performing at, an outstanding level of accomplishment in at least one domain when compared to other students of the same age, experience, or environment, and

(2) is characterized by exceptional gifts, talents, motivation, or interests. (Indiana Code §20-36-1-3, 2021)

Identification "focuses on labeling; however, it is simplistic, dichotomous and closed-ended (a yes or no decision)" (Ford, 2013, p. 36).

Implicit Associations Test "provides a measure of strengths of automatic associations. This measure is computed from performance speeds at two classification tasks in which association strengths influence performance" (Greenwald et al., 2003, p. 197).

Implicit bias is an "unconscious mental process" (Greenwald & Krieger, 2006, p. 946).

Underrepresentation "is a discrepancy between the number (or percentage) of students in a school district and their number (or percentage) in gifted education" (Ford, 2013, p. 37).

Summary and Organization of the Study

The underrepresentation of gifted Black students in the state of Indiana has been a persistent problem. Part of the identification process that might prevent students from receiving

the services they need could be our own personal implicit biases and deficit thinking with minority populations. Through this study, districts would be able to pinpoint their biases and look at equity when it comes to identifying gifted minorities.

I distributed this quantitative study into five chapters. Chapter 1 includes the background of the problem, statement of the problem, purpose of the study, significance of the study, research design, and definitions of terms. In Chapter 2, I provide a literature review of the underrepresentation of Black students in gifted programs. I reviewed information regarding the multiple definitions of giftedness, what it means to be a culturally, linguistically, and economically diverse student, characteristics of Black gifted students, implicit bias, teacher perceptions of gifted students, culturally responsive classrooms, and cultural expectations within Black communities. In Chapter 3, I summarized the research design, which included the data collection and data analysis of the study. In Chapter 4, I presented the quantitative analysis of the asserted hypotheses. In Chapter 5, I provided a summary of the findings, conclusions, implications, and recommendations for future research.

CHAPTER 2

LITERATURE REVIEW

Within the field of education, providing appropriate accommodations for all students is what can help students achieve their fullest potential. This potential can be in the form of gifted education services that are equally accessible to all students. However, with unclear and unstructured definitions of giftedness, school districts are left relying on old and outdated policies or coming up with their own policies to try to meet the needs of students with gifts and talents (Dixson et al., 2020). However, there are groups of students that tend to get overlooked within gifted education due to a single criterion for identification, a lack of teacher referrals, or potential bias among educators (Hemmler et al., 2022). Black students have been historically underrepresented within gifted education and the literature is vast and comprehensive. By understanding the barriers that our Black students with gifts and potentials face, then as a society, we can try to equalize the education that our students receive and deserve.

Definitions of Giftedness

Being fascinated with people with exceptional abilities is nothing new. It was first noted as early as 2200 BC that the Chinese had a competitive system to select people for governmental positions (Renzulli, 2011). When looking at gifted, talented, and creative youth, there is a variety of definitions at organizational and state levels. These definitions can even be chunked into *liberal* or *conservative* viewpoints in terms of determining who qualifies for services. Renzulli

(2011) mentioned that schools should be cautious on restrictive programming because it could miss a variety of students who might otherwise be eligible for gifted programming. Therefore, when looking at conservative viewpoints of giftedness, these might be limited by looking at school performance data only, whereas a liberal viewpoint might look at multiple criteria aside from a person's Intelligence Quotient (IQ) or academic performance. The subjective nature of these definitions is what divides scholars and school districts alike because it is easier for achievement tests and other quantitative data to tell a clear-cut story of that student.

Starting at the macro level of gifted definitions, the United States Office of Education was first developed in the 1972 Marland Report to Congress which is now housed within the current Elementary and Secondary Education Act. In this definition:

Gifted and talented children are those identified by professionally qualified persons who by virtue of outstanding abilities, are capable of high performance. These are children who require differentiated educational programs and/or services beyond those normally provided by the regular school program in order to realize their contribution to self and society. Children capable of high performance include those with demonstrated achievement and/or potential ability in any of the following areas, singly or in a combination

1. General intellectual ability

2. Specific academic aptitude

3. Creative or productive thinking

4. Leadership ability

5. Visual and performing arts

6. Psychomotor ability (Marland, 1972, p. 2)

The U.S. Department of Education (USDOE), in 1993, broadened the definition of giftedness by becoming more inclusive. Specifically, the USDOE (1993) report stated:

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. These children and youth exhibit high performance capacity in intellectual, creative, and/or artistic areas, and unusual leadership capacity, or excel in specific academic fields. They require services or activities not ordinarily provided by the schools. Outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor. (p. 26)

This version of giftedness was pivotal for a few reasons. First, the word potential was added to the definition which identified that students may grow into their gifts and talents. The word potential opens a door for students who are minorities, economically disadvantaged, underachievers, or students who have special needs (Ford & Grantham, 2003). Giftedness does not look the same or present the same in all cultures or economic classes; it was imperative that this was recognized and was so in this version. Secondly, the inclusion of all cultural and socioeconomic groups (U.S. Department of Education [USDOE], 1993) made the definition inclusive for minority students and those of any socio-economic status.

There were five revisions of the definition between the Marland report in 1993 up until 2001 with No Child Left Behind (Ford, 2010a). Most of these definitions continued to look at two identifying factors: IQ and test performance. Momentum was gaining in the early 2000s; however, in No Child Left Behind (NCLB), the definition of giftedness took a vague approach like earlier versions that were less philosophical. Critics of this view say that this definition ignores nonintellectual (i.e., motivational) factors, denies that creativity and leadership can

coexist aside from aptitude, and tends to be misused by practitioners (Renzulli, 2011). Aside from historically mentioning the need for gifted and talented services, it must be noted that there is no federal mandate to require these services which is why the definition of giftedness, identification criteria, and programming across states are so ambiguous (Ford et al., 2004). Many districts are left to associations or state guidance to serve the needs of students with gifts and talents.

The NAGC, one of the leading associations for gifted and talented children, looks at giftedness in terms of its complex nature. According to the NAGC (2019):

Students with gifts and talents perform—or have the capability to perform—at higher levels compared to others of the same age, experience, and environment in one or more domains. They require modification(s) to their educational experience(s) to learn and realize their potential. (p. 1)

The NAGC produces a *State of the States in Gifted Education* (Rinn et al., 2022) report every three to four years. In 2022, the following characteristics of giftedness were represented in state definitions ($n = 46$), with the number of states in parenthesis: advanced intellectual ability ($n = 36$), academic ability ($n = 32$), creativity ($n = 31$), performing arts ($n = 18$), leadership ($n = 16$), visual arts ($n = 16$), music ($n = 4$), psychomotor ability ($n = 3$), and task commitment ($n = 3$). Not all states were represented in the data due to there not being a gifted and talented mandate or programming or funding for their programs. Indiana not only has a gifted and talented mandate, but also funding for the programming. Compared to the 2019–2020 data, characteristics including intellectual ability, creativity, and academic ability increased. Areas that were not available from the prior data included specific population domains including low socio-

economic status, culturally and ethnically diverse gifted students who also have special needs, and physical/geographical location.

Another integral movement within the United States occurred in 1983 when the report *A Nation at Risk: The Imperative for Educational Reform* was released by the National Commission on Excellence in Education. This document detailed how schools were failing children and made a prompt call to action to ensure that all students' educational needs were being met. All educational needs included gifted and talented youth so that they could thrive in all school settings. This federal call for action, for students of all talents, led to the Javits Gifted and Talented Students Education Act of 1988, which coordinates grants, projects, research, and explores new strategies to use in gifted education (Luria et al., 2016). Specifically, the heart of the program aims to help serve underrepresented and marginalized populations in gifted education including CLD youth with the overall goal to decrease the gap between these populations and their peers (Office of Elementary and Secondary Education,n.d.). Grants are awarded under two priorities. The first priority supports initiatives to develop and scale up models serving students who are underrepresented in gifted and talented programs. The second priority supports state and local efforts to improve services for gifted and talented students. Additional criteria to receive Javits grant dollars include:

- Conducting evidence-based research on methods and techniques for identifying and teaching gifted and talented students and for using gifted and talented programs and methods to identify and provide the opportunity for all students to be served, particularly low-income and at-risk students.

- Establishing and operating programs and projects for identifying and serving gifted and talented students, including innovative methods and strategies (such as summer

programs, mentoring programs, peer tutoring programs, service-learning programs, and cooperative learning programs involving business, industry, and education) for identifying and educating students who may not be served by traditional gifted and talented programs.

- Providing technical assistance and disseminating information, which may include how gifted and talented programs and methods may be adapted for use by all students, particularly low-income and at-risk students. (Office of Elementary and Secondary Education, n.d., paras. 5–7)

The Javits Gifted and Talented Students Education Act of 1988 was fundamental in gaining attention of underserved populations within gifted education and opening doors to those populations for non-White and low-income students to be seen. National attention was being brought to gifted and talented education; however, as of 2022, according to McClain and Pfeiffer (2012), 45 states included intelligence as an indicator of needing special services and 27 identified creativity as a criterion, which was down from 30 states 10 years prior.

Gifted students come from a variety of upbringings including all races, ethnicities, and socio-economic backgrounds. Over the years, there has been debate about the true definition of giftedness and there is not one truly accepted definition. Giftedness can also include creativity and talent that the student currently possesses, or it could entail the student's potential to perform above their peers. Giftedness is multifaceted in that it looks at academic potential, but it also involves meeting a student's creative and social needs that might take place outside of a traditional school day.

Indiana Code defines a student with high ability as one who:

(1) Performs at, or shows the potential for performing at, an outstanding level of accomplishment in at least one domain when compared to other students of the same age, experience, or environment, and:

(2) is characterized by exceptional gifts, talents, motivation, or interests. (Indiana Code §20-36-1-3, 2021)

Regardless of the definition used to identify giftedness, services must be provided to students who truly deserve them, and acting like there is a certain percentage, or quota, of people who should be labeled as gifted is not an accurate representation. Treating giftedness like a prescribed or scarce commodity will leave many students left behind (Ford, 2003). Likewise, falling back on previously used models in schools will yield similar results. Ford (2010b) argued that waiting to identify gifted youth until they are in second, third, and fourth grade, or later, is counterproductive and doing the student a disservice, particularly when those students might live in poverty. Wells (2020) stated that some schools offer advanced programs for gifted youth as a substitute for educational programming for gifted students. However, all too often, these advanced courses are only offered at the secondary level and bypass the critical younger years of a child's intellectual development.

Under the domain of special education lies gifted education. Just like how identifying a student who needs an Individualized Education Plan is important so that they are getting the services they deserve, the same is true with those who have gifts and talents. Yet, without a solid definition from a national or state level and an absence of legislation looking at helping to identify and retain gifted students, school districts are often left in limbo (Wells, 2020).

Multiple definitions and ideologies about what it means to be gifted involve different instruments that can be used to measure a person's ability or potential. Over the last 30 years, the

Full-Scale IQ (FSIQ) scores have been drastically improved and had been the dominant force in the identification process for years. In fact,

> Traditional definitions of giftedness (almost exclusively normed and conceptualized on middle-class Whites) have been primarily operationalized in two ways:
>
> (a) by high scores on IQ tests (130 and higher), and
>
> (b) by high scores on achievement tests (often at or above 92nd percentile). (Ford & King, 2014, p. 301)

Once again, the inclusion of the word *potential*, which seems to drift in and out of definitions, shows hope in including a variety of underrepresented populations due to their ability to grow their gifts and talents. More modern educators prefer an approach like Renzulli's three-ring conception of giftedness or Sternberg's WISC (i.e., Wisdom, Intelligence, and Creativity, Synthesized model, as cited in Luria et al., 2016). Critics, like Renzulli (2011) and Sternberg (2019), say that these quantitative measures greatly stifle creativity and critical thinking measures and may be biased in their objectivity.

Culturally and Linguistically Diverse Gifted Students

Consistently, gifted and talented CLD youth continue to be underrepresented and left behind (Luria et al., 2016) and tend to be neglected among student populations (Siegle et al., 2016). In fact, very few districts can say that their gifted program is representative of their school's population in terms of practice and purpose (Ford, 2003; Howard, 2018). After the *Brown v. Board of Education* (Warren, 1954) decision declaring the desegregation of schools, one might think that this was easily enacted. However, Ford and King (2014) argued that segregation is alive and well within United States schools and integration is an ideal that has yet to be fully enacted nearly 68 years later. According to the USDOE (2020), underrepresentation

of minority students has been a trend since the 1980s which has led to the over identification of giftedness in middle-class White students.

Culturally and linguistically diverse students, within the realm of gifted education, include Black, Hispanic, and Native Indian populations (Ford et al., 2008), of which Blacks and Hispanics have been a targeted population within Indiana Schools (Wang, 2018) due to their underrepresentation. Siegle et al. (2015) reinforced this finding with national data regarding Black and Hispanic students with the underrepresentation of Black students taking a continuous lead. Students who did not qualify for free or reduced lunch and were not a language minority student were more likely to be identified for gifted services over their peers. White students, when they did not qualify for free or reduced lunch, were three and a half times more likely to be identified than their Black peers with the same demographics. Even more alarming is that White students with free or reduced lunch were 12 times more likely to be identified for gifted services over their Black peers who also qualified for free or reduced lunch. These findings show that minority status was not the only factor that applied to under identified groups, but that free and reduced lunch status magnified those disparities even when, on paper, they were performing comparatively with their White peers. In essence, these data create an *achievement trap*, instead of a gap, separating the haves from the have nots (Teale & Gambrell, 2007).

Unfortunately, the problem is not as easy as just identifying the population and then inviting more of those students into gifted programs. There are deeply rooted cultural beliefs among some populations that expose a dark and ugly American history. Early in American history, Black and Latino populations were seen as genetically inferior. That evolved into this group being seen as *culturally deprived* or *disadvantaged* (Gould, 1996; Valencia, 1997). A more neutral terminology of "culturally different" (Ford, 2010a, p. 50) has been used in recent times

but there are still instances of the former definitions and belief systems continuing to existg.

These societal norms and values lead towards elitism and privilege within certain communities

(Howard, 2018). This privilege is then transferred over into the school systems in which Hatt

(2016) stated that, "Schools as cultural institutions [have been] shaped and centered upon the

cultural tropes of Whiteness and smartness in the U.S." (p. 1142). Some might argue that it is

beneficial to say that the past was just that, the past. However, this mindset denies decades in

inequality that cannot be simply brushed over (Ford, 2003).

This would lead some to believe that the instruments or the criteria used to identify CLD

students are not culturally sensitive or show bias. This underrepresentation of CLD students has

been longstanding and resistant to change (Ford, 2010b), and was even mentioned in the 1972

Marland report which acknowledged that marginalized groups were hardly being serviced (Luria

et al., 2016). To further investigate this speculation, Karnes et al. (1997)

> Examined 38 complaints or letters of findings in gifted education, falling into four
>
> categories: (a) admission to gifted programs; (b) identification of gifted students; (c)
>
> placement in gifted programs; and (d) procedures involving notification, communication
>
> and testing of gifted students. Of the 38 complaints or letters, almost half ($n = 17$)
>
> pertained to discrimination against CLD students. (p. 163)

When analyzing the school setting, advocates for underrepresented populations in gifted

education argue for varied perspectives not only in the identification of underrepresented gifted

students, but also in terms of curriculum, models, and instructional methods (Siegle et al., 2016).

For example, Stanfield and Dennis (1995) referred to the physical space as curriculum. When

gifted programs pull students out for gifted services, they noticed that most of the White kids

were leaving the class which unintentionally magnified that White students are more intelligent,

have access to more resources, and pull-out programs emphasize a racial hierarchy. Another barrier that CLD students might face is that some districts have caps or numbers or percentages (Ford, 2003) that they must meet for gifted services. This high ability cap, or a quota, is fixable once it is acknowledged. Additionally, very few schools, when asked about their cut scores on Cognitive Ability Tests, can give a sound rationale. The problem here goes beyond just identifying students in one district because it becomes a systematic problem. One student can be considered gifted in one district but not the next district depending on their cut scores. Teacher recommendations are a frequent additive to gifted identification and some of the lack of minority representation can be due to the lack of teachers identifying gifts and talents in students. There also might be outdated practices, policies, and procedures when it comes to placement of gifted students (Siegle et al., 2016).

Frasier (1997) argued that the roadblocks experienced by minority students were not part of a school or district problem, but a societal problem and came up with a Four A model for schools when identifying CLD students. First is being intentional with who can *access* and be identified for gifted programs. The second is the *assessment* portion where students are evaluated for the presence of gifts and talents. The third piece is *accommodation* to make sure that intentionality is used to support CLD students. The final element is *attitude* where teachers and staff are able to identify their feelings towards CLD groups of students (Grantham & Ford, 2007). Additionally, Frasier (1989) recommended that nomination be based off behavior traits that are based on dynamic traits instead of an understanding of language in a testing situation. Through the expansion of the definition of intelligence, schools can adequately identify gifted Black youth through nominations, behavioral indicators, and collecting data from objective and subjective measures. School districts must also be very intentional in their selection process by

purposely trying to identify a particular quota among minority students (3–5%) as a baseline (Frasier, 1979).

The excellence gap between White students and those of color is widening despite a growing amount of literature requesting a change in antiquated practices. This gap is apparent in identification, retention of minority students, and through pedagogical practices (Howard, 2008), and tends to be rooted in segregation and historical practices. According to Ford and King (2014), looking at the importance of culture in identifying CLD youth has been set aside and even achievement data, when on target with their peers, have been overlooked (Siegle et al., 2016). This leaves the basis for which decisions are being made left to a normed middle-class White lens. To close this achievement gap for our cultural minorities, Ford (2010b) argued that this cannot be done without decreasing underrepresentation and shifting our focus on recruiting and retaining gifted minority youth.

Gifted and Talented Black Students

Historical oppression of minorities is still alive and well in some parts of the United States and has implications in the identification of gifted Black students into gifted programs. One might think that a Black student with a high IQ would automatically be tagged for receiving gifted services; however, that is not always the case. Instead, this subpopulation within the CLD community tends to get overlooked more than any other group (Pearman & McGee, 2022) even when districts know and acknowledge there needs to be change, these students are getting neglected (Van Tassel-Baska, 2005). In fact, for over seven decades, beginning with a Jenkins (1936) study, Black students have continued to be underrepresented (Ford et. al., 2004). Specifically, in the United States, according to the National Center for Education Statistics (2020) Public School Teacher Data File of 2017–18, White teachers made up 79% of the

population. In Indiana, specifically, White teachers make up 92.6% of the teaching population. This is particularly alarming because nearly 13% of Indiana students are Black (National Center for Education Statistics, 2020). The Black students in Indiana do not see themselves in the teaching demographics in the schools that they attend. With the understanding that there is a cultural disparity between who is in the classroom and who is teaching them, Ford et al. (2004) argued that educators can be cultural bridges and serve students with diverse needs. Furthermore, by bringing diversity to gifted programs, varying views and new cultures can enhance programs and make it better for all students (Sparks, 2022).

Many of the roadblocks that Black students face can be attributed to deficit thinking which is the belief that, "Culturally different students are genetically and culturally inferior to White students" (Ford, 2010b, p. 32). This perpetuates looking at education through a White lens and through White privilege, which is treating the "social and cultural capital (e.g., language, values, customs, traditions) of White Americans is [sic] valued and held as normal, normative, or the standard" (Ford, 2010b, p. 39). The nature of the term deficit implies looking at what is lacking in the person. This focus of seeing what is lacking or *wrong* with the person prevents a focus on that individual's gifts and talents (Ford, 2003). Instead of looking at education through a cultural lens, the idea of assimilation and keeping a standard White perspective is pervasive. Advocates for underrepresentation might celebrate the fact that districts and teachers are being *color blind*; however, acknowledging and celebrating the differences in their students is truly what brings light to the inequalities within the education system. In a world where treating everyone as equal is encouraged, this does a disservice when culture needs to be acknowledged, especially for minorities in gifted education. As a society, there needs to be a shift from being color blind, or culture blind (Ford, 2010b) to color brave (Hobson, 2014) and celebrate cultural

differences. If color or cultural blindness continues, minority values, beliefs, practices, and norms could begin to be seen as *wrong, incorrect, abnormal*, or even *dysfunctional* (Ford et al., 2004). This is detrimental when trying to increase underrepresentation in gifted programming. In fact, with grouping students based on White norms, the tracking of gifted students "is heavily influenced by subjective factors derived from racist ideas, largely stemming from its eugenicist origins" (Hendrix, 2022, p. 216), which ends up harming an already marginalized population.

Within gifted education, teachers tend to test minority students for special education more so than for gifted services (Warikoo et al., 2016). This can be attributed to gifts and talents being represented in different ways depending on cultural values. Something that might be seen as a gift in one culture could be seen as a deficit in a White middle-class culture. These values make identifying students for gifted services subjective and, even if the intent is to see the potential in a CLD student, unintended barriers can still be in place. One way to bypass the traditional standardized test barrier is to use a nonverbal test that tests a student's achievement, abstract thinking, reasoning, and problem-solving skills (Ford, 2003). Paired with multiple measures, like teacher recommendations or student grades, this could more accurately assess a student's potential than one test that is verbally oriented.

One ideology that creeps in surrounding the intelligence debate is the issue of nature versus nurture. Ford and Grantham (2003) argued that Black individuals are at the center of this debate. People who advocate that intelligence is a product of nature believe that there is genetic superiority and that you are born either intelligent or not. Nurture advocates believe that the environment is a function of society, and that intelligence is something that can be fostered and grown. Instead of being stagnant, the nurture advocates believe that intelligence is more fluid. People who believe in the nature approach of intelligence and see a Black student score lower on

an IQ or other performance task tend to assume that the individual is not as smart and will stay

that way regardless of interventions and services. This mindset is dangerous when identifying

gifted Black students because it does not give this subpopulation a chance or take environmental

factors into consideration. Therefore, educators are less likely to nominate students for gifted

education services under the assumptions that they will never be able to overcome certain

obstacles.

Aside from racial implications, there is also a lack of resources available for Black

students. Having adequate access to science, technology, engineering, and mathematic (STEM)

courses and resources are limited and restricted in many Black and minority dominated schools.

According to Siegle et al. (2016), 57% of Black students have full access to STEM courses

compared to 81% of their White counterparts. Inaccessibility to resources and programs is a

recurring theme when looking at what districts have to offer specifically within urban versus

suburban settings. This can be seen with course offerings, specifically the Advanced Placement

(AP) or International Baccalaureate (IB) courses that are offered at the high school level.

Additional inaccessibility can be due to lack of teacher training or lack of staffing. However, in

schools where AP or IB courses are offered, the achievement gap is even more abrupt when

looking at how Black students make up 16% of our high school populations, yet only 9% were

enrolled in at least one AP or IB course, and only 4% earned credit through the AP exam

(Pearman & McGee, 2022).

Some other challenges to overcome when serving gifted minority students include

teachers having access to a rigorous curriculum. Barton (2003) mentioned that gifted education

prides itself on excellent instruction and rigor, but some school districts, especially those in poor

urban settings, do not have the trained staff or money to gain access to these resources. By not

having access to updated materials, gifted minority students unintentionally fall behind due to lack of access specifically within the areas of math and science (Dexter et. al., 2021). Another barrier that gifted minority students face is not having access to well-trained and highly effective teachers. In high need districts, it is difficult to find and maintain teaching staff in urban populations where many of our minority students go to school. In these urban settings students also tend to have larger class sizes. This greater students-to-teacher ratio could lead to less one-on-one time with gifted students and may also lead to challenges surrounding classroom management. The lack of technology could be an issue at some urban schools as well. Johnathan Kozol (2005) noted that urban schools rarely have enough technology or the most updated technologies for each student.

It must be noted that there is a subculture in terms of the definition of giftedness and this is regarding a gifted student's "economic, cultural, socioemotional, affective, and developmental needs" (Stambaugh & Ford, 2015, p. 192). The needs of CLD students can manifest in different needs in the classroom compared to their White peers, as well. This point has remained consistent among researchers. Black students, in particular,

> Prefer to learn in a more hands-on way, prefer concrete methods of learning, are creative storytellers, are more likely to show leadership qualities or question authority, may not show their intelligence in certain test situations, and may be uneven in their overall academic performance. (Stambaugh & Ford, 2015, p. 193)

Using a blanket approach to gifted students is not only wrong, but also it is inaccurate in terms of the students' needs.

Within gifted education, some students, although identified, do not necessarily succeed, or thrive, in gifted programming (Ford et al., 2008). These students, when looking at talent

development, can be identified as underachievers. Underachievers often go under the radar when being identified because teachers and schools are looking for high performers. However, underachievement is possible with bright students due to a) expectations surrounding not being challenged at school, b) socio-economic barriers, or c) limited English proficiency.

Implicit Bias

Within social psychology the concept of studying people's attitudes showed increased interest in the 1930s. Allport (1935) said that understanding our attitudes were the "most distinctive and indispensable concepts" (p. 798). The work of discovering the unconscious really took shape because of the work of Sigmund Freud and has been actively disputed ever since (Greenwald & Krieger, 2006). During the 1970s, the idea of measuring attitude–behavior correlations started to take flight with increased curiosity regarding the strength of these behaviors and its stability across time (Greenwald et al., 2009). It was not until the 1980s when the idea of implicit mental phenomena started to make waves in the social psychology and legal arenas regarding their connection to discrimination and bias. Anthony Greenwald and Mahzarin Bananji (1995) introduced implicit bias as a term to contradict the assumption that all human beliefs were prevalent and accessible. Kraus (1995) further developed this attitude construct by noting that there are some attitudes that cannot be reached or acknowledged through self-reports. This led to the launch of the Implicit Association Test (Greenwald et al., 1998) to determine if implicit, or unconscious, measures could be quantified.

Biases, also known as attitudes, are placed in two categories: explicit and implicit. These biases can be in the form of any topic ranging from race to political affiliations. Attitudes are "favorable or unfavorable dispositions towards social objects, such as people, places, and policies" (Greenwald & Banaji, 1995, p. 7). More specifically, "explicit attitudes have

traditionally been conceptualized as reflecting deliberate mental processes that are available through conscious introspection" (Hehman et al., 2019, p. 1023). These are beliefs or attitudes that the person is consciously aware of and can verbalize or act on these thoughts (. Often, one will see these explicit attitudes expressed in a self-reporting survey or through conversation with the individual.

Explicit attitudes shape deliberative and well-considered responses where a person can step back, analyze a situation, think about the costs and benefits of their reactions or choices, and make a conscious decision about how to behave (Dovidio et al., 2002). Whether these explicit attitudes show depends on the person's time, motivation, and other people's potential consequences and attitudes towards their actions or behaviors. Explicit attitudes are more deliberate and there is a choice of control and way those attitudes are expressed. Examples of such explicit attitudes can be present within acts of prejudice or discrimination (Clark & Zygmunt, 2014). Carpenter (2008) argued that explicit attitudes are more detrimental to society because of the conscious awareness that is present.

Conversely, "implicit attitudes have been conceptualized as reflecting mental processes that occur unintentionally and outside of conscious awareness" (Hehman et al., 2019, p. 1023). An implicit bias is a natural human function as the human brand tries to make sense of information in a categorical way so that the information can be stored and retried easily from memory. Implicit bias can be present even when the person unconsciously does not condone or endorse the bias or stereotype (Carpenter, 2008). Essentially, people can say one thing but think another way without even being aware of the internal discrepancy.

At first, it was thought that implicit bias was simply not accessible through introspection because people were not reporting deeply rooted feelings that came out unconsciously (Madva,

2018). Implicit attitudes are presented in ways that are more difficult to monitor like through nonverbal behaviors (Clark & Zygmunt, 2014; Dovidio et al., 2002). Control is a central aspect of implicit attitudes and behaviors because the individual acts impulsively. Implicit attitudes tend to be more influential when the person acts without thinking because of a time restriction or if there is no foreseeable consequence to their actions. Carpenter (2008) pointed out that time is the key because when a person is pressed for time, it can reveal hidden truths and associations like *Black and violent*, or*, woman and frail*. The ironic part of explicit and implicit attitudes is that the person may do or say one thing, but their nonverbal body language may indicate another way of thinking. An example of nonverbal body language that would be more spontaneous includes rapid blinking or reduced eye contact when the person feels uncomfortable in a situation and their implicit attitudes take over (Dovidio et al., 2002).

Implicit associations are fundamental to our wellbeing because forming associations can be a powerful survival mechanism (Carpenter, 2008). However, having these associations becomes problematic when they start to contradict our beliefs, values, and actions. This cognitive dissonance that people experience can cause true conflict between what a person believes versus what they want to believe. Research has not shown any consistent results in terms of a correlation between implicit bias and actions. Karpinski and Hilton (2001) found that there was a weak relationship between implicit bias and a person's actions, whereas Greenwald and Farnham (2000) found there to be a positive correlation between implicit bias and actions.

The key difference between explicit attitudes and implicit attitudes is surrounded by the element of consciousness, control, and time (Hahn et al., 2014). One is at the forefront of consciousness, where the person can articulate their beliefs, and one is not within conscious grasp and can only be discovered through measures that associate speed or response accuracy on

a given task. Control is a critical element because explicit attitudes can be expressed through verbal expression or action, whereas implicit attitudes might be shown in the form of nonverbal body language. Time is the final element that varies with these two different attitudes. When the cost is high and the benefits do not outweigh the cost, then explicit attitudes and actions can be controlled to fit the appropriate situation. When there is a lack of time, the unconscious actions take over and are more influential.

Implicit bias is dangerous for a multitude of reasons, but mainly because it can lead to discriminatory practices (Berndt Rasmussen, 2020). Implicit attitudes and implicit stereotypes present differently. Implicit attitudes are one thing, which can present as dislike or intolerance towards a specific racial group (Chin et al., 2020). Implicit stereotypes generalize that all members of a certain group act in a certain way or hold specific characteristics. Marginalized groups are particularly sensitive to how these attitudes or stereotypes present themselves.

According to Assari (2018), teacher discrimination could be hidden in the form of implicit bias which can attribute to Black student achievement or even disciplinary practices. When breaking this down even further, minority men, as opposed to women, tend to be the subject of more discriminatory practices. The perpetrators of the discriminatory practices are White men as they have a higher implicit bias against Black people rather than White women or any other racial group.

The social and emotional impact of implicit bias can truly affect the whole Black community. Assari (2018) asserted that discrimination can lead to other high-risk behaviors, social isolation, or other unhealthy behaviors. "The risk for depression, anxiety, suicide, and substance abuse increases drastically when being a target for discrimination" (Assari, 2018, p. 43), whether that discrimination is intentional or not.

Deficit Thinking, Teacher Perceptions, and the Culturally Responsive Classroom

Deficit thinking can contribute to longstanding beliefs that stay with a person from the past into the present. Ideologies like deficit thinking, which can hold perceptions both positive and negative about a group, can influence policy, practices, and definitions (Palmer & Witanapatirana, 2020). This deficit orientation can be attributed to the segregation, and resistance to desegregation in schools, that occurred after *Plessy v. Ferguson* (1896) which stated that segregation laws did not violate the equal protection clause of the Fourteenth Amendment By not moving forward with desegregation and acknowledging that these practices are still in place, many still attribute the underrepresentation of gifted Black students to this hierarchical and racially charged system. Based on this ranked system ideology, more alarmingly, "Preconceptions and fears about CLD groups (particularly [Black] Americans) have led to polemical and prejudicial research methods, deliberate miscalculations, convenient omissions, and data misinterpretation among scientists studying intelligence" (Ford et al., 2008, p. 293).

Valencia (1997) stated that deficit thinking is linked to believing that there are elements the individual cannot change about themselves: cognitive ability, motivational limitations, or familiar dysfunctions. The blame, in deficit thinking, lies on aspects that individuals cannot control, and because of that, the assumption is that they will never be able to overcome those barriers. This way of thinking affects behavior because educators could be in the mindset that regardless of what they do to help this student, nothing is going to be able to change. Now the challenge in deficit thinking changes from looking at a person's beliefs and extends into how the person behaves.

One obstacle to overcome for schools with a large minority population is that some teachers purposely try to avoid teaching in those districts or buildings, and teachers who take

jobs at these schools tend to be underqualified (Jackson, 2009). Some teachers, needing a job, will accept a position at a highly diverse school but could be drastically undertrained, biased, or reluctant or unknowing of how to meet the needs of diverse students. Hinojosa and Moras (2009) wanted to investigate and see if there was a difference between attitudes of teachers and non-teachers and found that teachers significantly held bias more so than non-teachers in both theory and practice. Holding stereotypes in the classroom can lead to lowering expectations for specific groups of students or a negative labeling effect because of race (Perez & Okonofua, 2022).

Literature by Van Tassel-Baska (2005) argued that schools need to ensure differentiation in both elementary and secondary curriculum. Part of providing an appropriate curriculum is for teachers to identify that they might not be able to provide everything for particular students and that outside resources are necessary. Other *non-negotiables* include accelerated courses of study, content acceleration, grade level acceleration, telecommunication options, flexible grouping, and assessment differentiation. Using alternative assessments are important, for example a performance-based assessment instead of the SAT, because even gifted students typically do not excel on these nationally normed tests without significant preparation. Performance based assessments require students to provide multiple responses at varying depths to show their understanding of the content.

Davis and Colangelo (1997) stated that nearly 90% of school districts rely on test score data as their primary indicator for gifted services. A straightforward criterion might seem to be beneficial; however, these tests tend to be normed on White middle-class results. Relying on one cultural norm and set of expectations does very little when trying to be culturally inclusive and look at other cultural standards for achievement. When test scores are heavily relied on and the

primary means for identification, educators are less likely to refer potential gifted minority

students for services, which contributes to their underrepresentation.

According to Ford and Grantham (2003),

Educators can choose from at least three explanations for the poor test performance of

diverse students: (a) the fault rests within the test (e.g., test bias); (b) the fault rests with

the educational environment at home and school (e.g., poor instruction and lack of access

to high quality education); or (c) the fault rests with (or within) the student (e.g., he/she is

cognitively inferior, genetically inferior, or culturally deprived). (p. 220)

The first two belief systems, by teachers, would lead them to feel like they need to change a

system to make it more equitable. However, Ford and Grantham argued that those with the last

ideology tend to remain in deficit thinking and assume that nothing can be done regardless of the

circumstances, test, or learning environment. Along with expanding the knowledge base of

teachers, there still is very little literature that has focused on teacher referrals in the

identification process. Simply educating teachers is not enough; training is needed in all aspects

of the high ability identification process.

Literature from Ferguson (2003) and Tenenbaum and Ruck (2007) have shown that

teachers treat students differently based on race, which can ultimately influence student

outcomes. These preset beliefs can be in the form of educator bias. It cannot be assumed that

teachers go into the gifted identification process maliciously trying to exclude a certain

population (Hendrix, 2022). That ideology would not be accurate or fair. However, very few

teachers are exposed to both gifted education practices and multicultural educational experiences

(Ford & Grantham, 2003). By neither being culturally sensitive nor knowing how to meet gifted

students' needs, educators do not have the necessary tools to know how to overcome

underrepresentation and serve their students equally. Much like the reliance on White normed test scores, student performances and behaviors tend to be compared against their White peers as well. The danger in this is that even in districts where teacher recommendations could help a gifted minority receive gifted services, if they are not performing like their White peers, they will tend to get overlooked. It is imperative that educators remember that there is no such thing as a homogeneous classroom and that there need to be intentional checks and balances against deficit-centric ideologies with Black students (Williams et al., 2020).

The language that White teachers use regarding minority students has been found to be color blind (Hobson, 2014). Using terminology like *us* versus *them* when referring to minority students is not only offensive, but it reinforces racially loaded pronouns (Lewis, 2003). Conversely, by completely ignoring the races, which Pollock (2005) referred to as *colormute*, educators are making a choice not to embrace diversity and acknowledge the power that it brings to the classroom. Verbiage and language matter when it comes to narrowing the racial gaps seen in our schools even if it is just through the use of language.

There are other perceptions that teachers face around control. Teachers do not have control of their students' lives outside of school, nor do they have control of the overall political or social climate of the times (Ford, 2003). Many of the decisions that must be made need to be within the best interest of students within the school walls because that is where educators have the most control. Gardner (1984) encouraged schools to provide young people with basic needs, provide diverse opportunities, and assist with differentiated abilities to help students thrive. All of these can be controlled within the school environment.

Ford and Trotman (2001) recommended that teachers have interest in diverse students' cultural and academic interests; however, most preservice programs neglect to address the need

for practicing culturally responsive teaching. Learning to include culturally responsive teaching methods is one step in the right direction when advocating for minority youth. Being able to connect with diverse students is critical seeing that most of the teaching population is made up of White individuals (Ford & Harris, 1996). Additionally, authors find that student achievement is hindered when there is a *cultural mismatch* between the student and teacher (Ford & Trotman, 2001).

To bridge the gap between White educators and Black families, teachers need to try to reach out to their diverse students' families. Introspection can be useful for educators as well as they start to think about the culture that is represented in their classroom, if students can see themselves in the curriculum or physical space, and if there are intentional culturally responsive practices being implemented (Pesch et al., 2022). Educators do not need to adopt other cultural views (Ford & Trotman, 2001), but they can respect and embrace differences within the classroom.

There are several key components in a culturally responsive classroom that would benefit Black gifted students immensely. The first component is that there is culturally relevant pedagogy that is "characterized by teaching that empowers students intellectually, socially, emotionally, and politically by using cultural referents to impart knowledge, skills and attitudes" (Ladson-Billings, 2009, p. 18). A second component involves looking at topics from a minority point of view, tackling controversial topics proactively, and acknowledging potential bias that might be present. Looking at content from multiple lenses is a basic civil right (Banks & Banks, 2004).

Black Community Cultural Expectations

Stereotypes of Black Americans are rampant across the United States including the beliefs that Black Americans are violent and hostile (Devine, 1989), dangerous (Ghavami & Peplau, 2013), and threaten public safety (Cottrell & Neuberg, 2005) and with recent research that has maintained this narrative (March, 2022). Assari (2018) continued by stating that Black men tend to be seen as non-intellectuals who demonstrate aggressive or violent behaviors. These stereotypes are alarming and are represented, not just in individuals' actions, but in the media as well. These social and environmental variables start to become self-fulfilling prophecies and can greatly impact Black students' motivation and academic achievement (Perez & Okonofua, 2022). Consequently, because of the negative stereotypes, Ogbu (1987) found that young Black children might develop an oppositional social identity. This is when the student purposely tries to underperform in school or tries to rebel against those in authoritative positions. A student with this identity rejects the White majority culture in a way that sacrifices their own achievement in school to align with the stereotyped cultural expectations. For those Black students who do stay within gifted education at their school, they might adopt ineffective coping mechanisms. This can present in a way in which Black students purposely avoid contact with their White peers or put forth little effort so that they are not compared to the dominant culture. In a way, Ford and Harris (1996) described Black giftedness as a social handicap. For those Black students who do want to be in gifted programming and do excel in their coursework, their achievement might sever relationships with their Black peers because they are *acting White* in the classroom. Black students are then faced with many more obstacles from the psychological and social-emotional realm in terms of how they fit into the Black community and how they present to others.

Education is a triad between the student, the school, and the family or community. For fear of a language barrier or not understanding a culture, sometimes educators choose not to communicate with culturally diverse families (Ford & Grantham, 2003). Teachers tend to prefer to work with parents that are consistently engaged in their child's education instead of trying to constantly communicate with parents who are not involved. However, building a relationship (Liang et al., 2020) and trust (Brown, 2022) with culturally diverse families is one important step in the direction of equity for Black students. Ford (1996) found that very few schools seek to build relationships and partnerships with Black families.

Ford and Grantham (2003) noted *stereotype threat* is sometimes seen with the Black community. Stereotype threat is when anxiety takes over during testing situations and student performance suffers because of that anxiety. The way that this can present in the classroom includes the student acting like the class clown, athlete, or even worse, purposely sabotaging their own achievement in order not to stand out from their cultural peer group. This self-fulfilling prophecy becomes an enemy of intellectually gifted Black students because they start to tell themselves that they are not capable of achieving greatly, and then work in a way to prove that stereotype right. Parents of diverse children need to help their children with peer pressure, navigating social injustice, achieving at a higher level, and staying motivated. By identifying potential self-sabotaging endeavors, parents can assist the child in refocusing their goals, letting go of negative self-thoughts, and helping them reach their potential. Likewise, for Black parents that set high expectations for their child, their child often meets or exceeds their expectations through academic success and achieving at a greater level (Clark, 2015).

One struggle for gifted Black students, in terms of support at home, is parent availability and trust between the home and school system (Brown, 2022). Many Black students, more than

White students, live in single-parent households and live off a lower income (Ford, 2006). This lack of income can affect the student and family's educational access, healthcare, and psychological well-being. Family involvement also differs across different racial groups. Black families tend to be less involved in their student's school than White families (Harry & Klingner, 2014). Side effects of this lack of engagement include attending fewer school meetings, conferences, volunteering less, and reading to their child less. This low participation may play a role in the student having more behavior problems in school and having lower academic performance.

Implicit Bias, Pervasiveness, and Correlations

In current research, there is a gap between studies that report implicit bias test results in the context of self-reported demographic information. In April of 2022, I reached out to Project Implicit (2011) which houses the data for the Implicit Associations Test regarding any research that they have compiled comparing implicit attitudes to individual demographic indicators. No response was received. A follow up correspondence in August of 2022 yielded a response with an unpublished manuscript comparing the pervasiveness and correlation among attitudes and stereotypes from the Implicit Associations Test between 2007–2015 (Ratcliff et al., 2022). Although information was provided, the article summarized reports across seven of the Implicit Associations tests, of which Black/White Race was one of them. The participant demographics collected included age, race, ethnicity, education, political orientation/affiliation, religion, and if they had participated in a prior test. These demographics do not match this study in which gender, race, possession of a high ability license, years of experience, highest collegiate degree, and professional role will be documented. The collection of races of a participant taking the IAT

is the only commonality. Regardless, some findings can apply but still leave room for further research.

Over 20 million entries have been collected on the Project Implicit website (Project Implicit, 2011), which is the most well-known demo site that collects information regarding a multitude of potential implicit biases. Since its inception in the 1990s, the IAT has been reproduced in 39 countries and in 27 languages (Ratcliff et. al., 2022). "The research compiled showed that people who took the Black/White IAT (n = 1,574,235), 58.1% did so for an assignment, 16.8% as a recommendation, 20% from a media link, 0.8% from a planned search, and 4% for another reason" (Ratcliff et. al., 2022, p. 7).

The analysis of the Black and White IAT aligned with the dominant groups, or *ingroups* within the United States. One of the variables that was measured was the person's race who was taking the Black/White IAT. When self-reporting, the data show that there is a small preference for White People over Black People (Cohen's d = 0.29) and showed moderate implicit preference for White People over Black People (d = 0.74). These differences were then broken down by the race of the participant. "The different between explicit attitudes between Black (d = -0.73) and White (d = 0.59) show that a d_{diff} = 1.32. Implicit attitudes between Black (d = -0.09) and White (d = 0.96) with d_{diff} = 1.01" (Ratcliff et. al., 2022, p. 11). Over a span of eight years with a large sample size, the data were clear in that bias exists.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

The literature is vast when looking at the underrepresentation of gifted Black students in our schools. A comprehensive literature review in Chapter 2 looked at multiple definitions of giftedness, the under-identification of culturally and linguistically diverse students, with a focus on Black students, implicit bias, teacher perceptions, and Black community expectations. The need for this study and the gap that it could fill was addressed in the statement of the problem, the purpose of the study, and the significance of the study sections within Chapter 1. The first chapter also stated the purpose of the study and research questions. Independent variables included an educator's gender, race, possession of a high ability license, years of experience, highest collegiate degree obtained, and their professional role working with gifted youth. The dependent variable was their score on the Implicit Associations Test. This chapter includes null hypotheses that were tested, a rationale for this research design, methods used in the IAT, survey design, issues of trustworthiness, data sources, data collection, data procedures, limitations, delimitations, and the method of analysis.

The purpose of this quantitative study was to determine if an educator's implicit bias influences gifted programming identification for Black students in Indiana. Historically, looking at equitable representation has been a focus of researchers (Hodges, 2020) without any permanent solution. Legislation at the federal level, such as the Every Student Succeeds Act

(2015) which revitalized the Elementary and Secondary Education Act (1965), allowed for money to be redistributed for underrepresented gifted populations. Money was allocated to:

> Improve the skills of teachers, principals, or other school leaders in order to enable them to identify students with specific learning needs, particularly children with disabilities, English learners, students who are gifted and talented, and students with low literacy levels, and provide instruction based on the needs of such students. (ESEA section 2101 (d, 2, B)

However, when put into practice, the identification process of gifted youth, particularly those who are racial minorities, has been overlooked with a lack of specific focus in identification, programming, and follow-through.

The IAT developed by Greenwald and Banaji (1995) has been used to measure evaluative associations with underlying implicit attitudes. Prior to the development of the IAT, research had been conducted using facial electromyography (Vanman et al., 1997), amygdala activation using functional magnetic resonance imaging (Hart et al., 2000), eyeblink startle responses (Phelps et al., 2000, Amodio et al., 2003), and cardiovascular measures to stimuli (Blascovich et al., 2001). Over 20 years later, the IAT still remains to be one of the fastest growing instruments within modern day psychology ranging between broad and more specific tests (Epifania et al., 2022).

Implicit attitudes are "manifest as actions or judgement that are under the control of automatically activated evaluation, without the performer's awareness of that causation" (Greenwald et al., 1998, p. 1464). One key element is that the IAT can resist cognitive priming. Cognitive priming is where a categorized target or stimuli, is presented in the presence of a positive or negative target word (De Houwer et al., 2009). For instance, in order to measure the difference between Black and White people, a Black or White face can be shown along with a

positive or negative target word. When shown a Black or White face again and the option of two words, the speed in which the person responds with the positive word can show their unconscious preference. A slight delay in response time to either a White or Black face can show bias.
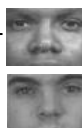
The IAT is designed in a way to time automatic responses between the individual taking the test and the stimuli on a computer screen (Greenwald et al., 1998). There are several sequences in the IAT as indicated by Figure 1. Two associations are assessed in the IAT, first an association between a target-concept discrimination, like identifying Black and White faces, and then in conjunction with attribute dimensions by associating words as being perceived as good or bad.

The first of seven sequences are to establish an initial target-concept discrimination. For example, identifying Black versus White. The computer screen in this first sequence would show traditionally Black or White faces which would coincide with a left or right response as indicated by the Black circles for the task instructions. Left or right keyboard responses are specifically identified before taking the test. On a traditional American keyboard, a left response could be indicated by pressing the *e* key, and the right response could be indicated by pressing the *i* key. The participant would then receive photographs of faces, to which they would respond if they were Black or White faces. The sample stimuli indicate how this participant could answer with the dash mark indicators to the left or right of the face which would match up with the Black (right) or White (left) response. Evaluating this first sequence would yield consistent results regardless of the participant. The second task is to associate good (left) versus bad (right) attributes. This second task is used to associate attribute discrimination. Once again, the evaluation of this task would remain consistent among the participants. The third and fourth task

is the initial combined task where Black (left), good (left), White (right), and bad (right) are used combining the first two sequences. The fifth sequence is to reverse the target-concept discrimination. In this instance, the Black and White are reversed, so the Black indicator is now on the left side, and the White indicator is now on the right side. During this sequence, faces were shown once again, and the participant must identify if they are Black or White faces. The sixth and seventh sequences involve a reversed combined task where the participant is asked to select a Black face (left), a good word (right), a White face (right), and a bad word (left). The third, fourth, sixth, and seventh sequences would begin to reveal attitudinal discrimination among the participants.

Figure 1

Implicit Association Test

Sequence	1	2	3	4	5	6	7
Task Description	Initial target concept discrimination	Associated attribute discrimination	Initial combined task	Initial combined task	Reverse target content discrimination	Reversed combined task	Reversed combined task
Task Instructions	Black- - White	Good- -Bad	-Bad -White Good- Black-	-Bad -White Good- Black-	-Black White-	Bad- White- -Good -Black	Bad- White- -Good -Black
Sample Stimuli	Happy — — Awful	Happy — — Awful	Happy — — Awful	Happy — — Awful		— Happy Awful —	— Happy Awful —

Note. This chart shows a sample stimulus from the IAT. Modified after "Measuring Individual Differences in Implicit Cognition: The Implicit Association Test," by A. Greenwald et al., 1998, *Journal of Personality and Social Psychology*, *74*(9), p. 1465.

Project Implicit (2011), a website maintained by researchers at Harvard University, lists the following implicit association tests that can be taken: Presidents, gender-science, sexuality, race, skin-tone, Asian, disability, weapons, weight, transgender, religion, gender-career, age, native, and Arab-Muslim. Most participants, regardless of their awareness of what the IAT is trying to study, might have felt obliged to correct their answers to satisfy the purpose of the experiment and to eliminate errors on their behalf. This delay in response is what is measured compared to the average latency between two combined tasks. An example with the race IAT would be if a Black + positive response time were quicker than White + negative response time. This would indicate that the participant would have a stronger association favoring Black over White stimuli with positive valence.

Researchers might wonder if doing an implicit bias test would be appropriate when participants can self-report their beliefs. Self-reporting beliefs tend to be motivated by social desirability (Hofmann et al., 2005). Fazio and Olson (2003) used a MODE (Motivation and Opportunity as Determinants) to show the relationship between explicit and implicit measures. Topics that were deemed as mundane generally showed a higher correlation between self-reports and implicit measures. However, when social sensitivity was involved, like it is on measures of race, the correlation was lower (Hofmann et al., 2005). This assessment, regardless of what participants vocalized, showed that when motivation or judgements were involved, self-reporting was not a reliable measure.

Purpose of the Study

It is hoped this study would determine if there were unconscious biases that Indiana educators have that negatively impact the identification of gifted Black youth for programming. This study would determine if there is a statistically significant difference between select

educator demographics who work with identifying gifted youth and the perceptions of potential biases that they may hold. By understanding if there are unconscious biases within those who hold power in identifying gifted students, this study would shine light on the issue so that schools would be able to focus on gifted identification in a more objective manner for all students. The independent/predictor variables in this study included gender, race, licensure type, years of experience, college education level, and educator position held. The dependent/criterion variable would be the implicit association composite score.

Research Questions

Data were collected for the following questions:

1. What is the state of implicit bias prevalence in identifying gifted Black students in the state of Indiana?

2. Is there a statistically significant difference based on gender, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

3. Is there a statistically significant difference based on race, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

4. Is there a statistically significant difference based on possession of a high ability license, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

5. Is there a statistically significant difference based on years of experience, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

6. Is there a statistically significant difference based on a person's highest collegiate degree obtainment, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

7. Is there a statistically significant difference based on a participant's professional role, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

Null Hypotheses

The null hypotheses for this study were as follows:

Question 2: $H_0 1$. There is not a statistically significant difference based on gender in the identification of Black students for gifted programming based on the Implicit Associations Test.

Question 3: $H_0 2$. There is not a statistically significant difference based on race in the identification of Black students for gifted programming based on the Implicit Associations Test.

Question 4: $H_0 3$. There is not a statistically significant difference based on an educator's possession of a high ability license in the identification of Black students for gifted programming based on the Implicit Associations Test.

Question 5: $H_0 4$. There is not a statistically significant difference based on years of experience in the identification of Black students for gifted programming based on the Implicit Associations Test.

Question 6: $H_0 5$. There is not a statistically significant difference based on an educator's highest college degree obtainment in the identification of Black students for gifted programming based on the Implicit Associations Test.

Question 7: $H_0 6$. There is not a statistically significant difference based on an educator's professional role in the identification of Black students for gifted programming based on the Implicit Associations Test.

Research Design Rationale

This quantitative study attempted to identify whether there were unconscious biases held by Indiana educators that negatively impact the identification of gifted Black youth for programming. The specific target participant were any educators who work as a teacher or in a central office with the identification process of gifted youth. Additionally, this study attempted to explain if there was a statistically significant difference between select educator demographics and those who work with identifying gifted youth. The independent variables for select educator demographics included gender, race, possession of a high ability license, years of experience, their highest collegiate degree obtained, and their professional role. A survey was conducted in two parts. The first part was a collection of educator demographics and the second portion was a collection of racial IAT specifically measuring the response of Black versus White.

The IAT was one of the first Web-based social cognition collection sites that studies attitudes about different social groups with over 1.5 million completed tasks within the first five years from its launch in 1998, averaging 150,000 hits per day (Nosek et al., 2002). Even through the use of a website, where participants can self-select the test that they would like to take, there has been a considerable difference between implicit and explicit measures. Cohen's *d* (Cohen, 1988) is a statistical measurement that interprets the magnitude of effect sizes. An effect size of .2 is considered small, .5 is considered medium, and .8 is considered large. Figure 2, below, shows the results preference for White over Blacks using Cohen's *d* (White respondents, $n = 103,316$, Black respondents, $n = 17,510$).

Figure 2

Preference for Whites over Blacks
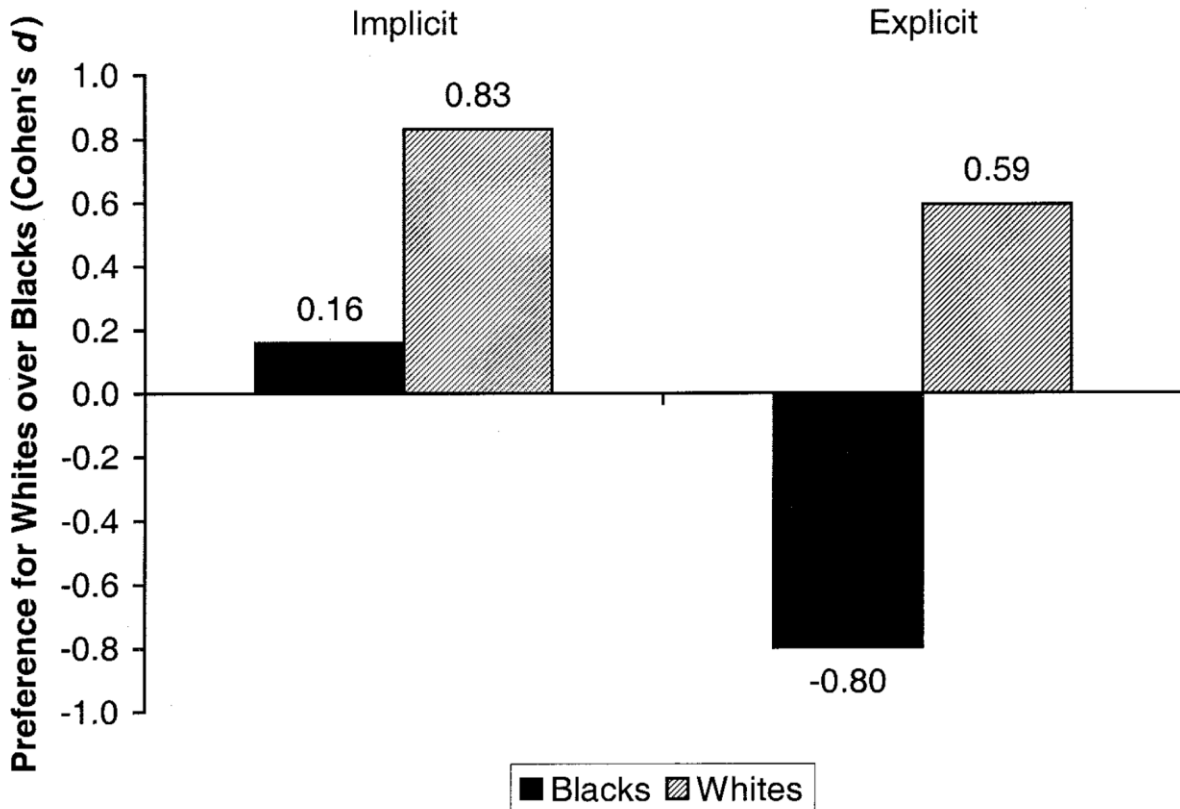
Note. This chart shows a sample stimulus from the IAT. From "Harvesting Implicit Group Attitudes and Beliefs from a Demonstration Web Site" by Nosek et al., 2002, *Group Dynamics: Theory, Research, and Practice*, *6*(1), p. 106.

The purpose of the survey instrument and rationale of completing the study have been identified in Chapter 1 and the literature review within Chapter 2. Following the planning of the survey design, this section also includes identifying the population, sampling, construction of the instrument, conducting the survey, and analysis of data steps. Each of these steps are discussed in this chapter.

Survey Design

The survey design was completed in two sections using Qualtrics to record the data. The first section of the survey was for the participant to share demographic information including their gender, race, if they possess a high ability license, their years of experience in education, their highest collegiate degree obtained, and their professional role within the school. The second section of the survey, which can be found in Appendix A, included the IAT for Black versus White comparison. Each question from the two surveys has a direct link to the literature review in Chapter 2.

The data collection instrument and questions went through Indiana State University Internal Review Board (IRB) approval. Following approval, participants were solicited through the Indiana Department of Education email list for licensed educators. The target population for these emails were urban districts that have a more diverse student population.

Issues of Trustworthiness

The survey questions used in Appendix A coincide with Chapter 2's literature review. The need for an online survey is high because Greenwald et al. (2009) found that reporting attitudes that the participant has little awareness of cannot be captured through self-reporting measures. Additionally, studies have repeatedly found good internal consistency regardless of the participant's awareness of the IAT (Greenwald et al., 2009). Due to the sheer magnitude of the IAT and the number of participants who have taken the test, test-retest reliability is an essential element to analyze. The Cronbach alpha reliability is one of the most widely used measures within social science (Bonett & Wright, 2015). According to Brunel et al. (2004) the IAT measures have a high internal consistency of .80 or higher which is desirable, with an average range from .70 to .90 on a multitude of categorical IATs (e.g., race, gender, disability;

Nosek et al., 2007). Additionally, the following elements have proven to have no effect on the reliability of the test:

(a)   Which hand is assigned to the pleasant category

(b)   Variability in the number of items used to represent categories

(c)   The familiarity of the items used to represent categories

(d)   Variability in the response-stimulus interval

(e)   The order of the mixed categorization tasks (Brunel et al., 2004, p. 391)

Another consideration was to look at the test-retest reliability which is measured by using Pearson's *r*. Across multiple studies, the test-retest reliability has shown a moderate to high correlation with results averaging .60 over the course of eight different studies (Nosek et al., 2007). Much like any test, results can vary based on the individual and their attentiveness to the test, if the participant is tired, or other extraneous circumstances.

Data Sources and Collection

Prior to the study, approval from the Indiana State University Internal Review Board was obtained. Once approved by the Indiana State University Internal Review Board, educators were emailed after immediate approval from their building principal or superintendent. The study sample was pulled from the Indiana Department of Education educator listserv. Each superintendent, who was in an urban or racially diverse district, received an email requesting participation from members of their district that work with the identification of high ability students. Once approval was given, specific educators were sent an email asking for participation. Specific demographics were collected from the participants including their gender, race, if they possess a high ability license, their years of experience in education, their highest collegiate degree obtained, and their professional role within the district. No other identifying

information was collected such as their name, address, school name, or district name. All participants were informed about how their participation is voluntary and that they can exit the survey, and their participation, at any time. Both the demographic and IAT surveys were set up in Qualtrics.

The launch date of the survey was in the beginning of February 2023. Due to the delay of start dates for educators in the second semester, February gave educators enough time to get settled into the school year while also being early enough to collect data during the spring semester. Reminders and follow-up emails were sent every two weeks encouraging participation. Additionally, if any participant had a question regarding the study at any point, they were able to contact Dr. Brad Balch or me through email correspondence.

To do a power analysis of the data, 100 participants for each independent demographic variable was ideal. Since 100 participants were not collected, the data was combined, removing non-essential variables, to create new independent variable categories. Once collected, descriptive and inferential statistics were calculated by pulling Qualtrics data into SPSS.

Data Procedures

Data were collected by sending out a survey to all Indiana educators, with superintendent and building principal approval, inviting their high ability staff to participate in this voluntary study. Data were collected and housed through Qualtrics and then run through IBM SPSS Version 26. Once the data were exported to SPSS, it was essential to see that all coding was correctly transferred. Accuracy of completion was checked prior to pulling the data into SPSS and participants with less than an 80% completion rate were removed due to insufficient data to analyze. All response rates were taken to form a composite score.

The IAT that was used for Qualtrics was based on a JavaScript application that imports the Black/White script into the survey instrument for analysis. The total time to take this survey was between 5–10 minutes. The IAT was broken down into 7 trial blocks in which a conventional algorithm is used which included:

(a)   Dropping the first two trials of test trial blocks for the IAT's two classification tasks (only scoring Blocks 3, 4, 6 and 7),

(b)   Recoding latencies outside of lower (300 milliseconds) and upper (3,000 milliseconds) boundaries to those boundary values,

(c)   Log-transforming latencies before averaging them,

(d)   Including error-trial latencies in analyzed data, and

(e)   Not using data from respondents for whom average latencies or error rates appear to be unusually high for the sample being investigated. (Greenwald et al., 2003, p. 197)

After the participants finished the IAT, a composite score was created looking at their average response times. Qualtrics collected the trial block, trial, condition (White people with bad words and Black people with good words), the compatibility of the participant's response, the type of stimulus that was given (a category in the form of a picture or an attribute in the form of a word), the category that it is testing (White/Black people, good/bad words), the stimulus shown (a picture or attribute in the form of a word), the participant's response, if there was an error in their response, and their response time to each item. A Cohen's *d* score is then formed based on response time and responses are then placed into three categories of bias: *strong*, *medium*, or *slight* strength in association.

Delimitations

Some delimitations include that this study was only measuring responses on the Black versus White IAT. Also, the only participants who responded were educators within Indiana that have a role in gifted education at the district or building level. This study was also a quantitative study that does not have a qualitative follow-up. One other delimitation was that this study was not being run as a deception study, which is a traditional route to measure implicit bias. Instead, participants were aware of what the study and the results it showed.

Method of Analysis

To understand the state of implicit bias prevalence in the state of Indiana, in research question 1, and how it might affect the identification of Black students for programming, descriptive analysis was used to determine if bias has any strong ties to the other independent variables that are being tested. The independent variables in this study are a combination of questions that were asked related to demographic information including gender, race, the possession of a high ability license, years of experience, their highest collegiate degree, and their professional role within the district.

The dependent variable being measured was the composite score from the IAT. Research question 2 regarding gender, question 4 regarding the possession of a high ability license, and question 7 regarding the participant's role in the classroom (classroom teacher or non-teacher) used an independent samples t-test to analyze results when compared to their IAT composition score. A t test "is a straightforward ratio that divides the observed difference between the means by the difference expected through chance alone" (Ary et al., 2010, p. 171). Each of these variables has an independent variable with two levels. Question 3 regarding race, question 5 regarding years of experience, and question 6 inquiring about the participant's highest college

degree with be analyzed using a one-way analysis of variance (ANOVA) when comparing this demographic data to their IAT composite score. An ANOVA was used when the researcher needs to analyze data with more than two groups (Ary et al., 2010). Due to having more than two groups, this leads to multiple comparisons, thus the need for an inferential technique that has a post hoc test. When the assumption of homogeneity of variance has been met, a Tukey HSD post hoc (honestly significant difference) test would be used. This was common in psychological research and used to "compute a single value that determines the minimum difference between treatment means that is necessary for significance" (Gravetter & Wallnau, 2017, p. 394). When the variances are not equal on the dependent variable scores among the different levels, then a Games-Howell post hoc test would be used (Boston University School of Public Health, n.d.). Furthermore, if the assumption of normality was violated, a nonparametric test must be used. This type of test does not assume that the outcome is approximately normally distributed. The post hoc tests and nonparametric measures would not be used unless necessary. All research questions were two tailed with a .05 alpha level.

Summary

The Implicit Association Test functions as a *barometer of inequality* but has remained useful in the field of systematic bias (Klein, 2020). By looking at the independent variables associated with educators within gifted education according to gender, race, possession of a high ability license, years of experience, highest collegiate degree obtainment, and their professional role, we can begin to shine a light on potential causes of educational inequities among Black students. By taking a consistent IAT composite score as the dependent variable, and using *t* tests and ANOVA, these predictor variables can start to give understanding to who, or what, might be contributing to underrepresentation of minority student in gifted programs in the state of Indiana.

In the next chapters, Chapter 4 will provide a detailed analysis of the findings and Chapter 5 will

provide a summary of the findings, implications, and ideas for future research.

CHAPTER 4

DATA ANALYSIS

This quantitative study sought to determine if Indiana educators held unconscious biases that could negatively impact the identification of gifted Black youth for services. Prior to the survey, specific demographic information including gender, race, if the person possessed a high ability license, years of experience, their highest collegiate degree, and their professional role acted as the independent/predictor variables. The dependent variable was the individual's composite score on the IAT.

The IAT is one of the most fundamental tests within the field of psychology (Carpenter et al., 2022) within the last two decades (Yamaguchi & Beattie, 2020) and continues to be used to measure stimuli that can detect racism, preference, and personality. Capturing response times to stimuli, even if they vary within milliseconds, suggests that strong associations can still be measured that determine a person's unconscious attitudes (Allidina et al., 2023). The IAT is research based on reliable findings. In previous studies, reliability within the IAT has shown consistent results with being reliable with Cronbach's α of $= 0.82 - 0.93$ (Bar-Anan & Nosek, 2014).

The survey was sent out to Indiana educators who are in areas in which they have a population of Black youth, and to those who have a role in identifying students for high ability services. These roles include but were not limited to classroom teachers, counselors,

administrators, and central office staff. In total, 855 surveys were sent out, 228 surveys were started, and 146 completed the survey with demographic information and the IAT results resulting in a 17% response rate.

To reveal the relationship between certain demographic information and results on the IAT, this study addressed the following questions:

1. What is the state of implicit bias prevalence in identifying gifted Black students in the state of Indiana?

2. Is there a statistically significant difference based on educators' gender, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

3. Is there a statistically significant difference based on educators' race, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

4. Is there a statistically significant difference based on educators' possession of a high ability license, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

5. Is there a statistically significant difference based on educators' years of experience, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

6. Is there a statistically significant difference based on educators' highest collegiate degree obtainment, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

7. Is there a statistically significant difference based on educators' professional role, in the identification of Black gifted students for programming, based on the Implicit Associations Test?

This survey was open for responses from February 15, 2023–March 22, 2023, giving participants five weeks to complete the survey with a reminder email sent on March 15, 2023. Responses were then analyzed for 100% completion and the data were disaggregated. This chapter provides a description of the data and the results from the study including descriptive data, inferential statistics, and a summary of the findings.

Descriptive Statistics

Survey Demographics

Demographic data were separated into gender, race, the possession of a high ability license, years of experience, their highest collegiate degree, and their professional role within the school. Of the 146 participants, 56 (38.4%) were male and 90 (61.6%) were female. Participant race was broken down into four categories with Black or African American representing one (0.7%) of the participants, 138 (94.5%) identifying as White, non-Hispanic, six (4.1%) identifying as Hispanic or Latino, and one (0.7%) identifying as other. A high ability license is not required within the state of Indiana to teach gifted youth, but 19 (13%) of the participants possessed a high ability license and 127 (87%) did not. When the population was divided by years of experience, 41 (28.1%) of the respondents reported having 0–10 years of experience, 48 (32.9%) reported having 11–20 years of experience, and 57 (39%) reported having 21 or more years of experience. The next category was if the educator possessed a bachelor's degree or a master's degree or higher. Of the respondents, 53 (36.6%) possessed a bachelor's degree, while only 93 (63.7%) reported having a master's degree or higher. Finally, the professional role of the educator was recorded into two categories: a classroom teacher or non-classroom teacher. Non-classroom teachers were identified as educators who have a role within the identification process of gifted youth but do not serve a role directly teaching

students. Positions within this category would include counselors, administrators, and central office staff. Of the participants, 97 (66.4%) were classroom teachers and 49 (33.6%) were non-classroom teachers.

The results of the IAT survey were broken down into strong (score that ranged between -2 to -.65 or .65 to 2), moderate (scores that ranged between -.64 to -.35 or .35 to .64), slight (scores that ranged from -.34 to -.15 or .15 to .34), or no automatic preference categories (scores that ranged from -.14 to .14). The overall survey was scored on a scale of -2, which is the strongest score for preference of White people over Black people, to 2 which is the strongest preference for Black people over White people. The results showed that 41 (28.1%) of participants showed strong automatic preference for White people over Black people, 50 (34.2%) showed moderate automatic preference for White people over Black people, 24 (16.4%) showed slight automatic preference for White people over Black people, 23 (15.8%) showed no automatic preference between Black people and White people, and 8 (5.5%) showed slight automatic preference for Black people over White people. No participants scored within the ranges of moderate automatic preference for Black people over White people, or strong automatic preference or Black people over White people.

IAT Results by Demographic

Gender. The whole group sample ($n = 146$) had scores that ranged from -1.97 to .48 with a mean of -.46 ($SD = .37$). The first piece of data collected was whether the participant was male or female. Males ($n = 56$) had scores that ranged from -.1.36 to .18 with a mean of -.45 ($SD = .35$) whereas their counterparts, females ($n = 90$) had scores that ranged from -1.97 to .48 with a mean of -.47 ($SD = .39$).

Race. Racial demographics were collected within four categories: Black or African American, White non-Hispanic, Hispanic or Latino, and other. Only one participant identified as Black or African American ($n = 1$) with a score of -0.02. Participants who responded as being White, non-Hispanic ($n = 138$) had scores that ranged from -1.97 to .48 with a mean of -.48 ($SD = .37$). Hispanic or Latino participants ($n = 6$) had scores that ranged from -.87 to .05 with a mean of -.27 ($SD = .33$). Finally, only one participant identified as other ($n = 1$) with a score of -.46.

High Ability License. Of the 146 participants, 19 reported that they currently possessed a high ability license within the state of Indiana with scores ranging from -1.36 to .05 with a mean of -.55 ($SD = .40$). Out of the participants without a high ability license ($n = 127$), scores ranged from -1.97 to .48 with a mean of -.45 ($SD = .37$). Possessing a high ability license is not a state requirement within the state of Indiana to teach gifted and talented students or make decisions regarding their placement.

Years of Experience. Demographic data for years of experience were divided into three distinct categories. Participants with 0–10 years of experience ($n = 41$) had scores that ranged from -1.10 to .48 with a mean of -.42 ($SD = .31$). Educators who said that they had 11–20 years of experience ($n = 48$) had scores that ranged from -1.36 to .44 with a mean of -.44 ($SD = .37$). The last group who reported having 21 years of experience or more ($n = 57$) had scores that ranged from -1.97 to .22 with a mean of -.52 ($SD = .41$).

Highest Collegiate Degree. The next piece of data that was collected was regarding the participant's highest level of education. Participants who have a bachelor's degree ($n = 53$) had scores that ranged from -1.36 to .48 with a mean of -.43 ($SD = .34$). Those who reported having a master's degree or higher ($n = 93$) had scores of -1.97 to .44 with a mean of -.48 ($SD = .39$).

Professional Role. Participants were then asked to describe their professional role. Specifically, they were asked if they were a classroom teacher or a non-classroom teacher. Non-classroom teacher includes positions like counselor, administrator, or central office staff. Of the participants who reported being classroom teachers ($n = 97$) their scores ranged from -1.36 to .48 with a mean of -.43 ($SD = .33$). Non-classroom teachers ($n = 49$) had scores that ranged from -1.97 to .44 with a mean of -.53 ($SD = .44$).

IAT Preference Results. Among the 146 participants, those whose results were a strong automatic preference for White people over Black people ($n = 41$) had scores that ranged from -1.97 to -.65 with a mean of -.89 ($SD = .23$). Participants who scored within the moderate preference for White people over Black people ($n = 50$) had scores that ranged from -.64 to -.35 with a mean of -.50 ($SD = .09$). The results for slight automatic preference for White people over Black people ($n = 24$) had scores that ranged from -.34 to -.15 with a mean of -.24 ($SD = .07$). Participants who scored within the results of no automatic preference between Black people and White people ($n = 23$) had scores that ranged from -.13 to .14 with a mean of -.01 ($SD = .08$). The last category for participants were the ones that scored within the category of slight automatic preference for Black people over White people ($n = 8$) with scores ranging from .15 to .48 with a mean of .30 ($SD = .15$).

Frequencies for Strong Automatic Preference for White over Black. For the category of strong automatic preference for White people over Black people ($n = 41$), males represented 11 (26.8%) of the category while females represented 30 (73.2%). When comparing this to the whole sample, females did represent a larger portion compared to the total survey sample of females of 61.6%. The percentage of females who were in the strong automatic preference for White over Black were 11.6% higher than the overall female participation rate.

When looking at the breakdown of participants within this category, 40 (97.6%) were White, non-Hispanic and one person (2.4%) was Hispanic or Latino. Compared to the overall participation average of 94.5% of the participants being White, this category is slightly higher. Likewise, only one of the six people who identified as Hispanic or Latino scored within this range. Data for Black or African American and other races were excluded due to no participants scoring as having a strong automatic preference for White people over Black people.

For those participants who scored as having a strong preference for White people over Black people, seven (17.1%) stated that they currently possessed a high ability license. Compared to the sample size with 13% reporting that that they had a high ability license, the results for this category were slightly larger. The other group of participants who reported that they did not have a high ability license were 34 (82.9%) of the individuals which was slightly lower than the overall sample size reporting that 87% did not possess a license.

The breakdown of participants within this score range for years of experience, 10 (24.4%) reported to have 0–10 years of educational experience. Those who reported having 11–20 years of experience included 12 (29.3%) participants. Respondents with 21 years of experience or more made up 19 (46.3%) of this category which was slightly larger than the overall sample size by 7.3%. The two former categories were slightly under the overall sample size within 3.7% and 3.6% respectively.

When reporting their highest level of education, 12 (29.3%) had a bachelor's degree and 29 (70.7%) had a master's degree or higher. Compared with the overall sample size, those that had a bachelor's degree was 7% lower. Inversely, those who had a master's degree was 7% higher than the overall sample size.

The final category was an educator's professional role. Of those who had a score range within the strong automatic preference for White people over Black people, 24 (58.5%) were classroom teachers and 17 (41.5%) were non-classroom teachers. These results differed from the total sample in that they were 7.9% less for classroom teachers and 7.9% more for the non-classroom teachers.

Frequencies for Moderate Automatic Preference for White over Black. For the category of strong automatic preference for White people over Black people ($n = 50$), males represented 26 (52%) of the category while females represented 24 (48%). When comparing this to the overall sample data, 13.6% more men were represented in this category and 13.6% less women scored as moderate automatic preference for White people over Black people. Most of the males, compared to the overall sample size of men ($n = 56$) fell into this moderate bias of White people over Black people category.

When looking at the breakdown of participants within this category, 49 (98%) were White, non-Hispanic and one person (2%) identified their race as other. Compared to the overall participation average of 94.5% of the participants being White, this category is slightly higher. Additionally, the only person who classified their race as other fell into this category.

Participants who scored as having a moderate preference for White people over Black people, four (8%) stated that they currently possessed a high ability license. Compared to the sample size with 13% reporting that that they had a high ability license, the results for this category were smaller by 5%. The other group of participants who reported that they did not have a high ability license were 46 (92%) of the individuals, which was slightly higher than the overall sample size reporting that 87% did not possess a license.

The breakdown of participants within this score range for years of experience, 13 (26%) reported to have 0–10 years of educational experience which was 2.1% fewer than the sample population. Those who reported having 11–20 years of experience included 18 (36%) participants which was 3.1% higher than the overall data. Respondents with 21 years of experience or more made up 19 (38%) of this category, which was 1% lower than the total participants with the same experience.

When reporting their highest level of education, 19 (38%) had a bachelor's degree and 31 (62%) had a master's degree or higher. Compared with the overall sample size, those that had a bachelor's degree was 2.3% higher. Those who had a master's degree were 1.7% lower than the overall sample size.

The final category was an educator's professional role. Of those who had a score range within the moderate automatic preference for White people over Black people, 38 (76%) were classroom teachers and 12 (24%) were non-classroom teachers. Nearly 9.6% more classroom teachers were in this category compared to non-classroom teachers compared to the overall sample dataset.

Frequencies for Slight Automatic Preference for White over Black. Participants who scored as having a slight automatic preference for White people over Black people had a total of 24 ($n = 24$) individuals. Males represented 8 (33.3%) of the category while females represented 16 (66.7%). When comparing this to the overall sample data, 5.1% more women than men were represented in this category of slight automatic preference for White people over Black people compared to the overall sample.

When looking at the racial breakdown of participants within this category, 21 (87.5%) were White, non-Hispanic and three (12.5%) were Hispanic or Latino. Compared to the overall

participation average of 94.5% of the participants being White, this category is slightly lower. Additionally, half of the Hispanic or Latino respondents fell into this slight automatic preference for White people over Black people.

Participants who scored as having a slight preference for White people over Black people, three (12.5%) stated that they currently possessed a high ability license. The other group of participants who reported that they did not have a high ability license were 21 (87.5%) of the individuals. Compared to the sample dataset where 13% had a high ability license and 87% who did not, these results are very similar.

The breakdown of participants within this score range for years of experience, 10 (41.7%) reported to have 0–10 years of educational experience which was 15.7% higher than the sample population with similar experience. Those who reported having 11–20 years of experience included six (25%) participants which was 9.8% less than the overall data within the same range. Respondents with 21 years of experience or more made up 8 (33.3%) of this category which was 5.8% lower than the total participants with the same experience.

When reporting their highest level of education, 12 (50%) had a bachelor's degree and 12 (50%) had a master's degree or higher. Compared with the overall sample size, those that had a bachelor's degree was 13.4% higher. Those who had a master's degree was 13.4% lower than the overall sample size.

The final category was an educator's professional role. Of those who had a score range within the slight automatic preference for White people over Black people, 15 (62.5%) were classroom teachers and nine (37.5%) were non-classroom teachers. Slightly more non-classroom teachers by 3.9% had scores within this category compared to classroom teachers with slightly less than the overall data average for professional role.

Frequencies for No Automatic Preference for Black over White. Participants who scored as having no automatic preference for Black people over White people had a total of 23 (*n* = 23) individuals. Males represented 10 (43.5%) of the category while females represented 13 (56.5%). When comparing this to the overall sample data, 5.1% more men than women were represented in this category of no automatic preference for Black people over White people compared to the overall sample.

When looking at the racial breakdown of participants within this category one (4.3%) individual was Black or African American, 20 (87%) were White, non-Hispanic and 2 (8.7%) were Hispanic or Latino. Compared to the overall participation average of 94.5% of the participants being White, this category is slightly lower. Additionally, 33% of the Hispanic or Latino respondents fell into the no automatic preference for Black people over White people.

Participants who scored as having a slight preference for Black people over White people, three (13%) stated that they currently possessed a high ability license. The other group of participants who reported that they did not have a high ability license were 20 (87%) of the individuals. These results are representative of the overall sample size for those who do or do not have a high ability license.

The breakdown of participants within this score range for years of experience, 6 (26.1%) reported to have 0–10 years of educational experience which was 2% lower than the sample population with similar experience. Those who reported having 11–20 years of experience included 8 (34.8%) participants which was 1.9% higher than the overall data within the same range. Respondents with 21 years of experience or more made up 9 (39.1%) of this category which was only 0.1% higher than the total participants with the same experience.

When reporting their highest level of education, eight (34.8%) had a bachelor's degree and 15 (65.2%) had a master's degree or higher. Compared with the overall sample size, those that had a bachelor's degree was 1.5% lower. Those who had a master's degree were 1.5% higher than the overall sample size.

The final category was an educator's professional role. Of those who had a score range within the no automatic preference for Black people over White people, 16 (69.6%) were classroom teachers and seven (30.4%) were non-classroom teachers. Slightly more classroom teachers by 3.2% had scores within this category compared to non-classroom teachers with slightly less than the overall data average for professional role.

Frequencies for Slight Automatic Preference for Black over White. Participants who scored as having slight automatic preference for Black people over White people had a total of eight ($n = 8$) individuals. Males represented one (12.5%) of the category while females represented 7 (87.5%). When comparing this to the overall sample data, 25.9% more women than men were represented in this category of slight automatic preference for Black people over White people compared to the overall sample.

When looking at the racial breakdown of participants within this category all eight (100%) were White, non-Hispanic. Compared to the overall participation average of 94.5% of the participants being White, this category is slightly higher. There were not any minorities from the overall sample data that showed preference for Black people over White people in this study.

Participants who scored as having a slight preference for Black people over White people, two (25%) stated that they currently possessed a high ability license. The other group of participants who reported that they did not have a high ability license were six (75%) of the

individuals. These results, when compared to the overall sample data, include 12% more who possessed a high ability license and 12% less for those who did not.

The breakdown of participants within this score range for years of experience, 2 (25%) reported to have 0–10 years of educational experience which was 3.1% lower than the sample population with similar experience. Those who reported having 11–20 years of experience included 4 (50%) participants which was 17.1% higher than the overall data within the same range. Respondents with 21 years of experience or more made up 2 (25%) of this category, which was 14% lower than the total participants with the same experience.

When reporting their highest level of education, two (25%) had a bachelor's degree and 6 (75%) had a master's degree or higher. Compared with the overall sample size, those that had a bachelor's degree was 11.3% lower. Those who had a master's degree was 11.3% higher than the overall sample size.

The final category was an educator's professional role. Of those who had a score range within the slight automatic preference for Black people over White people, five (50%) were classroom teachers and four (50%) were non-classroom teachers. Compared to the overall sample population, this made up 16.4% fewer classroom teachers and 16.4% more non-classroom teachers.

Inferential Statistics

Research Question 2

Question 2: $H_0 1$. There is not a statistically significant difference based on gender in the identification of Black students for gifted programming based on the Implicit Associations Test. The first null hypothesis used an independent samples *t*-test because there were two levels of my independent variable, and the goal was to determine if there were any statistically significant

differences on the dependent variable score which was the IAT result. The assumptions used for independent samples t-test include detecting outliers, normality, and homogeneity of variance. Detecting outliers is essential to process stability and to ensure that there are not any outliers within the dependent variable scores of either group and the assumption was met as no data points more than 1.5 standard deviations away from the box when plotted (Khakifirooz et al., 2021). It was also imperative to test for normality using the Shapiro-Wilk test (Possolo et al., 2021) which looks to ensure that scores for the dependent variable are normally distributed for both groups. This assumption was met if the p value (significance value) is greater than .05 (Ruxton et al., 2015). The last assumption is homogeneity of variance which uses the Levene's Test of Equality of Variances to ensure that variances within both groups on the dependent variable are equal which is met with a p value of 0.18 (Gravetter & Wallnau, 2017). The assumption of homogeneity of variance was met with a non-significant Levene's Test with $F = 1.90$, $p = .18$

When examining the IAT results between males and females within this null hypothesis, there was no significant difference. This is evident through an independent samples t-test where $t(144) = .45$, $p = .66$, two-tailed. The male group ($M = -.45$, $SD = .35$) and female group ($M = -.47$, $SD = .39$) did not demonstrate significant difference. The differences within the means can be attributed to chance. The first null hypothesis has been retained.

Research Question 3

Question 3: $H_0 2$. There is not a statistically significant difference based on race in the identification of Black students for gifted programming based on the Implicit Associations Test. The second null hypothesis was not tested because of the majority of respondents being White, non-Hispanic. With one respondent being Black or African American, six Hispanic or Latino,

and one race labeled as other, one-way ANOVA is subject to issues with uneven sample sizes. With three groups having less than 10 responses, running a test would not portray generalizable findings.

Research Question 4

Question 4: H_03. There was not a statistically significant difference based on an educator's possession of a high ability license in the identification of Black students for gifted programming based on the Implicit Associations Test. The assumptions used for independent samples t-test include detecting outliers, normality, and homogeneity of variance. There were no outliers within the dependent variable scores with no data points more than 1.5 standard deviations away from the mean. The Shapiro-Wilk test ensures that scores for the dependent variable are normally distributed for both groups. This assumption was met with a $p = .28$. The assumption of homogeneity of variance was met with a non-significant Levene's Test with $F = .17, p = .68$. When examining the IAT results between those who have a high ability license and those who do not, within this null hypothesis, there was no significant difference. This is evident through an independent samples t-test where $t(144) = -1.09, p = .28$, two-tailed. The group that possessed the high ability license ($M = -.55, SD = .40$) and the group who did not have their high ability license ($M = -.45, SD = .37$) did not demonstrate significant difference. The differences within the means can be attributed to chance. The third null hypothesis has been retained.

Research Question 5

Question 5: H_04. There is not a statistically significant difference based on years of experience in the identification of Black students for gifted programming based on the Implicit Associations Test. For this null hypothesis a one-way ANOVA was used because there were three levels with multiple comparisons. The assumptions used for independent samples t-test

include detecting outliers, normality, and homogeneity of variance. There were no outliers within the dependent variable scores with no data points more than 1.5 standard deviations away from the mean. The Shapiro-Wilk test ensures that scores for the dependent variable are normally distributed for both groups. This assumption was met with a $p = .35$. The assumption of homogeneity of variance was met with a non-significant Levene's Test with $F(2,143) = .94$, $p = .39$. This is evident through a one-way ANOVA where $F(2,143) = 1.05$, $p = .35$. The group that had 0–10 years of experience ($M = -.42$, $SD = .31$), the group with 11-20 years of experience ($M = -.43$, $SD = .37$), and the group who had 21 or more years of experience ($M = -.52$, $SD = .41$) did not demonstrate significant difference. With no significant difference, the post hoc analysis was not required. The differences within the means can be attributed to chance. The fourth null hypothesis has been retained.

Research Question 6

Question 6: H_05. There is not a statistically significant difference based on an educator's highest college degree obtainment in the identification of Black students for gifted programming based on the Implicit Associations Test. The assumptions used for independent samples t-test include detecting outliers, normality, and homogeneity of variance. There were no outliers within the dependent variable scores with no data points more than 1.5 standard deviations away from the mean. The Shapiro-Wilk test ensures that scores for the dependent variable are normally distributed for both groups. This assumption was met with a $p = .44$. The assumption of homogeneity of variance was met with a non-significant Levene's Test with $F = .79$, $p = .38$. When examining the IAT results between those who had a bachelor's degree and those who have a master's degree or higher within this null hypothesis, there was no significant difference. This is evident through an independent sample t-test where $t(144) = .77$, $p = .44$, two-tailed. The

group that had a bachelor's degree ($M = -.45$, $SD = .34$) and the group that had a master's degree or higher ($M = -.48$, $SD = .39$) did not demonstrate significant difference. The differences within the means can be attributed to chance. The fifth null hypothesis has been retained.

Research Question 7

Question 7: H_06. There is not a statistically significant difference based on an educator's professional role in the identification of Black students for gifted programming based on the Implicit Associations Test. The assumptions used for independent samples t-test include detecting outliers, normality, and homogeneity of variance. There were no outliers within the dependent variable scores with no data points more than 1.5 standard deviations away from the mean. The Shapiro-Wilk test ensures that scores for the dependent variable are normally distributed for both groups. This assumption was met with a $p = .15$. The assumption of homogeneity of variance was met with a non-significant Levene's Test with $F = 2.91$, $p = .09$. When examining the IAT results between those who were classroom teachers and those who were non-classroom teachers within this null hypothesis, there was no significant difference. This is evident through an independent sample t-test where $t(144) = 1.45$, $p = .15$, two-tailed. The group that had classroom teachers ($M = -.43$, $SD = .33$) and the group that had non-classroom teachers ($M = -.52$, $SD = .44$) did not demonstrate significant difference. The differences within the means can be attributed to chance. The sixth null hypothesis has been retained.

<div align="center">**Summary**</div>

This chapter outlined the descriptive and inferential statistics for demographic data of educators and IAT results. Although, there were some descriptive statistics for seven research questions comparing educator demographic data to their scores on the IAT. Data that were

collected included the participant's gender, race, if they possessed a high ability license, their years of experience, their highest collegiate degree, and their professional role. A total of 146 responses were collected with frequencies including a strong automatic preference for White people over Black people, moderate automatic preference for White people over Black people, slight preference for White people over Black people, no automatic preference for Black people over White people, and slight automatic preference for Black people over White people.

The overall IAT results showed generalized bias favoring White people over Black people; however, there was not any statistical significance between demographic variables that were collected, and all nulls were retained. By using *t*-tests and one-way ANOVAs, the data were able to be tested, run for assumptions, and interpreted. In Chapter 5 there will be a discussion and summary of the findings, implications, areas for future research, and a summary of the study.

CHAPTER 5

FINDINGS, IMPLICATIONS, LIMITATIONS, AND FUTURE RESEARCH

This quantitative study examined if underlying implicit biases were held among Indiana educators that might affect the identification of gifted Black students for programing. This chapter is divided into five sections. The first section provides a discussion and summary of the findings. Section two offers implications for Indiana educators and how they relate to gifted education and the identification of Black youth. Limitations to the study are then discussed and their potential impact to the overall study. Finally, the third section is a discussion of future research with recommendations followed by a brief conclusion.

Discussion of Findings

The overarching question in this study was, "What is the state of implicit bias prevalence in identifying gifted Black students in the state of Indiana?" In this study, research was conducted using quantitative methods by testing Indiana educator's demographic data against their results on the IAT. Through descriptive and inferential statistics, the null hypotheses were retained. Although no statistically significant findings were found among different educator demographic data, this study still served to show that biases do exist among Indiana educators.

The IAT was developed in 1997, and although it is the most prevalent way to measure for bias in a range of areas, a resurgence of this test has been in use since the onset of the COVID-19 pandemic in 2020 (Salem & Tillis, 2021). During this time of reimagining education when

schools were delivering instruction virtually and political turmoil included incidences of police brutality and the insurgence of the Black Lives Matter movement, equality, or lack thereof, was being discussed at every angle, including education. To date, most implicit bias research was connected to the field of education through the lens of discipline within schools. However, with Indiana having an underrepresentation of gifted Black students (Wang, 2018), connecting the field of gifted identification and implicit bias was crucial.

The nature of this research study was unique in its design in that the IAT includes a series of timed automatic responses between the individual taking the test and stimuli presented on the computer screen (Greenwald et al., 1998). In a series of seven sequences in the IAT, only four of the sequences go into creating a participant's composite score. The composite score shows a result between -2 and 2. A score of -2 indicated the strongest automatic preference for White over Black people and a 2 indicates the most strong automatic preference for Black over White people. Unlike a traditional survey where each question can be broken down and analyzed, the IAT produces an overall combined composite score. The analysis in this study came because of collecting educator demographic data and comparing it to the participant's overall IAT score.

Research Question 2

Is there a statistically significant difference based on gender, in the identification of Black gifted students for programming, based on the Implicit Associations Test? H_01. There is not a statistically significant difference based on gender in the identification of Black students for gifted programming based on the Implicit Associations Test. This question was asked to determine if there was a statistically significant difference among gender among participants who took the IAT. The whole same ($n = 146$) had scores that ranged from -1.97 to .48 with a mean of -.46 ($SD = .37$). Males ($n = 56$) had composite scores ranging from -1.36 to .18 with a mean of

-.45 (*SD* = .35). Most of the participants in this study were female. Female (*n* = 90) scores

ranged from -1.97 to .48 with a mean of -.47 (*SD* = .39). Both groups had participants fall in

every category represented in this study from strong automatic preference for White over Black

to slight automatic preference for Black over White. However, the female scores, with a higher

standard deviation, yielded to the extremes of either end. An independent sample t-test was used

to show no significant difference between genders and IAT results where *t*(144) = .45, *p* = .66,

two-tailed.

One potential rationale for more females scoring higher in the strong automatic

preference for White over Black and along the continuum is due to the number of females in the

profession in general. In this study, 61.6% of participants were female. According to the

Consortium for Policy Research in Education, a female majority has been prevalent for the last

decade with a steady incline with an average of 76% nationwide (Ingersoll et al., 2018).

Naturally, with a larger sample of females in this study, a wider range of scores could be

expected.

Research Question 3

Is there a statistically significant difference based on race, in the identification of Black

gifted students for programming, based on the Implicit Associations Test? H₀2. There is not a

statistically significant difference based on an educator's race in the identification of Black

students for gifted programming based on the Implicit Associations Test. This research question

and null hypothesis was not tested due to the small sample size for Black or African American,

Hispanic, or other races. Approximately 92.6% of Indiana educators are White (National Center

for Education Statistics, 2020) and in this study 94.5% (*n* = 136) of respondents were White.

Even with reaching out to diverse school districts, the number of minority educators are still few.

Research Question 4

Is there a statistically significant difference based on the possession of a high ability, in the identification of Black gifted students for programming, based on the Implicit Associations Test? H₀3. There is not a statistically significant difference based on an educator's possession of a high ability license in the identification of Black students for gifted programming based on the Implicit Associations Test. A high ability license is not required in the state of Indiana in order to teach or serve gifted youth. Of the 146 participants, 19 reported that they currently possessed a high ability license. Scores from the participants with a high ability license ($n = 19$) had scores that ranged from -1.36 (strong automatic preference for White over Black) to .05 (no automatic preference for Black over White) with a mean of -.55 ($SD = .40$). The majority of the participants in this study did not possess a high ability license ($n = 127$) and had score ranges from -1.97 (strong automatic preference for White over Black) to .48 (slight automatic preference for Black over White) with a mean of -.45 ($SD = .37$). The assumption of homogeneity of variance was met with a non-significant Levene's Test with $F = .17$, $p = .68$. An independent sample t-test was used where $t(144) = -1.09$, $p = .28$, two-tailed. The possession of a high ability license did not demonstrate significant difference.

Research Question 5

Is there a statistically significant difference based on years of experience, in the identification of Black gifted students for programming, based on the Implicit Associations Test? H₀4. There is not a statistically significant difference based on years of experience in the identification of Black students for gifted programming based on the Implicit Associations Test. In this demographic question, years of experience were divided into three categories. The group that had 0–10 years of experience ($n = 41$) had scores that ranged from -1.10 (strong automatic

preference for White over Black) to .48 (slight automatic preference for Black over White) with a mean of -.42 (*SD* = .31). The group with 11–20 years of experience (*n* = 48) had scores that ranged from -1.36 (strong automatic preference for Black over White) to .44 (slight automatic preference for Black over White) with a mean of -.44 (*SD* = .37). Finally, the group who had 21 or more years of experience (*n* = 57) had scores that ranged from -1.97 (strong automatic preference for White over Black) to .22 (slight automatic preference for Black over White) with a mean of -.52 (*SD* = .41). The assumption of homogeneity of variance was met with a non-significant Levene's Test with $F(2,143) = .94$, $p = .39$. With no significant difference, the post hoc analysis was not required. This is evident through a one-way ANOVA where $F(2,143) = 1.05$, $p = .35$.

Years of experience within education also allude to the age of the participant who was taking the survey. Very heavy bias favoring White versus Black people existed among all of the years of experience group; however, as years of experience increased, the intensity of the strong automatic preference for White over Black increased with scores ranging from -1.97 in those with 21 or more years of experience compared with those who have 11–20 years of experience with -1.36, and those with 0–10 years of experience at -1.10. Conversely, the least among of experience also tended to yield a higher score leaning towards slight automatic preference for Black over White. The difference among means was .10 between those with less than 10 years of experience and those who had 21 years or more. In a study by Solola et al. (2020), researchers found that younger generations show less bias to minority groups than older generations. Some of this is attributed to the Obama effect (Welch & Sigelman, 2011) where White majorities were exposed to a Black leader who negated typical Black stereotypes such as laziness and unintelligent. This would coincide with this group who had 0–10 years of experience having

been brought up in this era with a Black man as president. Simply stated, younger generations tend to be more open minded than older generations; however, based on the results of this study and the connection to Indiana educators, there still is a long way to go for true equity.

Research Question 5

Is there a statistically significant difference based on a person's highest collegiate degree attainment, in the identification of Black gifted students for programming, based on the Implicit Associations Test? $H_0$5. There is not a statistically significant difference based on an educator's highest college degree attainment in the identification of Black students for gifted programming based on the Implicit Associations Test. Of the 146 participants in this study, those who had a bachelor's degree ($n = 53$) scores ranged from -1.36 (strong automatic preference for White over Black) to .48 (slight automatic preference for Black over White) with a mean of -.43 ($SD = .34$). Those who stated that they had a master's degree or higher ($n = 93$) had scores that ranged from -1.97 (strong automatic preference for White over Black) to .44 (slight automatic preference for Black over White) with a mean of -.48 ($SD = .39$). The assumption of homogeneity of variance was met with a non-significant Levene's Test with $F = .79$, $p = .38$. Additionally, no significant difference was found between collegiate degree obtainment this is evident through an independent sample t-test where $t(144) = .77$, $p = .44$, two-tailed.

In this study, those with a master's degree or higher had more extreme scores than those who earned a bachelor's degree. One potential cause of this result could be that there was a larger sample size for those who had a master's degree or higher. Another possible cause could be that those with a bachelor's degree might have the least amount of experience and represent the younger teachers with less experience. Some might argue that the more educated the person is, the more adverse they might be to bias. In a study by Kuppens and Spears (2014), they found

that those who are more educated tend to display less explicit bias, but it has no effect on their implicit bias scores. Conversely, several studies have been done that have shown the opposite: that those with higher cognitive abilities tend to associate with lower anti-Black bias and a greater tolerance of those who present in minority groups (Wodtke, 2016). These studies, however, do not specifically target educators nor are they located within the state of Indiana.

Research Question 6

Is there a statistically significant difference based on a participant's professional role, in the identification of Black gifted students for programming, based on the Implicit Associations Test? H₀5. There is not a statistically significant difference based on an educator's professional role in the identification of Black students for gifted programming based on the Implicit Associations Test. Participants, when asked their professional role, were asked if they were a classroom teacher or a non-classroom teacher. Non-classroom teachers included positions like counselors, administrators, and central office staff. Most of the participants represented classroom teachers ($n = 97$) with scores ranging from -1.36 (strong automatic preference for White over Black) to .48 (slight automatic preference for Black over White) with a mean of -.43 ($SD = .33$). Non-classroom teachers ($n = 49$) had scores that ranged from -1.97 (strong automatic preference for White over Black) to .44 (slight automatic preference for Black over White) with a mean of -.53 ($SD = .44$). The assumption of homogeneity of variance was met with a non-significant Levene's Test with $F = 2.91$, $p = .09$. Additionally, there was no statistical significance between groups which was evident through an independent sample t-test where $t(144) = 1.45$, $p = .15$, two-tailed.

One potential argument as to why non-classroom teachers have more extreme scores than classroom teachers, even with a smaller sample size, might be that those individuals who took

the survey have never worked in a classroom setting with students. Likewise, those who are classroom teachers might be more apt to think about specific students that they have while they were taking the survey, making the survey more personal. Bias does not differentiate based on educational position, however. Confirmation bias, which can lead to a vicious cycle of implicit bias, is when the individual seeks out information to confirm what beliefs they held are true (Scott, 2021).

Implications

The implications of this study yield for changes within national and state policy, district leadership and high ability programming, and classroom teaching. Although there were no significant findings between certain demographic variables collected, the overall results show a very real implicit bias favoring White people over Black people. Knowing this, and being able to act on it, can greatly impact future generations of Black students who are deserving of high ability services in the future.

National and State Policy

When NAGC published the *State of the States in Gifted Education* (Rinn et al., 2022) report, the intentionality of including specific mention of population domains including low socio-economic status, culturally and ethnically diverse gifted students, and geographic location proved to be promising. However, when put into action, states have control over how they collect data and what they do with the data. Indiana is one of 32 states that collects data about various sub-groups. Going further with that data leaves much to be desired as Indiana lets local decision makers decide, if they choose, to have a policy to permit early entrance to kindergarten, have an acceleration policy, require teachers to have specific gifted and talented training, or track achievement and learning growth of gifted students according to the NAGC (2023) data.

Knowing that bias exists among Indiana educators, this should serve as a catalyst for change in several domains. First, gifted funding in the state of Indiana has not changed since 2011 with $12,548,096 being used state-wide (NAGC, 2023). With over 145,457 identified gifted students within the state, that leaves an average of $86 per pupil under the assumption that dollars are being used for gifted services, and that they are being evenly distributed. Secondly, the results of this study show that bias does exist among Indiana educators. With that in mind, being intentional about how to help a marginalized population is essential. Funding within the state needs to be available for the identification of gifted youth, universal screening using non-verbal assessments, and funding for current gifted programming. Only one state, in 2021, reported that they specifically use funding to address the equity and excellence gap by putting that money towards identifying underrepresented gifted youth; that state was North Carolina (Rinn et al., 2022). Finally, as the COVID-19 pandemic has subsided, it is important for our state legislators to refocus on meeting the needs of all our children especially those who have been neglected time and time again.

District Leadership and High Ability Programming

The 2022 NAGC *State of the States Report* (Rinn et al.) suggested several ways that states are currently trying to address the equity/excellence gap and some suggestions for district leadership and high ability program coordinators. Potential options to identify more gifted Black students for programming could include teacher training and professional development, culturally responsive teaching, using alternative assessments, universal screening, and using specialized checklists geared towards CLD students.

It is imperative that district leadership understands and accepts that bias exists among Indiana educators. As a result, an increase in multicultural education with an emphasis on

culturally responsive teaching and understanding diversity is critical. The National Council for Accreditation of Teacher Education requires students at higher education institutes to take a multicultural class and to learn about how diversity is an asset to schools (NCATE, 2011). However, pre-service teaching courses and implementing programs in practice are two very different ideas. Wells (2020) argued that the first step in implementing a culturally responsive curriculum is to acknowledge that teacher perceptions do impact the classroom and create cultural conflict. Schools need to implement culturally responsive teaching where cultural diversity is accepted, discussed, and used within schoolwide pedagogy (Yilmaz & Gunel, 2022). By having district leaders train teachers in culturally responsive practices, educators, in any role, would add values such as "justice, sensitivity, equality, respect, benevolence, empathy, and awareness of stereotypes of prejudices" (Yilmaz & Gunel, 2022, p. 124).

Classroom Teaching

Identifying bias by using an instrument such as the IAT is an excellent resource that classroom teachers can use to begin addressing potential bias that they might have within their classroom. Another technique is for teachers to identify and facilitate discussion around microaggressions. Microaggressions are "brief and commonplace daily verbal, behavioral, or environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial slights and insults towards people of color" (Sue et al., 2007, p. 271). A few strategies that classroom teachers can use to identify if they are using microaggressions or are presenting bias is to record a lesson, keep a journal of potential incidents, and read scholarly articles (Darvin, 2018). Another strategy by Harper and Davis (2016) in their article *Eight Actions to Reduce Racism in College Classrooms*, the information can be expounded to a broader K-12 classroom as well. The authors suggested the following:

recognize implicit bias and remediate racial illiteracy, integrate diverse cultures and people into the curriculum, be aware of stereotype threats, address racial tension when they arise, and recognize that there needs to be shared responsibility to help change racial inequities.

Limitations

One limitation to this study was that the IAT has several different types of tests and this IAT that participants would take was solely based on their perception of the Black and White race. Additionally, participation was voluntary so their willingness to participate and any possible distraction that they might have encountered during the survey is a limitation. Even with voluntary participation, another limitation was truthful disclosure and answering in a way in which they think the researcher would like them to answer. Additionally, since approval was given by the superintendent or building principal before I emailed the educators, response rate from the superintendents was very limited. Many responded that they would love to help but did not have the demographic population appropriate for the study. Participants also self-reported their demographic information. Lastly, COVID-19 may have limited participants' willingness to participate in research studies.

After the survey was launched in February, a few more limitations were evident. Some participants tried to take the survey on their cellular device. The IAT is not compatible with mobile devices and could be one potential reason why only 146 of the 248 surveys were completed. Additionally, some districts had blocks against third party survey tools. This resulted in the participants being able to start the survey with their demographic information, but not able to complete the IAT, on a computer, due to the connection to the third-party vendor being blocked.

Future Research

Based on this study looking at educator demographics and their IAT score within the state of Indiana, there are several opportunities for future research. The first recommendation is to expand this study across several states to compare results. Additionally, this study could be broken down based on elementary and secondary educators to see if there is a difference between grade levels. Other studies that involve the IAT are usually run as deception studies which could be an option for those who help identify gifted Black youth for programming which would differ from this study in that participants were fully aware of what was being studied before they even started the survey.

With most of the participants being White in this survey, which is representative of national teaching demographics, one opportunity for further research would be to look at how White middle class values might affect the identification of Black youth. It would be important to look at different socio-economic statuses and how that might shape explicit and implicit bias. Finally, with the uptick in social justice campaigns like Black Lives Matters and more acknowledgement of White Supremacy, an opportunity for further research could be to look at how White Supremacy affects the identification in gifted Black studies particularly in areas in which White Supremacy is heavily prevalent.

One last suggestion for further research is to add a qualitative piece to this study or explore this study in mixed methods. The qualitative narratives that would accompany this study would be able to shine a deeper lens on the thoughts and feelings of educators identifying gifted Black students. Coupled with interviews and the quantitative data, this study could be enriched even more to tell fully the story of demographic data and IAT scores.

Summary

There is not a one-size-fits-all approach in looking at how Indiana educator demographics and IAT scores affect the identification of gifted and talented Black students for programming. Bias was apparent among most participants in the descriptive data; however, there were no statistically significant findings across the educator demographic independent variables. However, with this information, it is essential to advocate for change and transparency in addressing the underrepresentation of gifted Black students at the national, district, and classroom levels. By acknowledging bias, and understanding the effects bias can have on programming, educators will be able to address these issues more readily. With several opportunities for expanded versions of this study, our gifted Black youth will be able to have finally the justice and opportunities that they deserve.

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APPENDIX A: SURVEY TO BE SENT TO INDIANA K-12 EDUCATORS WHO WORK

WITH GIFTED STUDENTS

Survey Link: https://indstate.qualtrics.com/jfe/form/SV_9Z7uIrMeEh28GfI

This direct link goes to the IRB approved study (1983539-1) that was approved on November 22,

2022. This link contains a full Black/White IAT along with a section to collect educators'

demographic data.

APPENDIX B: FOLLOW UP E-MAIL TO INDIANA K-12 EDUCATORS

Implications With Identifying Gifted Black Students: A Study of Implicit Bias: https://indstate.qualtrics.com/jfe/form/SV_9Z7uIrMeEh28GfI

Good Morning,

If you have not completed the 5–10 minute survey, please consider helping us out. Join the many Indiana educators in helping to identify the presence of potential barriers (in the form of implicit bias) that might affect the identification of gifted Black students across the state. The link will be active until March 22, 2023.

Thank you to the 78 participants who have already participated in the survey measuring potential implicit bias among educators who work with identifying diverse gifted populations. The participation has been appreciated and will be impactful for our students across the state.

Respectfully,

Christy Diehl   Dr. Bradley V. Balch
Doctoral Candidate   Dissertation Chairperson
Indiana State University   Indiana State University
(630)207-5335   brad.balch@indstate.edu
cdiehl@sycamores.indstate.edu

APPENDIX C: LETTER REQUESTING DATA SHARE OF CURRENT INDIANA K-12

EDUCATOR E-MAIL ADDRESSES

Indiana Department of Education
Office of Legal Affairs
South Tower, Suite 600
115 W. Washington Street
Indianapolis, IN 46204

November 8, 2022

RE: Data Share of current Indiana K-12 educator email addresses

To Whom it Concerns:

Greetings. I'm a current Ph.D. candidate of the Department of Educational Leadership at Indiana State University in Terre Haute, Indiana. My Committee Chair is Dr. Bradley Balch. I'm conducting a study on if implicit bias might affect the identification of Black students for gifted programming. To determine the potential barriers some of our Black students face within Indiana, I wish to survey current Indiana K-12 educators (teachers, administrators, and central office staff) who work in the identification process for gifted education.

I am respectfully requesting access to your records of current Indiana K-12 educator email addresses.

Data Requested:
Teacher e-mails for current Indiana K-12 educators (teachers, administrators, and central office staff).

Sincerely,

Christy Diehl

APPENDIX D: CONSENT TO PARTICIPATE IN RESEARCH

IMPLICATIONS WITH IDENTIFYING GIFTED BLACK STUDENTS: A STUDY OF

IMPLICIT BIAS

Dear Educator,

You are invited to participate in a research study concerning implications with identifying gifted Black students (a study of implicit bias) among Indiana K-12 educators. All Indiana educators who work with identifying diverse gifted populations are invited to participate whether that is a classroom teacher, administrator, or central office staff. This study is being conducted by Christy Diehl as part of a doctoral dissertation with Dr. Bradley Balch serving as the faculty sponsor from the department of Educational Leadership at Indiana State University.

You may participate in this study by responding to the survey located at https://indstate.qualtrics.com/jfe/form/SV_9Z7uIrMeEh28GfI. To access this survey, please click on the survey link. If you have any questions, please contact me at (630) 207-5335 or at cdiehl@sycamores.indstate.edu. The survey will be available for you to complete between now and 11:59 p.m. on March 22, 2023.

Risks in this study are minimized because the procedures used are consistent with sound research design and do not unnecessarily expose any participants to risk. All responses will remain anonymous and individuals will not be identified. All data will be reported as group data. Participation in this research is voluntary, no penalty is involved for non-participation. The benefits of this study will be the information gained regarding potential barriers in the identification of gifted Black students in the form of implicit bias. The login is unique to the participant; however, participant identification will remain anonymous and only the researcher will have access to participant information. Information will only be used for study purposes and destroyed after two years.

If you have any questions about this study, please contact me or Dr. Bradley V. Balch by e-mail at brad.balch@indstate.edu or by phone at (812) 237-2802. If you have any questions about your rights as a research subject, you may contact the Indiana State University Institutional Review Board (IRB) by mail at 114 Erickson Hall, Terre Haute, IN 47809, by phone at (812) 237-8217, or by e-mail at irb@indstate.edu. This study 1983539-1 was approved by the IRB on November 23, 2022. Thank you for your efforts and assistance.

Respectfully,

Christy Diehl   Dr. Bradley Balch
Doctoral Candidate   Dissertation Chairperson
Indiana State University   Indiana State University
(630) 207-5335   brad.balch@indstat.edu
cdiehl@sycamores.indstate.edu

APPENDIX E: CONSENT FORM FOR ANONYMOUS SURVEY RESEARCH

Implications With Identifying Gifted Black Students: A Study of Implicit Bias

You are being invited to participate in a research study. This study aims to find out if there are unconscious biases that Indiana educators have that negatively impact the identification of gifted Black youth for programming. The way you can help me answer the question is by answering the questions in this anonymous survey, which should take you about 5–10 minutes. Some reasons you might want to participate in this research is to inform research on potential bias that might affect the identification of Black youth for gifted services. Some reasons you might not want to participate in this research are lack of time or lack of desire to participate. The choice to participate or not is yours; participation is entirely voluntary. You also can choose to answer or not answer any question you like, and to exit the survey if you wish to stop participating. No one will know whether you participated or not. You can choose not to respond to any of the questions or close the browser to discontinue your participation at any time.

The survey asks questions from the Black/White Implicit Associations Test (IAT) first developed by Dr. Greenwald and Dr. Banaji (1995) from Harvard University. Demographic data will be completed after the Black/White IAT. You have been asked to participate in this research because you are an Indiana educator who works with diverse gifted populations and the identification process of gifted youth. **Who can take the survey? Any Indiana educator (teacher or central office staff) who works with diverse gifted populations AND is involved with the identification of gifted youth.**

Although every effort will be made to protect your answers, complete anonymity cannot be guaranteed over the Internet. It is unlikely that you will benefit directly by participating in this study, but the research results may benefit university pre-sever education programs, school districts, gifted and talented education, and the general field of education. If you have any questions, please contact either Christy Diehl cdiehl@syamores.indstate.com, or Dr. Brad Balch brad.balch@indstate.edu. If you have any questions about your rights as a research subject or if you feel you have been placed at risk, you may contact the Indiana State University Institutional Review Board (IRB) by mail at Indiana State University, Office of Sponsored Programs, Terre Haute, IN 47809, by phone at (812) 237-3088 or by email at irb@indstate.edu.

By selecting, "I agree," you have read the above and agree to voluntarily participate in the survey described above.

____ I agree
____ I disagree