"Does This Mean I Am Racist, Distrust, or Dislike People of Color?"

A DisCrit Qualitative Study of Implicit Bias Among Preservice and Practicing Special Educators

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Abstract

It is critical that educators learn about the concept of implicit bias and contemplate any unconscious biases they may hold since Black students disproportionately experience punitive school disciplinary consequences and placement into programs for students with disabilities. Greenwald

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and colleagues' early (1998) research on implicit association established a foundation and framework for a tremendous amount of research related to teachers' implicit associations and students' educational pathways. The current study is framed on a foundation of social justice as it applies to special education through the combined lens of Disability Studies and Critical Race Theory known as Disability Critical Race Theory. The theory provides a framework that can be used to help preservice teachers make sense of the complex intersection of race and perceptions of ability. This qualitative study examined how preservice and practicing special educators acknowledge and reflect on implicit biases they may have. The findings underscore the need for teacher preparation programs to focus on supporting an understanding of bias specifically what it is, what it is not, and why it is a critical concept.

Keywords: DisCrit, implicit bias, special education

Introduction

The process of teaching about diversity can be an uncomfortable journey for individuals in privileged groups. Compounding this problem is a pervasive opposition to the teaching of diversity education in the United States (Schiff & Burton, 2020). Critical Race Theory (CRT) and the controversy around whether it should or should not be taught in American schools is exploding across the nation with more and more states passing legislation which bans its teaching (Morgan, 2022). Bonilla-Silva (2018) recognized that a discussion of race can be challenging for some people of the racial-majority group. White individuals in the United States, some of whom vehemently deny they are racists, often posit that to discuss race is to exaggerate the issue.

In his influential work about poverty and equity, Gorski (2018) detailed the difference between empty conversations concerning social issues compared to robust and productive conversations about race. He elaborated the first step in a critical conversation is to be able to name the problem. This requires specific knowledge and skills educators must possess in order to break through bias and stereotypical thinking. Although he was specifically referencing poverty, this step can easily be extended to include other issues such as race.

DiAngelo (2018) coined the term "white fragility" to describe the social constructs perpetuating the racial divide in our country; "Socialized into a deeply internalized sense of superiority that we are either unaware of or can never admit to ourselves, we become highly fragile to conversations about race" (p. 2). One critical barrier to a reflective, honest conversation about race is the misunderstanding of terms. Few people would overtly describe themselves as racist. The word conjures

images of men in white hoods standing under a burning cross. It is an ugly word with an ugly history and few will identify with it. A critical conversation about the historical events and social constructs and how they developed is necessary.

Regarding education, Gay (2015) reported that it is challenging for educators from advantaged backgrounds to teach in a culturally responsive manner if they do not first understand their own culture and the cultural differences of others. Gay elaborated that often, "students don't know as much as they need to about their own cultures, histories, and heritage" (2015, p. 124). Much of what students think they know and understand about other cultures is often overshadowed by stereotypical beliefs and myths. However, acquiring a knowledge base about diversity is not enough to make a real and lasting change. Educators need to translate that knowledge into culturally relevant, equitable curriculum and practices. Culturally responsive teaching is needed for substantial and significant educational experiences that prepare all learners for success in an increasingly global society.

Purpose and Research Questions

The purpose of this qualitative study was to examine how preservice and practicing special educators acknowledge and reflect on implicit biases they may have. The research questions guiding this study were: (1) How do preservice and practicing special educators respond to an online test of implicit bias, namely the Implicit Association Test-Race (IAT-R)?; and (2) What are the responses and reactions following the results of the implicit bias test?

Implicit associations develop separately from our conscious awareness and are not necessarily aligned with our explicit beliefs (Staats, 2016). For example, people who claim to treat all individuals equally may unconsciously engage in behavior reflective of their implicit biases instead of their explicit beliefs. Therefore, even people with good intentions can behave in ways that contribute to inequitable outcomes for different groups. Consider disciplinary measures that occur in schools. Student behavior is routinely classified as acceptable or unacceptable and consequences are assigned accordingly. However, classifying behavior involves subjectivity. How a teacher interprets behavior affects whether the behavior is met with discipline, and if so, the severity of discipline must be determined.

Challenging behavior such as disrespect and excessive noise, for example, cannot be objectively defined and are highly dependent on cultural norms. Even though there are no standardized measures for

assessing many challenging behaviors, subjective infractions constitute a very large portion of disciplinary incidents. Subjectivity can have an impact on teachers' decision making regarding challenging student behavior. Teachers' automatic unconscious associations can affect their interpretations of behaviors that warrant discipline and may contribute to the discipline disparities that exist between White students and Black students. It is critical that educators learn about the concept of implicit bias and contemplate any unconscious biases they may hold since Black students disproportionately experience punitive school disciplinary consequences and placement into programs for students with disabilities (Dever et al., 2016).

The Need for Culturally Responsive Educators

The need for culturally responsive educators is multi-faceted. One issue within the American school system is the racial disparity among teachers and students. The majority of teachers across the United States are White. In the 2017-2018 school year, 79% of all public elementary and secondary teachers were White (National Center for Education Statistics, 2020a); in contrast, during that same school year, only 48% of students enrolled in public elementary and secondary school were White (National Center for Education Statistics, 2020b). Understanding education practices and race is critical as disparate discipline practices are experienced by Black students in relation to White students (Barrett et al., 2017) and may be the result of implicit bias. For example, Gilliam et al. (2016) researched the possible role of preschool teachers' implicit biases as a potential factor in the disparities of preschool expulsions. In the study, the eye-gaze of teachers expecting challenging behavior focused more on Black children. It is particularly troubling to note that Black preschool students are 3.6 times more likely to receive an out-of-school suspension in comparison with their White peers (National Center for Education Statistics, 2020c).

These inequalities follow Black students throughout their school years and beyond. A 2016 report from the U.S. Department of Education's Office for Civil Rights reveals that Black K-12 students are 3.8 times more likely to receive out-of-school suspensions in comparison to their White peers. Black students make up roughly 40% of the suspensions nationwide (Steinburg & Lacoe, 2017) and are 2.2 times more likely to have a school-related arrest or be referred to law enforcement. These severe disciplinary outcomes are due to discriminatory practices within our schools, intentional or not. In 2014, the Department of Education and Department of Justice joined forces and issued a Dear Col-

league Letter to the public on the racial disparities in school discipline. Within this letter, the two parties highlighted that racial discrimination toward Black students in school discipline is a severe problem that often leads Black students to enter the school-to-prison pipeline. Plachowski (2019) encourages the United States to employ a more diverse teacher workforce in order to disrupt the effect of racism in schools. The term coined by Putman et al. (2016), "the teacher diversity gap", refers to the racial disparities of students and teachers in our country.

Researchers explain the most impactful tool to close achievement gaps in schools and encourage more successful post-secondary outcomes for students of color includes teachers being culturally responsive (Barrett et al., 2017; Ford, & Russo, 2016; Morgan, 2020). Culturally responsive educators are analytical and self-aware of their own biases. These educators also understand that their personal experiences have helped shape stereotypes which have turned into implicit bias. These unintentional and unconscious attitudes impact how teachers relate to students and how they choose curriculum, assess learning, and plan lessons. The most important part of this personal endeavor of evolving into a culturally responsive educator is a willingness to do something different to get different results in order to benefit students.

Measuring Implicit Bias

Foundational work by Greenwald and Banaji (1995) presents implicit stereotypes as "introspectively unidentified (or inaccurately identified) traces of past experience that mediate attributions of qualities to members of a social category" (p. 15). The researchers' work underscored the need for indirect measurement of implicit social cognition. Greenwald et al. (1998) published results of experiments that actualized this indirect measurement. The usefulness of the implicit association test (IAT) for assessing differences in evaluative associations was confirmed. Additionally, findings suggested that the IAT may be more resistant to personally or socially undesirable evaluative associations, such as ethnic racial attitudes when measured explicitly. It is imperative to note that one instrument cannot determine a person's biases, intentions, or presences. Attempting to identify such individual characteristics must be triangulated with multiple instruments. The IAT is intended to raise awareness of implicit bias but should not be treated as a diagnostic test (Project Implicit, n.d.).

The IAT measures implicit attitudes by measuring participants' automatic evaluations between two concepts (Greenwald et al., 1998). In the IAT-Race, participants first press keys "E" or "I" to identify a

series of faces that flash very briefly on the screen as Black or White and a series of words flashed briefly on the screen that have either a good or bad connotation. Next, these categories are intermixed. In the following rounds of the test, both faces and words flash on the screen. But now "E" can represent "Black" or "Good" with "I" representing "White" or "Bad" in one round, and later reversed so that "E" represents "Black" or "Bad" with "I" representing "White" or "Good". Greenwald et al. (1998) suggest that the IAT measures the participants' implicit bias corresponding to a stereotype or attitude about a particular group. Their research posits that individuals who have a slower response time in selecting "Good" when "Black" is linked to it, or "Bad" when "White" is linked to it, likely have a preference for White individuals over Black individuals. Upon concluding the IAT, participants are presented with results explaining to what extent they may have an automatic preference toward Black or White individuals.

Greenwald and colleagues' (1998) research on implicit association established a foundation and framework for a tremendous amount of research related to teachers' implicit associations and students' educational pathways. Pit-ten Cate & Glock (2019) conducted a meta-analysis of teachers' implicit associations related to students from diverse social groups. Twenty-two studies examined teachers' attitudes regarding a multitude of student characteristics such as disability status, ethnicity, gender, and socioeconomic status. The results found that teachers' implicit attitudes tend to favor students belonging to majority groups. Research has also examined relationships between implicit attitudes and student outcomes. İnan-Kaya & Rubie-Davies (2022) found students' academic achievement, ethnicity, special education classification, and emerging English language status impacted unequal treatment by, and interactions with, their teachers. Unequal treatment was demonstrated through academic interactions and nonverbal communication. Furthermore, some teachers treated some students differently when the circumstances were the same for all students. A multitude of research studies mirror and extend these findings, consistently supporting that implicit teacher attitudes are predictive of actual student outcomes (Hornstra et al., 2010; Peterson et al., 2016; Thijs et al., 2018; Thomas, 2017; Van den Bergh et al., 2010).

Validity of the IAT

The IAT has had a strong impact in fields such as psychology and educational research. Even though millions of people around the world have taken the IAT, it can support personal reflection, but research

suggests little evidence of its construct or predictive validity (Schimmack, 2021). Critics find that there is insufficient evidence that the IAT is a meaningful predictor of overt behavior (Carlsson & Agerström, 2016; Van Desel et al., 2020). Empirical claims about implicit attitudes must be accompanied by valid measures of implicit attitudes, and research is lacking to support that the IAT meets this requirement.

Overrepresentation of Black Students in Special Education

An overrepresentation of Black students in special education has plagued the field for decades (Ford, 2012; Morgan, 2020; Skiba et al., 2014; Zhang et al., 2014). They are overrepresented in the categories of intellectual disability, specific learning disability, developmental delay, and emotional disturbance (Artiles et al., 2012; Ford, 2012). In fact, reports show consistent and substantial overrepresentation of Black students in special education has sustained for more than 40 years (Ford & Russo, 2016). Black male students are twice as likely to be labeled as having an emotional disturbance than other disability categories (Bal et al., 2019). Black students with a label of emotional disturbance struggle academically, have higher suspension and expulsion rates, and consequently have worse graduation rates when compared to their peers within other disability categories.

In an attempt to ensure all students receive a free appropriate public education, the Individuals with Disabilities Education Improvement Act (2004), requires each state to assess whether or not disproportionality is occurring within the identification and placement processes (Bollmer et al., 2007; National Center for Education Statistics, 2020c); however, there stubbornly remains an overrepresentation of Black students placed in special education programs compared to White students (Sullivan & Osher, 2019). It is important to note, too, that Black students are historically underrepresented in the area of gifted and talented. In fact, empirical studies support significantly different probabilities of being placed into a gifted and talented program for Black students compared to White students with identical math and reading achievement scores (Grissom, 2015; Morgan, 2019). The onus is on teacher preparation programs to work to reverse these trends.

In order to support students of color and break the cycle of unfair educational practices, teacher preparation programs must support the development of preservice and practicing teachers to become culturally competent teachers (Kondor et al., 2019). How can we do this? Where do we start? A crucial initial step toward becoming culturally competent is self-reflection regarding one's own biases. Some teacher

preparation programs are making strides in this area. For example, two studies of preservice teachers in a three-year teacher education program grounded in promoting social justice found that, in comparison with first-year students, students in the last year of the program demonstrated significantly less implicit achievement bias and reduced fixed mindsets regarding students from diverse ethnic backgrounds (Stephens, 2022). Another study investigated whether a brief empathy-inducing intervention positively affected implicit bias among preservice teachers (Whitford et al., 2019). Statistically significant decreases in the implicit bias of White female preservice teachers toward Black individuals resulted from the empathy intervention. Washington and Kelly (2016) theorized that through understanding and using what is known about implicit biases, and how to effectively mitigate their influence, individuals can take responsibility for their actions. In relation to teaching, educators who are aware of their implicit biases can strive to consciously act in ways that align with their explicit beliefs.

Theoretical Frame

This study focused on implicit bias among preservice and practicing special educators from diverse backgrounds teaching children in special education who also represent intersectional identities, such as race, gender, ethnicity, and ability. As such, this study is framed on a foundation of social justice as it applies to special education through the combined lens of Disability Studies and Critical Race Theory known as Disability Critical Race Theory, or DisCrit, as it is commonly referred (Annamma et al., 2013). DisCrit was first proposed in 2013 as a critical way to understand issues through the intersectionality of both race and disability. This frame marries the two theories and seeks to expose hidden and embedded systems of inequities in special education (Kozleski et al., 2020). A critical theory is uniquely appropriate for our study as it lifts the veil off perceived and recognized implicit bias for special educators and their experiences of working with a diverse student population. Viewed through the lens of DisCrit, it may be possible to examine how social constructs of race and ability have been crafted to determine what is considered "normal" and to seek ways to dismantle racism and ableism in schools (Love et al., 2021).

Historically, there have been strong connections of intelligence, ability, and race. DuBois (1920) chronicled the deeply entrenched racist stereotypes of ability and race as a means to justify slavery, Jim Crow practices, and segregation. This socially acceptable form of segregation persists today in the disproportionate representation of Black

and Indigenous People of Color (BIPOC) within special education (Connelly, 2021; Harry & Klinger, 2014; Reid & Knight, 2006). As discussed earlier, decades of research show there are more students of color than White students within the categories of learning disability, intellectual disability, and emotional disturbance and far fewer students of color placed within gifted and talented programs (Artiles et al., 2012; Connelly, 2021; Ford, 2012, Oswald et al.,1999; Skiba et al., 2014). These categories of eligibility for special education are most problematic because they rely on subjective measurements based on social interpretations (Klinger & Edwards, 2006). More troubling, researchers found that students of color in special education have widely disparate disciplinary actions applied to them, including restraint and expulsion (Katsiyannis et al., 2020). Annamma and Handy (2020) coined these students as "multiply-marginalized" (p. 1). These students are those who straddle the intersections of race, gender, and ability. They often face the poorest post-school achievements compared to those deemed typically developing.

This history of inequities can be examined and dismantled through conceptions of social justice with a critical lens. As Solórzano and Huber (2020) elaborated, while implicit bias examines the intent of the action, Critical Race Theory looks at the impact. As our study is based on DisCrit, the ultimate aim is to understand the impact of implicit bias among special educators and take steps to interrupt and ameliorate the process. We see this as honoring the first tenant of DisCrit that focuses on "the ways that the forces of racism and ableism circulate interdependently, often in neutralized and invisible ways to uphold notions of normalcy" (Annamma et al., 2013, p. 11).

Method

This quasi-experimental qualitative study sought to examine how preservice and practicing special educators acknowledge and reflect on their implicit biases. The research questions guiding this study were: How do preservice teachers respond to an online test of implicit bias? What are the responses and reactions following the results of the implicit bias test? Viewed through a DisCrit lens, the researchers wanted to assess their students' understanding of implicit bias and how it unwittingly plays a role in equitable educational platforms for students of color.

Participants and Setting

Participants (See Table 1) in the study were students in online, asynchronous special education credential and/or master's degree programs

Table 1
Participant Characteristics

Participant Number	Rank	Age	Race	Gender	Score on HIAT
1	Graduate	44	White	Female	Strong preference for EA over AA
2	Graduate	32	White	Female	Strong preference for EA over AA
3	Graduate	36	White	Female	Strong preference for EA over AA
4	Graduate	30	Hispanic	Female	Strong preference for EA over AA
5	Graduate	26	Hispanic/ White	Female	Moderate preference for AA over EA
6	Graduate	26	Hispanic/ White	Female	Strong preference for EA over AA
7	Graduate	23	Hispanic	Female	Slight preference for EA over AA
8	Graduate	33	Asian	Female	Strong preference for EA over AA
9	Graduate	25	White	Female	Moderate preference for EA over AA
10	Graduate	39	White	Female	Strong preference for AA over EA
11	Graduate	33	White	Female	Slight preference for EA over AA
12	Graduate	24	Mexican American/ Scandinavian	Female	No preference
13	Graduate	27	White	Female	Moderate preference for EA over AA
14	Graduate	30	White	Female	Moderate preference for EA over AA
15	Graduate	30	White	Female	Did not disclose
16	Graduate	28	White	Female	No preference
17	Graduate	46	White	Female	Slight preference for AA over EA
18	Graduate	45	White	Female	Slight preference for EA over AA
19	Graduate	59	Black	Female	Slight preference for AA over EA
20	Graduate	34	White	Female	Strong preference for EA over AA
21	Graduate	32	White	Male	Slight preference for EA over AA
22	Graduate	60	White	Male	No preference
23	Graduate	25	White	Female	Slight preference for EA over AA
24	Graduate	46	White	Female	Did not disclose
25	Graduate	28	White	Female	No preference
26	Graduate	49	White	Male	Slight preference for EA over AA
27	Graduate	39	White	Female	No preference
28	Graduate	28	White	Female	Slight preference for EA over AA
29	Graduate	48	White	Female	Slight preference for EA over AA
30	Graduate	47	Black	Female	Strong preference for AA over EA
31	Graduate	26	White	Female	Moderate preference for EA over AA
32	Graduate	27	White	Female	No preference
33	Graduate	40	White	Female	No preference
34	Graduate	43	White	Female	Moderate preference for EA over AA
35	Graduate	45	White	Female	Moderate preference for EA over AA
36	Graduate	25	White	Female	Slight preference for EA over AA
37	Graduate	24	White	Female	Slight preference for EA over AA
38	Graduate	37	White	Male	Moderate preference for EA over AA
39	Graduate	31	Asian	Female	No preference
40	Graduate	43	White	Female	Moderate preference for EA over AA
41	Graduate	39	White	Female	Slight preference for EA over AA
42	Graduate	30	White	Female	Did not disclose
43	Graduate	39	Asian	Female	Automatic preference for AA over EA

Table 1, *Participant Characteristics***, continued**

Participant Number	Rank	Age	Race	Gender	Score on HIAT
44	Graduate	48	White	Female	Moderate preference for AA over EA
45	Graduate	50	White	Male	No preference
46	Graduate	52	White	Female	Did not disclose
47	Graduate	24	White	Female	Slight preference for EA over AA
48	Graduate	28	White	Female	No preference
49	Graduate	60	White	Female	Did not disclose
50	Graduate	40	White	Female	Did not disclose
51	Graduate	34	White	Female	Strong preference for EA over AA
52	Graduate	49	White	Female	Did not disclose
53	Undergrad	22	Black	Female	Slight preference for EA over AA
54	Undergrad	22	Black	Female	Moderate preference for AA over EA
55	Undergrad	25	White	Female	Automatic preference for AA over EA
56	Undergrad	22	Black	Female	Moderate preference for AA over EA
57	Undergrad	31	Black	Female	No preference
58	Undergrad	20	Black	Female	Slight preference for AA over EA
59	Undergrad	22	Black	Female	No preference
60	Undergrad	20	Black	Female	Slight preference for AA over EA
61	Undergrad	20	Black	Female	No preference
62	Undergrad	40	Black	Female	Little to no preference
63	Undergrad	36	Black	Female	No preference
64	Undergrad	22	Black	Female	Automatic preference for AA over EA
65	Undergrad	27	Black	Female	No preference
66	Undergrad	22	Hispanic	Male	Moderate preference for AA over EA
67	Undergrad	42	Black	Female	Moderate preference for AA over EA
68	Undergrad	32	Asian	Female	No preference

Note. AA denotes African American and EA denotes European American

at three public universities in three states, the Southwest, Midwest, and Southeast. The participants comprised both undergraduate preservice teachers and graduate-level special educators teaching on an emergency certificate. The Principal Investigator (PI) and one of the co-investigators utilized participants in their undergraduate positive behavioral interventions and support (PBIS) courses. There were 12 participants in the Southwest and 16 participants in the Southeast. The other co-investigator, located in the Midwest, recruited 40 participants from a graduate course on special education assessment.

A total of 68 preservice and in-service teachers participated in this qualitative study. Following Institutional Review Board approval at all three universities, an overview and invitation to participate was presented to students via the learning management system at the respective campuses. Prospective participants were advised that their participation was entirely voluntary and a decision to or not to participate would not impact their course grade. Participants were provided

consent via the learning management systems. A regular course assignment was used to collect data. Responses of those who consented to participate were analyzed. Compensation or other incentives were not offered.

Materials and Procedures

Psychologists at Harvard University and the University of Washington designed Project Implicit to measure implicit bias. This developed into an international, non-profit organization of professionals concerned about hidden bias, and educates the public about the impact of intolerance at a societal level (Project Implicit, 2011). The Implicit Association Test-Race (IAT-Race), is one tool that can help individuals be made aware of their implicit biases they may have. Research suggests that this conscious awareness of one's own implicit biases is a critical first step for counteracting their influence (Devine et al., 2012). This awareness is especially crucial for educators to help ensure that their explicit intentions to help students succeed are not unintentionally encumbered by implicit biases.

To encourage self-reflection on implicit biases, participants were given an assignment in which they were asked to take the IAT-Race (Project Implicit, 2011). This activity was selected because it provides users with immediate feedback on whether they may have any implicit preferences for White individuals over Black individuals, vice versa, or whether they may not have an implicit preference for either group. After students completed the test and received their results, they were asked to report their results, rank the accuracy of the results (i.e., scale of 1-10), and write a response in which they reflected on their results and the assignment itself. Information was not sought regarding participants' knowledge of the difference between implicit and explicit biases.

Data Analysis

The goal of this study was to raise awareness of implicit bias. Analysis was conducted through a DisCrit lens. Throughout the research process from gathering data to analysis, the researchers approached the study using continual reflection through introspection of personal "biases, values, and interests" (Creswell, 2013, p. 186).

Data analysis was conducted using open-coding, line by line analysis, identifying categories and themes, categorizing subcategories until saturation of the themes emerged. Each researcher worked separately during the initial phase of data analysis. Analysis of the open-ended responses gathered from the student responses taken after they com-

pleted the IAT-Race was accomplished by first reading the complete responses in conjunction with the students' score on the IAT-Race itself. During the initial reading, tentative themes were identified. During the second reading, open-coding was conducted (Emerson et al., 2011). This process included: a line-by-line analysis to identify categories and themes, convergence of member checks, and peer debriefing. The researchers then color-coded similar themes and patterns which emerged through constant comparison in order to unlock the participants' meanings (Rubin & Rubin, 2011).

The researchers then met together regularly to compare identified themes and categories. Focused coding was conducted in which meaningful categories were identified to answer the research questions. Preliminary analytic statements were isolated by the researchers and placed into the specific categories. The next phase was clarification of the themes through the DisCrit framework. During this phase of the analysis, the researchers first sought common expressions, words, and idioms across participant responses. The second stage consisted of connecting those words, common themes, and issues to the theoretical frame of the study.

Trustworthiness

Hesse-Biber and Piatelli (2012) discussed navigating power differences in the research process as variations that can influence data. All of the investigators are university professors and the participants were students taking required courses in their respective programs. Therefore, ongoing reflection and debriefing with each researcher was necessary in order to assure fidelity of the analysis. Reflexive practices included: the use of notes taken during the data collection process, peer review, and member checks in which the participants reviewed the data of the complete IAT-Race test in order to provide input on how their words were utilized. The researchers followed Marshall and Rossman's (2011) technique to establish trustworthiness of a study by critically evaluating the data at various stages of analysis, asked questions of the categories and subcategories, and scrutinized the data analysis.

Pre/Post Covid and Black Lives Matter

It is important to note that this research was conducted just prior to the COVID-19 pandemic, the racial issues associated with the killing of George Floyd, and the increased negative focus on the Black Lives Matter movement (BLM). As noted, the completion of the IAT-Race was a class assignment for students in all three faculty members'

courses. The assignment was mandatory and all were expected to participate whether they were part of the study or not. At the time of this research, there was no hesitancy among the students to complete the assignment. However, since that time, multiple critical events have occurred in our nation. Including the murder of George Floyd, the negative social media attention given to the BLM movement, and the violent assault on our nation's Capital on January 6th, 2021. Since the time of this study, the researchers have continued to assign the IAT-Race as part of a course activity, except now there is some vehement vocal opposition and outright refusal to take the test. Some students stated they would not take the IAT-Race because by talking about race, we are making racism worse. This points to the national debate on race and demonstrates the results of divisive rhetoric flooding media at all levels.

Vehement discussion of race and how to discuss and more importantly, how to teach issues about race, have been loudly disputed and distorted through the media. For example, in one researcher's home state, the governor signed a law that specifically bans the teaching of Critical Race Theory (Pierce, 2021). There are multiple states that have or are considering such laws predominantly written by White, male, conservatives with no input from people of color or from educators. These laws prohibit any teaching that makes children feel "discomfort, guilt, anguish, or any other form of psychological distress on account of his or her race or sex" (Dutton, 2021, p. 5). However, this is a clear example of what Feagin (2013) coined as the "white racial frame" (p. 10). These talking points are utilized to discuss the implicit and explicit ways White people reinforce the social constructs that keep institutional racism firmly entrenched. An honest, often uncomfortable, discussion of race and the history of racism in our country is challenging, however crucial, to interrupt racist beliefs and practices.

Results

Themes

The results of the data analysis initially revealed seven themes and subthemes. For the purpose of this paper, the researchers have focused on three themes: (a) participants' perceptions of the test accuracy, (b) self-reflection of biases, and (c) self-reflection of explicit bias. The researchers made a methodological choice to use large data units in order to capture the voice and intent of the participants. As this issue has the potential to be divisive, it was felt that the voice and perspectives of the participants should be emphasized in this study.

Theme #1
Participants' Perception of the Accuracy of the IAT-Race:
"The IAT has ample room for user error making it difficult to gather accurate data for those conducting the test."

Many participants questioned the accuracy of the test itself upon learning their results. The reliability and validity of the instrument are discussed as a limitation of this study, and participants' reactions may have been solely related to these constructs. For example, Nosek et al. (2007) reported weak correlations between the IAT and other measure of implicit beliefs. The work of Karpinski et al. (2005) found explicit measures of attitudes to be stronger predictors of intentional behavior in comparison with the IAT.

Instead of predicting deliberative behavior, the IAT may reflect "shared cultural stereotypes" (Arkes & Tetlock, 2004, p. 258). In fact, even Greenwald, co-creator of the test, acknowledges the limitations of the IAT, "Racism and prejudice are explicit attitudes with components of hostility or negative animus toward a group. The IAT doesn't even begin to measure something like that" (Lopez, 2017, para.17). However, we analyzed participants' responses using DisCrit as our theoretical framework. When analyzed through this lens, we consider the possibility that participants may have opted to focus on the test itself rather than critically reflect on any bias within themselves. Such deflection could be reflective of defensiveness when confronted with possible evidence of personal biases (Perry et al., 2015).

> My results suggested that I have a strong automatic preference for white people over black people. I don't consider this to be reflective of myself nor a reliable tool to assess my choice between the two races, however according to the test I am subconsciously racist towards people of color. In my opinion, the IAT assessment is not a reliable tool to use to predict subconscious bias towards a race. (Participant #4)

Another participant explained:

> I grew up around White people and lived in areas that were predominantly White and Hispanic. I did not develop relationships with people of color until later, when I lived in Dallas, TX. Does this mean I am racist, distrust or dislike people of color? No, I do not feel that this statement suggests or implies that I am racist at all. I would strongly argue against the score if that were the case. It only shows what I have a preference for that with which I am familiar. (Participant #34)

The researchers understand that one online test of implicit bias is not enough to combat racism or to assist people to understand their implicit biases; however, it can be a good starting point to encourage

an honest conversation about race. Howard (2010) cautioned that an examination of our own racial identities and biases can be quite a challenge. It is only through critical reflection that a person can travel through this difficult journey and understand that confronting implicit bias is an important first step. Again, when analyzed through DisCrit, we consider the possibility that some participants were not critically aware of their biases. Challenging the validity of the instrument does not mean they are not ready to examine their biases; instead, the validity is being questioned—which is supported by scholarly literature, not just by the participants: "I am a little surprised by my score. I didn't think that I had a preference for one race over the other. The fact that I had a strong preference really makes me question the test and my thoughts," from Participant #2. Another quote from Participant #3,

> Yet, as I took the test, I was confused about how the test actually measured my unconscious thoughts. I felt like the test focused more heavily on how quickly I could read words and process images, and many of the tasks on the test seemed like Alex's association-heavy rehabilitation treatment in *A Clockwork Orange*!

Solórzano and Huber (2020) chronicled the importance of recognizing everyday racism and understanding our own acts of microaggression. It was curious that one participant alluded to morality in regard to their answers: "I believe people make bad and good decisions based on how they were taught and what morals were taught to them. I have a hard time understanding how this would be helpful knowing a preference of individual's race," Participant #8. It was disconcerting that some, not all, of the participants did not recognize their implicit bias or even question if that was the results of their test scores, but instead blamed the test itself:

> I feel this test is designed to purposely reflect negative reviews for one race or another. I also feel that the test is flawed because it had far more words that went with African Americans (in either trial), than Caucasians. So by default a tester would have more opportunities to make mistakes and choose the wrong associative word. I'm not simply grumpy because I do not like my results, I just feel that this test is designed to give inaccurate results. (Participant #15)

A single instrument cannot determine if someone is racist or not, especially given the reservations about this test's validity expressed in the literature, and participants' reflections can be used as a second source to strengthen the results generated when they took the test. Beyond the findings from this study, DisCrit theory can be used as a mechanism to promote student success when teachers and educational

leaders first understand how educational inequalities are reproduced, and then use that knowledge to create equitable learning settings and opportunities (Annamma & Morrison, 2018).

Theme #2
Self-reflection of Biases:
"This assignment has given me much to think about. Thank you!"

As mentioned in the introduction, Gorksi (2018) stated that the first step in understanding one's biases is naming the problem. Many of the preservice and practicing special educators who completed this online test of implicit bias evaluated their own biases. When analyzing this data utilizing the DisCrit theoretical framework lens, it also appeared that these teachers explored their biases about students of color with and without disabilities and their families. Participants #32 and #14 noted their self-reflection. "I think that this assessment really makes you look at who you are, and makes you think about the different things that sometimes make you uncomfortable," from Participant #32. "It did cause me to reflect on my cultural background, exposure, and experiences in the area of race and I realized that it is mixed," from Participant #14.

After completing the online assessment, Participant #25 recognized her racial biases as recorded in her results:

> This test was a great reminder of how important it is to put aside our own opinions of people, whether they be negative or positive, and truly try to help them, no matter what their race may be. Personally, I like tests like this because they remind us how easy it is to get lost in everyone else's opinions and judgment.

Participant #36 made a powerful acknowledgement that this implicit bias assessment can be pivotal while working with their students in the classroom, "As an educator, my implicit biases have the potential to affect my relations with the community, the way I view and talk to families, and even the way I handle student interactions and manage behavior."

Interestingly, some participants also reflected on their biases while reminiscing on their home environment as children and how their upbringing shaped their racial biases as reflected by Participant #16, "However, I do find myself stereotyping sometimes based on race, gender, or socio-economic status. I attribute this to reverting back to my roots and how I was raised as a child into adulthood." Understanding our implicit bias is to understand our intent of the unknowing acts, and DisCrit seeks to understand how those acts impact others (Solórzano & Huber, 2020). It was encouraging to see how the participants unpacked their own family history and recognized racism:

> I grew up in a household with a father and step-mother that were racist…not in the way in which is noticeable to others, but they were subtle. They would say things, disparaging things, of those of a different race and while I knew this was not ok, I was forced to hear it nonetheless. (Participant #38)

One powerful quote showed that this participant understood and rejected their family's legacy of hate:

> I grew up with a father who was (and still is) extremely racist. He did not like me to have friends of other races, to watch television shows that he considered to be "for black people", or to listen to music that he thought was "for black people". Hearing him use racial slurs was part of everyday life for me, and even at a young age I can remember it making me upset and angry to hear him say those things. As I got older, I made my own standpoint on this subject very clear, and it definitely caused some arguments between my dad and I until he finally realized he was not going to change my mind about it. Now, we basically agree to disagree on this matter although in order to make this agreement successful, I basically have to accept that he is going to continue to make racial slurs and no amount of protest from me is going to change that. (Participant #33)

Theme #3
Self-reflection of Explicit Biases:
"I get uncomfortable when Black people are being boisterous."

DisCrit theory, in relation to education, emphasizes how race, racism, and ableism are built into interactions and processes of education. These acts impact students of color with disabilities qualitatively differently in comparison to their White peers with disabilities (Annamma et al., 2013). Participant #29 reflects on his explicit bias of behavior which is representative of the overrepresentation of Black boys identified in the category of emotional disturbance (one qualifying feature of which is the incredibly subjective, "Inappropriate types of behavior or feelings under normal circumstances" [IDEIA, 2004]) and of the disproportionate disciplinary practices experienced by Black students:

> I get uncomfortable when Black people are being boisterous, I do not know if that speaks more to a difference in culture or the color of their skin. I am admittedly more aware when there is a group of young Black people around, but not so much so when the group is White.

Similarly, Participant #55 acknowledged a fear of shopping in a predominantly Black town: "But, I am afraid to go into stores in the [location redacted] except for the nicer parts, so in certain situations maybe I am a little biased and do not like to admit it."

The conceptualization of differences between Black individuals and White individuals has been used to justify the slavery, segregation, violence and even murder of Black individuals (Taylor et al., 2019). Hoffman et al. (2016) found that a substantial number of White medical students, residents, and laypersons held inaccurate beliefs about biological differences between Black individuals and White individuals. Likewise, pervasive historical beliefs about the relationship between race and ability, firmly rooted in White supremacy, remain evident today. Segregated classrooms for students with disabilities remain disproportionately populated with students of color (Harry & Fenton, 2016). The explicit biases Participant #35 reflects upon mirror this emphasis on *different* and *other*:

> It is not that I do not like or do not trust African Americans; instead, I am cautious and shy towards their culture and appearance because it is different from my own. For example, I have always wanted to touch the hair of an African American person, to really put my hands in it and feel the texture, and I am interested in whether or not their skin is oily.

Discussion

DisCrit theory calls for teacher preparation programs to be reimagined and restructured (Annamma et al., 2018). Preservice teachers need to engage in preparation experiences involving critical analysis of social and educational issues related to equity and be provided opportunities for deep self-reflection (Kulkarni et al., 2021). In the current study, some participants' focus on the perceived accuracy of the IAT-Race rather than critically self-reflecting on the possible biases they have may be reflective of teacher preparation that does not emphasize the aforementioned concepts. The findings underscore the need for teacher preparation programs to focus on supporting an understanding of bias (Whitford et al., 2019), specifically what it is, what it is not, and why it is a critical concept. To encourage preservice and practicing teachers to use the IAT-Race as an opportunity for self-reflection, a discussion on the difference between implicit bias and racism is crucial before having them take the IAT-Race. Also, explicitly stating that this activity is intended to prompt self-reflection and is not being utilized to label anyone as racist may also facilitate self-reflection and lessen the extent to which the accuracy of the test is questioned.

Educating people about the discrepancy between their implicit and explicit bias may help them regulate defensive attitudes (Howell et al., 2015). Defensive posturing may be a reluctance to accept a primary tenet of DisCrit, that "racism and ableism do not exist in a vacuum and

that the normalcy by which they operate in schools and society more broadly goes unquestioned in part by the silencing of their interdependence" (Kulkarni et al., 2021, p. 622). For preservice and practicing teachers belonging to the majority group, this reality can be challenging to acknowledge, considerably more so if their teacher preparation is not based on social justice, equity, and inclusivity.

DisCrit theory provides a framework that can be used to help preservice teachers make sense of the "complex and historically charged intersection of race and perceived ability and the effects that this has on students of color" (Olmstead et al., 2019). The IAT-Race assignment prompted some participants to reflect on biases of which they were consciously aware. While these responses may reflect deficit thinking, there is value in their candor. For when we are aware of our biases and can actively name and define them, a foundation is laid to explore these predispositions. This critical self-reflection can begin by asking difficult questions such as: In what are my biases based? Reality? Perception? Fear? Remnants of my upbringing? The comfort of what I have always held to be true? Critical questions such as these, if approached with a genuine interest to dismantle biases we have, can lead to conscious efforts to change our belief patterns and subsequently our external actions.

Some participants made a connection between their implicit biases and their work with students. Self-awareness such as this can result in teaching practices and relationships based on equity and inclusion. This is reflective of DisCrit's emphasis on learning environments built on solidarity in the classroom rather than managing students (Migliarini & Annamma, 2016). Furthermore, DisCrit can help preservice teachers in understanding how to shift their conceptualization of discipline as a tool of punishment to utilizing their relationships and interactions with their students as tools for learning.

The current study did not explicitly examine participants' beliefs about biases they may hold regarding students of color. However, our results indicate the importance of critical self-reflection for teachers of students of color with disabilities. Future research should examine teacher self-reflections concerning their lived experiences and how it may impact their beliefs and decision-making for their diverse students as a baseline for understanding their implicit bias test results.

Limitations

These findings, while certainly suggestive, must be accompanied by an acknowledgement of important issues with the study. First, data was not collected on participants' previous knowledge and professional

training on cultural sensitivity. While educators are expected to be sensitive to their students' cultural backgrounds, there are many educators who have not received training in culturally responsive teaching. The researchers do not have knowledge of participants who have received specific training on cultural differences and those who have not.

Another limitation of the current study is the uncertainty of the extent to which the participants truly understood the meaning of implicit bias. Oftentimes, and as discussed previously, it is misunderstood as being racist, which can promote feelings of defensiveness or distrust. In future replications, information should be sought about participants' understanding of the actual meaning of implicit bias. An additional option would be to provide participants with information about the differences between implicit bias and racism before having them take the IAT-Race.

Next, this research does not fully explore the conditions under which participants identify the purpose of racial measures. It also does not explore the individual differences that correlate with differences in guessing. Other experimental procedures also should be tested. Finally, and equally important, the IAT-R presents test takers with both words and faces. The test incorporates computerized representations of adult faces. Since participants are educators, or are in teacher preparation programs, the researchers believe that the results may differ if the IAT depicted the faces of children and youth. Despite these limitations, our study provides valuable information regarding implicit racial biases of preservice and practicing teachers.

Finally, there exists significant criticism of the IAT in terms of reliability and validity. For example, the measure exhibits low test-retest reliability. The IAT-R has a test-retest reliability score of 0.44, while the IAT overall is approximately 0.5 (Nguyen, 2019). Validity, another concern with the IAT, is best established by showing that results from the test can accurately predict behaviors in real life. From 2009 to 2015, four separate meta-analyses that suggested the IAT is a weak predictor of discriminating behavior (Goldhill, 2017). However, this study was not intended to inform preservice and practicing teachers that they either do or do not have biases or that they engage in discriminatory behavior. Even so, the authors are in support of Dan Losen's sentiment on the concept of implicit bias:

> We don't often have good scientific tools to measure bias with precision, whether explicit or implicit. That lack of scientific precision in measuring the impact of one variable doesn't refute the concept, nor does it suggest one should ignore the likelihood that some less conscious forms of bias affect decision making. If some feel more com-

fortable only recognizing racial bias in its most explicit measurable form, I'd argue they are engaged in cognitive dissonance and not really paying attention to the science. (D. Losen, personal communication, October 5, 2020)

Conclusion

The seventh tenet of DisCrit states, "DisCrit requires activism and supports all forms of resistance" (Annamma et al., 2013, p. 11). This research underscores the call for teachers as change agents, as students of color continue to face inequities in public schools across the United States (Cooper et al., 2022; Flynn & Shelton, 2022). Due to this fact, teacher preparation programs cannot continue in a "business as usual" manner (Kulkarni, 2018). We must put practices in place in which preservice and in-service teachers examine their own biases and meaningfully reflect on how these may impact their teaching practices. Preservice and practicing teachers should be given scenarios to prompt self-reflection of their own personal concepts of "good" behavior and "bad" behavior and the role of their belief in determining behaviors to target for change (LeBlanc, 2016).

Self-reflection is critical as teachers' good intentions can be misguided. For example, in a study on culturally responsive classroom management, a teacher recounted that, in an attempt to reduce "flexing"—attempting to intimidate someone by standing over them—among his students, he would take away class currency they had earned when they engaged in this behavior. One morning, the teacher overheard a father explain to his son that he had to walk home alone that afternoon. The father told his son to walk "hard" as a form of self-protection when he got to a specific street known to be dangerous. That father/son conversation led the teacher to revisit his approach and to teach students the behaviors he did want to see in his classroom rather than penalizing them for behaviors that he wanted to reduce.

The goal of the current study was to understand and identify how preservice and practicing special educators may self-reflect on their biases. Simply being aware of what implicit biases are and how they can affect judgment can help special educators treat their students with equity. Perhaps when educators have a clearer understanding that implicit bias is not equivalent to being a racist, it will facilitate the ability to self-reflect on implicit biases and how they may impact birth-12 students. When we understand our own minds, we can increase our agency and take responsibility for our actions (Devine et al., 2012). Understanding our implicit biases can result in consciously acting in ways that align with our stated ideals. When teachers do this, the trajectory

for students of color will begin to change. Educators who are able to identify their explicit biases are in a prime position to engage with DisCrit as a tool to examine the implications of structural racism and ableism in the lived experiences of students of color, often resulting in the labels of "disabled."

Teacher educators must work with preservice teachers to create shifts in their beliefs and abilities to reflect critically on the intersection of disability and race (hooks, 2014). Preservice teachers who envision themselves as advocates and have an understanding of the intersectional and interdisciplinary framework of DisCrit can conceptualize their relationships with students as connected to the larger work of dismantling inequalities multiply marginalized students face (Migliarini & Annamma, 2016).

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