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Abstract

The purpose of this study was to examine the relationship between an educator's level of implicit and explicit bias. A purposeful sample of 374 educators, working in the EC-12 setting in the southeast region of Texas, completed a race *Implicit Association Test* (IAT) and the *RIVEC Prejudice Scale*; 12 of which were selected to participate in one-on-one interviews. Findings suggested a person may verbalize little to no explicit bias, but their implicit bias indicated otherwise. Black participants were found to have less implicit anti-White bias than the White and Hispanic participants' implicit anti-Black bias. Implicit bias was found to occur between Black and Hispanic participants and between Black and White participants. In contrast, findings did not suggest any differences among the three racial groups in terms of their level of explicit bias. Participants expressed varying reactions to their implicit and explicit biases.

Keywords

explicit bias, Implicit Association Test, implicit bias, multi-cultural education, public schools, RIVEC Prejudice Scale, teacher bias

Introduction

According to the United States (U.S.) National Center for Education Statistics (NCES, 2021a), the demographics for White, Black, and Hispanic educators in the U.S. are 79%, 7%, and 9% respectively. In contrast, the racial and ethnic composition of public-school students has evolved significantly; just 47% of students in grades one through twelve are White, and Hispanic and Black students now make up 42% of this population (NCES, 2021b). With a cursory review of these data, it is evident that the majority of teachers in the U.S. are not the same race as the students they are teaching. While this may not present as alarming to most, a possibility remains that there might be hidden biases creeping into various aspects of teaching and learning in a teacher's classroom performance. Teachers' racial attitudes, explicit or implicit, could prove to be a significant factor when analyzing the affect these biases may have on academic achievement, management of discipline, and the level of engagement of students (Chin et al., 2020; Hinojosa & Moras, 2009). Furthermore, teachers' lack of understanding of the students who differ from themselves could potentially highlight biases in the classroom setting through the manner in which teachers may interact with diverse students (Gay, 2018; Grace, 2020; Samuels, 2018).

In today's politically charged environment, discussions about implicit and explicit biases in education are often met with resistance and has even been banned from professional development and teacher training via policy such as Senate Bill 3, in Texas for example (TEA, 2021). However, research has indicated that the lack of awareness of one's biases can be connected to the racial and cultural stereotypes that have "persistence and power" over a person (Whitford & Emerson, 2019, p. 672). Teachers who are unaware of their biases may inadvertently let them shape their interactions and relationships within the school community (Whitford & Emerson, 2019). This study aimed to explore the connection between educators' implicit and explicit biases and their perceptions of these biases in the Early Childhood (EC) – 12 educational settings. Given the current political climate, particularly in Texas, this research underscores the critical need to engage with these issues directly.

Literature Review

Understanding Implicit and Explicit Bias

Implicit or unconscious bias refers to attitudes or stereotypes that influence our understanding, actions, and decisions in an unconscious manner (Sensoy & DiAngelo, 2017). These biases may present as favorable or unfavorable preferences and are activated unintentionally in the subconscious (Sensoy & DiAngelo, 2017). Implicit biases are different from known biases that individuals may choose to conceal for the purposes of social and/or political correctness (Sensoy & DiAngelo, 2017). Many times, implicit biases are present not from a person's beliefs or feelings, but rather an observed or taught pattern which has historically created a pattern of marginalization among those who are Black, Indigenous, or People of Color (BIPOC) members of our communities (Gullo et al., 2019). Biases that are part of a person are developed from many aspects including (but not limited to) their upbringing, family beliefs, community shared perspective, and personal experiences.

Conversely, explicit biases are the preferences, beliefs, and attitudes of which people are generally consciously aware and can, when willing, identify and communicate to others (Daumeyer et al., 2019). Conscious awareness is the crucial element that distinguishes implicit from explicit bias (Daumeyer et al., 2019). Explicit biases are usually held in the system 2 cognition processing (Staats, 2016). As a human processes millions of pieces of information in small minute increments of time, much of the processing is done in system 1, outside of a person's conscious awareness (Staats, 2016). System 1 cognitive processing is categorized as intuitive and the thoughts that are created in a person's system 1 are generated without great effort as it is associated with previous experiences, learned behaviors, context clues, pattern recognition and hunches (Pelaccia et al., 2011; Tay et al., 2016). In contrast to system 1, system 2 cognition is the conscious, deliberate, and slower analytical thinking a person does based on collected information in the person's environment through logical judgements (Pelaccia et al., 2011; Tay et al., 2016). In turn, it is possible that people are likely to hold others less accountable for discriminatory behavior that is thought to be due to implicit, rather than explicit, attitudes (Daumeyer et al., 2019). Thus, oftentimes implicit biases and their detrimental impacts remain unaddressed. The implicit and explicit connection differ from each other partly due to two reasons. Nosek (2017) identified that dissociation may occur in a participant because they are not comfortable reporting their mental thoughts but can also occur because a person may be unable to share their mental thoughts because they might not have the awareness that those thoughts are actually at play.

Reactions to Identified Bias

Identifying an educator's bias can create a wide range of reactions to the reality that there are actual biases present. Clark and Zygmunt (2014) conducted a qualitative study with 302 graduate teachers, of whom 92% were White. After the tests were taken, the teachers posted a personal reaction to their own IAT test results on a discussion board. Results were collected over a period of three years. Ninety-six percent of the teachers stated their IAT results showed they have a bias towards non-European Americans, 59% percent as disregard or disbelief, 22% as acceptance, and 19% as discomfort or distress.

A medical field study conducted by Sukhera et al. (2018) included a professional learning activity related to implicit bias. When provided the opportunity to reflect in a judgement free arena, participants were able to reflect and identify reasons why they were still harnessing the biases. As the workplaces were allowed to adopt changes to decrease biases, change was noticed. Several participants admitted to being frustrated with themselves for allowing biases to influence their professional actions. In this study, when participants were provided the opportunity to reflect with others in a safe environment, they adjusted their behavior intentionally to make changes and decrease biases.

Educators need explicit and direct bias training, time for reflection and observation of their own practices and behavior, and a plan of action to proactively work towards a reduction of bias to minimize the possible effects against students. Just as the medical professionals in the study participated in a professional learning activity related to bias, educators are also in need of bias related training to shed light on educators' own biases (Zellars, 2016). Nadan and Stark (2017) completed a study where undergraduate students reflection on their identified biases. Participants felt pushed out of their comfort zones and experienced negative emotions for possessing some

level of bias and exhibited feelings of shock, surprise, and even disappointment. Some participants did not accept their results as valid or reliable, attempting to validate their results with experiences and social concepts. Hillard (2013) had similar findings in regards to the wide ranging reactions of one's IAT results and determined that experiencing negative feelings towards the assessment may increase a person's willingness to adjust their thinking and work to decreasing his or her bias.

Theoretical Framework

The theoretical framework for this study is based on Critical Race Theory (CRT). Critical Race Theory was developed by a coalition of legal scholars and activists who delved into the intersection of groups in relation to race, power, class, and racism in a broad context which includes perspectives that cover a wide range of areas including, but not limited to, economics, history, group, self-interest, setting, emotions, and the unconscious (Delgado & Stefancic, 2017). Critical Race Theory started out as Critical Legal Studies (CLS) which asserted that law was not "objective or apolitical" and began to go against the widely accepted idea that knowledge was neutral and not affiliated with any social or political connections (Baszile, 2015). This theory pulls from broad law literature, sociology, history, ethnic studies, women's studies, and storytelling as its foundational base for working towards the elimination of racism with the clear understanding that law may perpetuate the unjust social order that is present (George, 2021; Soloranzo & Yosso, 2002). The framework is a vital critique of the ongoing institutional racism and social construction of race that allows for the continuation of a system that repeatedly places non-Whites at the bottom, which goes beyond the Black-White binary (George, 2021). It cannot be "confined to a static and narrow definition" but is a malleable practice of framing and interpreting the world around us with a specific "race-conscious" lens to identify inequities that are present within social structures (George, 2021, p. 2; Zamudio et al., 2011).

Ladson-Billings and Tate (1995) centered CRT in the educational area and connect the legal studies tenets to real and tangible elements in schooling. Critical Race Theory and the implications in the field of education allow for explanations and examples of how state's educational systems have sustained inequity that minorities experience relating to curriculum, instruction, and assessment (Ladson-Billings, 1998). Schooling curriculum has perpetuated racism by the deliberate act of publishing companies (and districts that adopt their published curriculum) excluding the lived experiences and history of non-Whites and chose the pathway of a white-washed history instead of truth telling curriculum that includes a wide variety of experiences and stories (George, 2021; Wenger, 2021). The academic and discipline disparities that are evident in daily practices of many educational institutions, even though most are implicit, are upholding the malignment of minorities (Diamond et al., 2004; Grace, 2020; Grissom & Redding, 2015; Skiba et al., 2002, Tennebaum & Ruck, 2007).

Critical Race Theory serves as an appropriate framework for this study by emphasizing that racism is an ordinary, everyday experience suggesting that biases are not isolated incidents but rather reflect broader societal narratives and systemic inequalities (Dixson & Rousseau, 2005). Payne and Hannay (2021) argue a context-based perspective on implicit bias that indicates the overall level of bias within an environment—like a workplace or community—reflects the systemic racism present there, thus implicit bias may serve as a product of – and a driver of – systemic inequalities. Critical Race Theory underscores the importance of understanding how individual

biases—shaped by historical and contemporary contexts—interact with institutional practices, ultimately affecting classroom dynamics and student interactions (Ladson-Billings, 1998; Grace, 2020). By situating an exploration of implicit and explicit biases within the framework of CRT, we can better appreciate how they perpetuate systemic racism and impact the educational environment. Furthermore, by positioning this research within a commitment to social justice (Dixson & Rousseau, 2005), CRT not only seeks to illuminate the nuances of individual biases but also emphasizes the need for actionable pathways to disrupt oppressive structures in education. This approach aligns with CRT's social justice tenet, aiming to catalyze change and foster a more equitable educational landscape.

Method

Participants

A purposeful sample of 374 EC-12 educators, working in a large region of school districts located in the southeastern region of Texas, participated in this study. Table 1 displays the demographics of the survey participants. Twelve of these participants were also selected to be interviewed. Table 2 provides a breakdown of the interviewees' demographics. In addition, Table 3 displays the interview participants' pseudonyms, race/ethnicities, and IAT/RIVEC scores, ratings, and reactions.

Table 1

EC-12 Survey Participants

	Frequency (n)	Percentage (%)
1. Gender		
Female	289	77.3
Male	82	21.9
Other	3	0.8
2. Race/Ethnicity		
Black	75	20.1
White	248	66.3
Hispanic	51	13.6
3. Age		
20-29 years	22	5.9
30-39 years	67	17.9
40-49 years	95	25.4
50-59 years	126	33.7
60-69 years	56	15.0
70 years or older	8	2.1
5. Years in Education		

0-5 years	36	9.6
6-10 years	68	18.2
11-15 years	66	17.6
16 – 20 years	71	19.0
20 or more years	133	35.6
6. Level of Education		
Bachelor's Degree	169	45.2
Master's Degree	184	49.2
Doctorate Degree	21	5.6
7. Level Predominantly Taught		
Elementary	125	33.4
Intermediate	19	5.1
Middle School	76	20.3
High School	154	41.2

Table 2

EC-12 Interview Participants

	Frequency (n)	Percentage (%)
1. Gender		
Female	9	75.0
Male	3	5.0
2. Race/Ethnicity		
Black	3	25.0
White	5	41.7
Hispanic	4	33.3
3. Age		
20-29 years	1	8.3
30-39 years	2	16.7
40-49 years	5	41.7
50-59 years	3	25.0
60-69 years	1	8.3
5. Years in Education		
0-5 years	1	8.3
6-10 years	4	33.3
11-15 years	2	16.7
16 – 20 years	3	25.0

20 or more years	2	16.7
6. Level of Education		
Bachelor's Degree	3	25.0
Master's Degree	8	66.7
Doctorate Degree	1	8.3
7. Level Predominantly Taught		
Elementary	3	25.0
Middle School	2	16.7
High School	7	58.3

Table 3

Interview Participants' IAT/RIVEC Scores, Ratings, and Reactions

Pseudonym	Race/ Ethnicity	IAT Score	IAT Rating	IAT Reaction	RIVEC Score	RIVEC Rating	RIVEC Reaction
AnneMarie	Hispanic	-0.24	Slight White Preference	Shocked	0	Absence	Relief
Betty	Hispanic	-0.66	Strong White Preference	Shocked	0	Absence	Relief
Debbie	Hispanic	-0.13	Little Preference (White)	Agreeable	0	Absence	Relief
Eleanor	Black	-0.26	Slight White Preference	Surprised	0	Absence	Accurate
Gloria	Black	0.57	Moderate Black Preference	Presumptive	0	Absence	Accurate
Judy	White	-0.62	Moderate White Preference	Presumptive	3	Medium-High	Deflection
Karen	White	0.01	Little Preference (Black)	Agreeable	2	Low-Medium	Acknowledgement
Margie	Black	0.25	Slight Black Preference	Agreeable	0	Absence	Accurate
Mary	Hispanic	0.11	Little Preference (Black)	Presumptive	2	Low-Medium	Accurate
Richie	White	-0.73	Strong White Preference	Embarrassment	2	Low-Medium	Disappointment
Ronnie	White	0.38	Moderate White Preference	Presumptive	1	Low	Relief
Terry	White	-0.38	Moderate White Preference	Agreeable	0	Absence	Accurate

Instrumentation

Implicit association test. The *Implicit Association Test* (IAT), created by Greenwald et al. (1998), was used to determine a person's socially associative structures through automatic evaluation of a stimuli. This measurement tool has been touted to measure automatic associations even when a participant might not want those associations exposed (Greenwald et al., 1998). The IAT quantifies a person's bias that is a part of their conscious awareness (Gullo et al., 2019). The IAT is completed by the participant assigning an attribute to an image on the computer screen using one response with the left hand and one response with the right hand. The assessment categories pleasant words with images as well as unpleasant words with images. The IAT has various versions which assess race, body images, sexual orientation, etc. Greenwald et al. (1998) determined that the varying degree of difficulty between the initial target discrimination and the later attribute discrimination provides the implicit bias measure. The IAT is designed so that even though a participant might vehemently deny any bias towards any out-group, the IAT would reveal a possible level of implicit bias.

Participants, utilizing a standard keyboard functioning device, are presented with several sets of images and words to match to a category using the "E" and "I" on a keyboard. The categories, African Americans, European Americans, Bad, and Good are located in the top left and top right of the screen. A set appears with just images and the racial categories to match. A set appears with words, such as attractive, delightful, angry, and annoying, that the participant categorizes as good or bad. A set then appears with all four categories on the screen in two sets with good and bad matched with African American and European American and the participant matches the positive and negative words to the correct side with the race categories also present. The combination of the two categories on each side of the screen then flip with each race appearing with good and bad. The sets are repeated with the words and the facial images (see Table 4). The latency periods are measured to determine the time it takes the participant to respond.

Table 4

Implicit Association Text Words and Visuals Used

Category	Items
Good	Smiling, Enjoy, Joyous, Friend, Cheer, Delight, Fantastic, Celebrate
Bad	Rotten, Failure, Evil, Hurtful, Hate, Tragic, Disgust, Selfish
Black Faces	

White Faces

Greenwald et al. (1998) conducted three different studies to determine the validity and reliability of the IAT. The first experiment was conducted with 32 students from the University of Washington. The participants classified items (i.e. flowers, insect names, weapons, musical instruments) with pleasant and unpleasant words. Response latencies were included in the data for each trial. The first two trials of each block were not included due to their large latency period. The IAT effect sizes were $d = 0.78$ for the flowers and insect trials while the musical instrument and weapon trial IAT effect size was $d = 2.30$.

Experiment two consisted of 17 Korean American and 15 Japanese American students from the University of Washington. The students completed an IAT measure classifying Korean names versus full-length Japanese names, with the second Korean names with shortened Japanese names. This round also included a paper questionnaire measure to identify involvement in the Korean or Japanese cultures as well as Asian cultures relative to American culture. Experiment two showed a similar IAT effect size compared to experience one.

The third experiment consisted of 26 White American students from the University of Washington who assigned names to either belong to a White American or to a Black American (both male and female names) as well as an explicit measure as in experiment two. The results of experiment three showed that there was more favorability towards associating White names with positive words than Black names with positive words. The self-reporting measure showed less prejudice towards Blacks than the IAT did. This confirms that the IAT measures implicit bias in a person. The IAT, inclusive of the variations, reliabilities typically reach consistency estimates (Cronbach's alphas) between 0.70 and 0.90 (Schnabel et al., 2006).

RIVEC prejudice scale. The *Subtle and Blatant Prejudice Scale* was developed as a 20-item Likert scale with 10 questions for subtle prejudice and 10 for blatant prejudice (Pettigrew & Meertens, 1995). There was some inconsistency in the instrument because of the nature of possessing negative feelings towards an outgroup but not being blatant about them. The instrument authors address the validity of the instrument with confirmatory models and adjusting scales based on the region being tested. The data consisted of 3,810 European participants from different regions and answering questions to different out-groups depending on the region they were located in.

Martini et al. (2016) adapted Pettigrew and Meertens' *Subtle and Prejudice Scale* to create the *RIVEC (Rejection, Intimacy, Values, Emotions, and Culture) Prejudice Scale* using the Chilean adaptation of the original instrument to increase the validity and reliability of an instrument to determine the level of prejudice in an individual. The *RIVEC Prejudice Scale* authors adjusted the new instrument to address the issues of avoiding double assertions, bias in the wording of the items, as well as not labelling items as subtle or blatant ahead of time on the instrument. The new instrument measures an overall level of prejudice which indicates a person's intensity of prejudice towards a particular group.

The *RIVEC Prejudice Scale* was developed and tested with 471 participants in the Antofagasta region of Chile. The *RIVEC Prejudice Scale* consists of 15 items using a 5-point Likert scale (Absolutely Disagree; Absolutely Agree); still holding true to the elements developed by Pettigrew and Meertens (2016). In the data analysis, a participant with a raw score of 50% or greater to the total possible score indicates a prejudice presence in the individual. Martini et al. (2016) classified participant's scores into six categories: (a) absence (0), (b) low intensity (one component present), (c) low-medium intensity (two components present), (d) medium-high intensity (three components present), (e) high intensity (four components present), and (f) extreme intensity (all five components present). The *RIVEC Prejudice Scale* was determined acceptable when using second-order factor analysis establishing a reliability coefficient of .88 for the overall instrument (Martini et al., 2016).

Data Collection Procedures

Prior to data collection, IRB permission was granted. Participants were provided a Qualtrics link containing both surveys along with a survey cover letter stating voluntary participation, the approximate time frame needed for the study, and participants' identity would remain confidential. Data were collected over a period of six weeks. Interview participants were selected from survey respondents who shared their contact information. Participants reviewed their survey data and then participated in a 45-90-minute discussion about the experience and reactions to IAT result as well as the level of explicit bias. Interviews were conducted in person as well as via video conferencing software and recorded for accuracy.

Data Analysis

Survey data were imported into IBM SPSS and analyzed by conducting descriptive statistics, one-way analysis of variance (ANOVA), and a Pearson's product moment correlation. Eta- and omega-squared, Cohen's d, and coefficient of determination ($r2$) were utilized to report effect sizes and Tukey HSD Post Hoc tests were reported on largest mean differences between groups. Interview transcripts were coded with NVivo software using an inductive and deductive coding process to analyze the participant responses. This information was used in conjunction with the quantitative data to provide a more wholistic view of the participant's bias. Pseudonyms were assigned to protect the identity of the interviewees. Validity was strengthened by the triangulation of results across the quantitative and qualitative data, peer review, and member checking.

Results

Implicit Bias and Explicit Bias

The results of the Pearson's product moment correlation indicated there was a statistically significant negative relationship between implicit and explicit bias scores, $r(372) = -.120$, $p = 0.02$ $r^2 = .014$. A person may verbalize that they have little to no bias through their explicit bias, which is in their conscious awareness, but their implicit bias, the bias that operates in a person's unconscious awareness, says otherwise creating essentially a contradiction. Explicit bias

accounted for 1.4% of the variance in implicit bias. Tables 5-8 illustrate the participants results for the IAT.

Table 5

Participants' Implicit Association Test Outcome

Preference Racial Group	Frequency (n)	Percentage (%)
Preference for Black over White	112	30.0
Preference for White over Black	262	70.0

Table 6

Participants' Implicit Association Test Outcome by Race

Preference Racial Group	Frequency (n)	Percentage (%)
Preference for Black over White	112	30.0
Black	44	39.3
Hispanic	8	7.1
White	60	53.6
Preference for White over Black	262	70.0
Black	31	11.8
Hispanic	43	16.4
White	188	71.8

Table 7

Participants' Level of Identified Implicit Bias from the IAT

IAT Ratings	Frequency (n)	Percentage (%)
Preference for Black over White	112	100.0

Little to no preference	27	24.1
Slight preference	38	33.9
Moderate preference	31	27.7
Strong preference	16	14.3
Preference for White over Black	262	100.0
Little to no preference	39	14.9
Slight preference	58	22.1
Moderate preference	93	35.5
Strong preference	72	27.5

Table 8

Participants' Level of Identified Implicit Bias from the IAT by Racial Group

IAT Ratings	Frequency (n)	Percentage (%)
Preference for Black over White	112	100.0
Little to no preference	27	24.1
Black	5	18.5
Hispanic	3	11.1
White	19	70.3
Slight preference	38	33.9
Black	13	34.2
Hispanic	3	7.9
White	22	57.9
Moderate preference	31	27.7
Black	13	41.9
Hispanic	2	6.5
White	16	51.6
Strong preference	16	14.3
Black	13	81.3
Hispanic	0	0.0
White	3	18.7
Preference for White over Black	262	100.0

Little to no preference	39	14.9
Black	11	28.2
Hispanic	7	17.9
White	21	53.8
Slight preference	58	22.1
Black	9	15.5
Hispanic	11	19.0
White	38	65.5
Moderate preference	93	35.5
Black	9	9.7
Hispanic	9	9.7
White	75	80.6
Strong preference	72	27.5
Black	2	2.8
Hispanic	16	22.2
White	54	75.0

Of the 374 participants, 70.0% showed an implicit preference for White people over Black people, while 30.0% showed an implicit preference for Black people over White people. When analyzing the results of each preference group, the results indicated that the two most common preference groups for implicitly preferring Black people over White people were "slight preference" (33.9%) and "moderate preference" (27.7%). Sixty-three percent of the implicit preference group for White people over Black people consisted of the "moderate" (35.5%) and "strong implicit preference" (27.5%) group.

The Black participants whose IAT results showed an implicit preference for Black people over White people are fairly evenly spread among the four categorical groups with the exact same number in the "slight," "moderate," and "strong implicit preference" groups. Of the 51 Hispanic participants, only 15.7% showed an implicit preference for Black people over White people. There is a fairly even split of the number of Black participants in each of the four groups in the preference for White people over Black people. Thirty percent of the Hispanic participants showed a "strong implicit preference" for White people over Black people.

Of the White participants, 49.2% of their implicit bias scores fall into the "moderate" and "strong" categories in the implicit preference for White people over Black people indicating that while all three racial groups do have a preference in both areas (White over Black and Black over White), the White and Hispanic participants have a stronger implicit preference for the White racial group than the Black racial group. The Black participants were more evenly distributed between the two preference groups when compared to the White and Hispanic racial group with 58.7% showing an implicit preference for Black over White and 41.3% showing an implicit preference for White over Black. When analyzing the average IAT scores for each racial group, the Black participant's average was .17 which is categorized as little to no anti-White implicit bias. However, the White and Hispanic racial group's IAT average was -.30 and -.36 respectively, which are both categorized as moderate anti-Black bias.

Table 9 provides the participant responses per item to the *RIVEC Prejudice Scale.* When analyzing the responses, nine of the 15-items scored higher than 80.0% in disagreement (#1-3, 7-9, 14) or agreement (#6, 13). In terms of "disagreeing" to the items, 92.0% disagreed that *Blacks live worse than Whites because they belong to a less able race*, 95.7% that *Blacks take jobs, housing, and school placed that should be filled by Whites,* 95.7% that *In general, Blacks are people that you cannot trust*, 88.0% that *I perceive that Blacks living in the U.S. do not have friendship values that Whites have in the U.S.,* 86.1% that *The disadvantage of Blacks using some services (rentals, hospitals, etc.) is that they not know how to respect the established norms,* 85.3% that *Blacks do not have the ingrained values that Whites give to the family in the U.S.,* and 83.4% that *The Black children who go to school in the U.S. should assimilate to the White culture than their culture.* In terms of "agreeing" to the items, 82.9% agreed *I would not mind if a Black person with a cultural level similar to mine married someone from my family,* and 82.6% agreed *If my child has a Black classmate, he or she will be enriched by recognizing different traditions and customs*.

Table 9

Participant Responses to the RIVEC Prejudice Scale

Survey Item	Absolutely Disagree / Disagree	Neither Agree nor Disagree	Agree / Absolutely Agree
1. Blacks live worse than Whites because they belong to a less able race.	92.0 (n = 344)	4.8 (n = 18)	3.2 (n = 12)
2. Blacks take jobs, housing, and school places that should be filled by Whites.	95.7 (n = 358)	4.3 (n = 16)	0.0 (n = 0)
3. In general, Blacks are people that you cannot trust.	95.7 (n = 358)	3.7 (n = 14)	0.5 (n = 2)
4. I do not think there is a difference between a Black good friend and a White good friend.**	14.2 (n = 53)	10.2 (n = 38)	75.7 (n = 283)
5. If I have to travel for work with a co-worker, I would prefer to travel with a White than a Black.	75.1 (n = 281)	21.7 (n = 81)	3.2 (n = 12)
6. I would not mind if a Black person with a cultural level similar to mine, married someone from my family.**	3.5 (n = 13)	13.6 (n = 51)	82.9 (n = 310)

7. I perceive that Blacks living in the U.S. do not have friendship values that Whites have in the U.S.	88.0 (n = 329)	9.6 (n = 36)	2.4 (n = 9)
8. The disadvantage of Blacks using some services (rentals, hospitals, etc.) is that they do not know how to respect the established norms.	86.1 (n = 322)	8.3 (n = 31)	5.6 (n = 21)
9. Blacks do not have the ingrained values that Whites give to the family in the U.S.	85.3 (n = 319)	9.6 (n = 36)	5.1 (n = 19)
10. I admire Blacks who look for better job opportunities.**	1.9 (n = 7)	28.9 (n = 108)	69.3 (n = 259)
11. In general, I feel sorry for Blacks living in the U.S.**	43.3 (n = 162)	28.1 (n = 105)	28.6 (n = 107)
12. In general, I consider Blacks to be friendly and educated.**	3.5 (n = 13)	19.5 (n = 73)	77.0 (n = 288)
13. If my child has a Black classmate, he or she will be enriched by recognizing different traditions and customs.**	1.9 (n = 7)	15.5 (n = 58)	82.6 (n = 309)
14. The Black children who go to school in the U.S., should assimilate to the White culture than their culture.	83.4 (n = 312)	15.2 (n = 57)	1.3 (n = 5)
15. If a Black child attends school in the U.S., they should be required to respect the White cultural values and traditions.**	53.5 (n = 200)	31.6 (n = 118)	15.0 (n = 56)

**Reversed Scored Items

Race and Implicit/Explicit Bias

Findings of the one-way ANOVA indicated a statistically significant mean difference among racial groups and their level of implicit bias, $F(2, 371) = 37.80$, $p < .001$, eta-squared = .164, omega-squared = .169. The portion of variance explained in implicit bias scores by the racial makeup of the participants ranged from 16.4%-16.9%. The results of the Tukey HSD Post Hoc indicated the largest mean difference was between the implicit bias scores of the Black racial group and Hispanic racial group ($M_d = .538$; $p < .001$). Additionally, there were statistically significant mean differences in the implicit bias scores between the Black racial group and White racial group (M_d

= .477; p < .001). Findings, however, did not indicate a statistically significant mean difference among racial groups and their level of explicit bias, $F(2, 371) = 1.61$, $p = .201$. These findings indicated that implicit bias (i.e. unconscious thoughts about a racial group) occurred between racial groups, but explicit bias (i.e. conscious/vocal thoughts about a racial group) did not.

Qualitative Findings

In exploring participants' responses to their identified implicit and explicit biases, several reactions were prevalent. These reactions reflected a range of emotional responses and self-reflections regarding their implicit and explicit biases, highlighting the complexity of individuals' perceptions of their own biases. Below, we provide some sample statements from the qualitative phase of this study to illustrate the nuances of their reactions and the implications for educational practices.

Implicit bias reactions. During the interviews, participants were presented with their IAT bias results. Five reactions were recorded from their responses: (a) presumptive, (b) agreeable, (c) surprised, (d) shocked, and/or (e) embarrassed (see Table 3). Examples of participant reactions are provided below with corresponding quotes.

Ronnie, a White male who is "moderately" biased against Blacks, explained, "It doesn't surprise me. I was born in the 60's during the civil rights movement. It takes a long time for change to happen." Judy, a White female, justified her "moderate" bias against Blacks saying, "I've had limited interactions with Black people." Margie, a Black female who showed a "slight pro-Black" bias stated, "I've had to build my self-esteem back up as far as my race." Betty, a female Hispanic teacher with a "strong pro-White" bias and who was eager to learn about her rating, detailed,

> As a Hispanic, when you look at the White way of life, or the assumption, God this is horrific, but it is more about socioeconomic status. People tend to not look at education as a way to change your life.

Richie, a White male with a "strong pro-White" bias, who has spent his entire educational career teaching Hispanic and Black students, explained,

> I have a lot of feelings about this. I am embarrassed. This is bad. It is not something I can control as far as I can tell. Part of me wants to throw out excuses [like] how much of this is nature versus nurture; how much of this is watching the television. The people who could be harmed by this don't care why I am the way I am.

Explicit bias reactions. All interviewees were presented with their identified explicit bias and reactions were solicited. The following themes emerged: (a) accurate, (b) relief, (c) deflection, (d) acknowledgement, and/or (e) disappointment (see Table 3). Examples of participant reactions are provided below with corresponding quotes.

Mary, a Hispanic educator with an identified "low-medium" prejudice against Blacks, said, "I'm not around a lot of people that are Black, so my interactions are limited." Terry added to his explanation of accuracy in his explicit score with, "It is very difficult to be a White person and not

have some level of prejudice, conscious or unconscious." Annemarie, a Hispanic female with "no presence" of prejudice explained the contributing element was, "the experiences that have shaped" her in her life. Judy, a White female with "medium-high" intensity of prejudice, in the theme of deflection, said,

> We do have some good friends that are Black. I interact really well with them. I do have an intellectual awareness of differences in culture and those types of things that I try to keep in mind. I think it comes from the parenting and education component. My experience is that Black parents don't put much value in education and appropriate parental upbringing.

Richie, with an explicit bias score of "low-medium" intensity, after a few pauses while trying to start talking said,

> I thought I would have been one to the left at worse. This feels like a personal judgement. I have had to work against what I was taught by my own family, friends, and even teachers in some cases. I've taught 1,100 students in my career, and I don't want to do any of them any harm.

In all, participants expressed a range of emotions when confronted with their biases, revealing a deep-seated complexity in how they perceive race and education. Ronnie's acknowledgment of his biases as shaped by his upbringing during the civil rights movement and Margie's journey to rebuild her self-esteem both illustrate the impact of personal histories on bias formation. Additionally, Richie's struggle with his explicit biases emphasizes the conflict between personal values and societal conditioning. Moreover, while her honesty sheds light on her perspective, Judy's remark reflects a common but problematic belief that can perpetuate prejudice, particularly the notion that parental involvement in education is inherently tied to racial identity. This framing highlights how such beliefs contribute to systemic inequities and reinforce harmful stereotypes. This context is essential in discussing the implications of their comments and behaviors in educational settings, as it underscores the urgent need for ongoing dialogue and intervention to challenge and change harmful narratives. This holistic approach will help illuminate the ways in which biases manifest and perpetuate systemic inequities.

Discussion

Findings indicated there was a negative relationship between a teacher's implicit and explicit bias measure. As their IAT score increased, their *RIVEC Prejudice Scale* scores decreased; indicating that, according to this sample, participants who possess an anti-Black implicit preference, also tended to show less anti-Black bias in the self-reported measure. The relationship between implicit and explicit bias is heavily debated within the research community. Nier (2005) found that when participants knew that their true attitudes, implicit and explicit, were being assessed that there was a significant relationship between the two measures highlighting that social desirability concerns might be a huge contributing factor to the disassociation of the implicit and explicit bias measures.

Amodio et al. (2003) recommended that bias assessments also explore the motivational factors that contribute to a participant's responses indicating that some bias measures may not be completely accurate of the true beliefs a person has towards another racial group. Sometimes participants can articulate that they do not hold prejudicial views towards a racial group, but still may, in fact, hold biases towards others as a result of their upbringing and instilled views from other sources (Kumar et al., 2015; Pettigrew, 1987). The variance in the implicit and explicit bias measures support research that a teachers' implicit bias can marginalize students in relation to academic achievement, discipline management, and interactions even though the teachers' explicit bias measure indicates there is no prejudice (Glock & Krolak-Schwerdy, 2013; Kumar et al., 2015).

Findings also indicated there was a statistically significant mean difference between the Black racial group's implicit bias measure and the White and Hispanic implicit bias measure. The Black racial group's average bias was closer to no bias or preference for one racial group over the other than the Hispanic or White racial group indicating that while the Black racial group did have a preference for Black over White, it was 44% less preference for their own racial group than the White racial group and 53% less preference for their own racial group than the Hispanic racial group. The findings also indicated that there was not a statistically significant mean difference between the racial groups and their level of explicit bias. The level of implicit bias, or preference for Black over White, in this research study for the Black racial group was lower than the level of preference for White over Black for the White and Hispanic racial groups.

Qualitative findings suggested that teachers have varying reactions to identifies biases and varying personal evidence that one attributes to their level of bias present. In line with this research study's qualitative section, Clark and Zygmunt (2014) findings included a wide range of reactions to identified implicit bias which is to be expected based on Bennett's Developmental Model of Intercultural Sensitivity (DMIS) which details that everyone is at a different level when it comes to intercultural communication and personal experiences that can possibly influence one's level of bias. Reflecting on one's identified bias through assessment measures and judgment free space to process, participants can actively work to decrease their biases (Amodio & Swencionis, 2018; Sukhera et al., 2018).

To extend this discussion through the lens of Critical Race Theory (CRT), we argue that racism is not merely an individual prejudice but is embedded in the fabric of societal institutions, which directly influences the implicit and explicit biases exhibited by teachers as supported by Payne and Hannay (2021). The findings indicating a negative relationship between implicit and explicit bias highlight a crucial aspect of CRT: the need to interrogate how these biases affect marginalized groups within educational settings. As noted, a teacher's higher implicit bias as measured by the IAT correlates with lower scores on the *RIVEC Prejudice Scale*. This suggests that even teachers who perceive themselves as "colorblind" may still harbor unconscious biases that affect their interactions with students of different racial backgrounds, thus emphasizing the endemic nature or racism. Critical Race Theory scholars have argued that these biases can perpetuate inequities in academic achievement and disciplinary actions, often leading to a cycle of disadvantage for students of color (Grace, 2020; Ladson-Billings, 1998).

In conclusion, by integrating a CRT perspective into the discussion of implicit and explicit biases among teachers, we can better understand how these biases operate within a larger systemic

framework. This understanding is crucial for developing interventions that not only address individual biases but also challenge the systemic inequities that affect students of color in educational settings. For instance, racial disparities in academic achievement persist for Black students compared to their white peers (Paschall et al., 2018). Racial bias plays a significant role in academic trajectories and achievement (Rynders, 2019). As it relates to instruction, Black students are more susceptible to negative teacher perceptions and low expectations, which influence what is taught and how it is taught (Grace & Nelson, 2019; Morris, 2016). Often academic stratification has a symbiotic relationship with discipline disproportionality (Angus & Nelson, 2021; Gregory et al., 2010). Historically, Black students have been negatively impacted by disproportionately harsh disciplinary policies and practices (Carter et al., 2017; Skiba et al., 2014). Black students are generally more likely to encounter impediments to quality instruction and curriculum barriers, excessive disciplinary referrals and suspensions only exacerbate their marginalization. Research indicates that implicit bias influences instructional and discipline practices, and educator decision making (Peterson et al., 2016; Riddle & Sinclair, 2019).

This study's findings have identified implications for multiple stakeholder groups within the public school system. While this research focused on the school setting, there is a larger issue at play with the biases that are present in society. Addressing bias in the educational sector is a practice that has recently started a conversation, but classroom teachers, campus administrators, and district leaders are lagging in addressing serious bias issues that are plaguing minorities in schools (Losinski et al., 2019).

Implications

Interventions are sometimes needed to actively work to decrease a person's bias and participating through an empathic exercise can raise awareness about the role bias plays in one's life (Warren, 2918; Whitford & Emerson, 2019). Learning about bias (racial, gender, academic ability, language proficiency, weight, sexual orientation), discovering personal biases that are held, and participating in activities designed to reduce the effects of bias on students were discussed in the interviews as things that the participants did not have experience with during their teacher preparation programs as well as minimal experience with during in-service professional development (Harrison & Lakin, 2008; Jackson et al., 2014). Hagiwara et al. (2020) identified internal motivation as a contributing factor to reducing bias in addition to training, which controlling a person's internal motivation is not always possible, so the combination of training related to increasing a person's self-awareness of their implicit bias, as well as increasing one's internal motivation to reduce the level of implicit bias they possess, and providing evidence-based strategies to minimize one's bias is critical. While it is possible to create change in a person's implicit measure, there was no translation into a change with a person's explicit bias measure, indicating that while a person's bias is malleability, it is minimal (Forscher et al., 2019). Creating sustainable change in reducing bias in the workforce of an organization is a sizable feat.

District leaders and policymakers must recognize the critical role they play in addressing implicit and explicit bias within their schools, as the qualitative findings of this research reveal that teachers often perceive little impact from district-level initiatives aimed at reducing such biases. Given that marginalized populations frequently experience bias from educators, as well as through biased assessments and curricula, it is essential for district leadership to implement effective strategies to

mitigate these issues. Policymakers must understand that investing time and resources into comprehensive bias training and awareness initiatives can foster a more equitable learning environment for all students, particularly those from marginalized backgrounds. Engaging in equity audits that include array of stakeholders—including staff, students, and parents—ensuring a holistic understanding of the current challenges without fear of judgment is critical. While this process may reveal uncomfortable truths and highlight disparities, it is a necessary step toward identifying and addressing inequitable practices based on gender, race, ethnicity, disability, and other factors. Only by analyzing concrete data can educational leaders begin to dismantle barriers that hinder the success of minority students (Dodman et al., 2019; Skrla et al., 2009). Following the initial assessment, a diverse committee should be established to develop an actionable plan, complete with key checkpoints for accountability. Only by fostering a culture of transparency and accountability can school districts effectively work toward restoring equity and improving educational outcomes for all students (Palmer et al., 2019).

Additionally, campus administrators play a crucial role in effectively reducing bias within their schools, moving beyond the superficiality of one-time diversity training sessions. True change requires ongoing observation and active engagement with bias-related behaviors throughout the school year. Microaggressions—subtle yet harmful behaviors rooted in implicit bias—can accumulate and negatively affect staff, students, and parents if left unaddressed. Administrators must facilitate discussions with various stakeholder groups to pinpoint bias issues and regularly analyze multiple data sources, such as discipline records and academic performance, to identify patterns impacting marginalized students. Simply identifying these patterns is insufficient without actionable steps; therefore, campus leaders must communicate their findings and collaborate on solutions, which may require additional training or resources that district leadership might not provide. Engaging in uncomfortable conversations about racial disparities in achievement and equitable access to high quality curriculum is vital. Research has shown that teacher biases can influence academic perceptions and referrals, necessitating a commitment to mindful decision-making that actively counters inequities (Copur-Gencturk et al., 2020; Grissom & Redding, 2015; Gullo & Beachum, 2020; Young & Laible, 2000).

Lastly, Classroom teachers, much like the findings of Whitford and Emerson (2019), need opportunities to explore their own biases and view them through the perspectives of students and parents. Engaging in individuation and perspective-taking, as suggested by Burgess et al. (2017), helps teachers recognize implicit biases that may unknowingly affect their relationships with students and families. Starting with implicit bias measures can highlight areas for growth, followed by experiences where teachers learn from colleagues or students of different races about the real-world impacts of bias. Creating a judgment-free space for these discussions is essential. Additionally, teachers should record and analyze their lessons to identify interactions across racial and gender groups, seating arrangements, and other behaviors that may reflect bias. For pre-service teachers, engaging in empathic exercises, such as reading and writing activities, has been shown to reduce bias (Whitford & Emerson, 2019) and can help them recognize their own attitudes toward race and cultural differences (Warren, 2018). If educational institutions neglect to address these biases, they risk perpetuating inequities for marginalized students (Frankenberg, 2012; Quinn, 2017). Acknowledging implicit biases is the first step toward meaningful change and requires ongoing research and action to mitigate their effects in educational settings (Hahn & Gawronski, 2018).

Conclusion

Society is becoming increasingly aware of the role of implicit bias, especially in recent years in the U.S., and educational organizations are no exception, as evidenced by the academic and disciplinary disparities affecting BIPOC students. This awareness, however, is occurring against a backdrop of significant political backlash regarding discussions of race and bias in education. Legislative measures in several states have sought to restrict conversations around systemic racism and implicit bias, framing them as divisive or inappropriate for educational settings.

Such political pushback creates a challenging environment for school leaders striving to implement meaningful reforms. However, if school leaders fail to confront these disparities, the existing academic and disciplinary gaps are likely to persist, perpetuating cycles of inequity and disadvantage for marginalized students. Moreover, the reluctance to engage with these critical issues only reinforces a culture of silence around bias, making it more difficult for educators to develop the necessary awareness and skills to address their own biases effectively. As these conversations become increasingly polarized, it is vital for educational institutions to stand firm in their commitment to equity and inclusivity.

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