



# IMPLICIT BIAS STRATEGIES

# Addressing Implicit Bias in Early Childhood Education

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This document draws from implicit bias research to provide strategies to reduce bias both on an organizational and individual level. Each will address the contextual and cognitive factors that lead to implicit bias in these domains and offer a practical application to counter their effects. The Kirwan Institute for the Study of Race and Ethnicity is an interdisciplinary engaged research institute at The Ohio State University established in May 2003.

Our goal is to connect individuals and communities with opportunities needed for thriving by educating the public, building the capacity of allied social justice organizations, and investing in efforts that support equity and inclusion. Here at the Kirwan Institute we do this through research, engagement, and communication.

**Our mission is simple:** we work to create a just and inclusive society where all people and communities have opportunity to succeed.

## Introduction

ew would deny the importance of education in shaping life's opportunities. As such, early interventions have often been heralded as a critical leverage point for ensuring that students' educational opportunities are maximized. The value of education for youth goes far beyond content knowledge as it fosters artistic, emotional, and relational growth. Nevertheless, a student's brilliance, creativity, and hard work fail to serve a function if the opportunity to utilize those gifts is absent. Thus, we must strive to break any barriers to success as early as possible in order for youth to reach their full potential, especially as we know that early education experiences—whether positive or negative-can impact a student's educational and social trajectory (in general, see Engle & Black, 2008; Hamre & Pianta, 2001; Kern & Friedman, 2008; Peisner-Feinberg et al., 2001). The role of educators and school personnel is instrumental for ensuring a successful educational experience for youth. This responsibility requires flexibility, compassion, and the ability to navigate the ever-changing tides of the educational system. Indeed, many educators sacrifice precious time and invest additional effort, both on and off the clock, to ensure the best outcomes for their students.

Despite these intentions, we recognize that various barriers, such as implicit biases, can complicate educators' efforts to help students reach their full potential. Defined as the "attitudes or stereotypes that affect our understanding, actions, and decisions in an unconscious manner," these cognitive associations can contribute to the dynamics of various social interactions (Staats, 2013, p. 16). Implicit biases are a part of humans' automatic social cognition and reflect exposure to stereotypical messag-

es rather than intent (Greenwald et al., 2002; Kawakami & Miura, 2014). Thus, implicit biases are unique in the sense that one can possess them toward groups of people while still maintaining an explicit commitment to egalitarianism. However, these biases, even if held by good people, can still produce a variety of negative effects if left unchecked. For example, in addition to education, the presence of implicit racial biases contributes to negative outcomes within domains such as healthcare, criminal justice, and employment.<sup>1</sup>

Thus, in our effort to understand and limit the negative effects of implicit bias across students' educational experiences, we are compelled to extend our scope into the realm of early child-hood. Though implicit biases certainly can impact youth's interactions with each other, this document focuses on the role of educators in mitigating the effects of implicit bias, both personally and in their classrooms.

#### **Education Outcomes**

Educators are critical to the process of reducing the effects of implicit biases in schools. However, like the majority of individuals, both classroom and pre-service teachers have been shown to hold positive implicit biases toward White students and negative biases toward non-White students (Glock & Karbach, 2015; Hartlep, 2015; Van den Bergh, Denessen, Hornstra, Voeten, & Holland, 2010). Additionally, these biases often are related to teaching and discipline practices that adversely affect outcomes for minority students (in general, see Kumar, Karabenick, & Burgoon, 2014; Okonofua & Eberhardt, 2015). For youth, these effects span from academic performance to school

<sup>&</sup>lt;sup>1</sup>For a review, see previous and current versions of Kirwan's State of the Science Implicit Bias Review at: http://kirwaninstitute.osu.edu/implicit-bias-review/

discipline. For example, individuals' unconscious racial associations can affect perceptions of non-White students' play, academic potential, and innocence, even if their behaviors are identical to those of White students (Goff, Jackson, Leone, Culotta, & DiTomasso, 2014; Schubert Center for Child Studies, 2014; Yates & Marcelo, 2014). To illustrate, teacher ratings of imaginative and expressive play were related to perceptions of less preparedness, less peer acceptance, and higher ratings of student-teacher conflict for Black preschoolers; however, the same criteria were related to positive teacher ratings for non-Black children (Yates & Marcelo, 2014).

Despite the adverse impact of many implicit biases, there is still a promising outlook for all students. Educators, being champions for students' achievement, are likely to be motivated to engage in practices to decrease the effects of bias. Moreover, the presence of implicit biases does not diminish the fact that most in the educational profession support egalitarian values, such as equitable treatment for all students. As citizens of a country that holds equal opportunity in education at its core, those invested in education are compelled to make this virtue a reality. Acknowledging implicit bias is first step to ensuring our behaviors align with the egalitarian values we embrace.

### **Goals of this Document**

In recent years, the research dedicated specifically to reducing the effects of implicit bias has proliferated. However, empirically tested strategies for addressing implicit bias in an early education setting remain quite limited. In this critical time of children's social, emotional, and cognitive development, we must strive to advance this literature in order to ensure opportunity for all students. Thus, this document draws from the relevant implicit bias research to provide strategies to reduce bias both on an organizational and individual level. Each will address the contextual and cognitive factors that lead to implicit bias in these domains and offer a practical application to counter their effects.

At the Kirwan Institute, race and ethnicity are the primary interests of our research, yet we recognize that a variety of social identities can leave individuals susceptible to the effects of implicit bias. Thus, although this document focused predominantly on implicit racial bias, other forms of implicit bias, such as gender or disability bias, may be addressed through the following strategies.

# School Wide and Organizational Strategies: Considering Institutional Values

Considering schools and organizations broadly, recommendations for reducing the effects of implicit bias center on the institutional values the schools adopt. In general, several conditions on an institutional level contribute to heighted reliance on one's implicit associations. When mental resources are limited, humans are more likely to rely on automatic, rather than deliberative mental processes; examples include increased time pressures and cognitive busyness —both of which are present in an educational context (Bertrand, Chugh, & Mullainathan, 2005; Gilbert & Hixon, 1991). These conditions play a larger role in the likelihood of bias perpetuating in institutional decision-making practices, and staff development and culture.

Decision Making Practices: Multiple aspects of decision-making processes—such as salient social categories, stress, and ambiguity—leave schools vulnerable to the effects of implicit bias (Mitchell, Banaji, & Nosek, 2003; Van Knippenberg, Dijksterhuis, & Vermeulen, 1999). Thus, holding the following institutional values may help prevent bias from permeating critical decision points:

### Data-based decision making

• Emphasize the importance of data collection and accountability when developing and implementing educational and discipline policies. Gathering meaningful data and monitoring progress can positively impact multiple aspects of the early childhood education experience and enhance student outcomes (Hojnoski, Gischlar, & Missall, 2009). This is especially relevant for addressing implicit bias, as this form of bias operates outside of conscious awareness. Thus, data can shed light on disparate treatment trends and patterns that may otherwise go unnoticed by the individuals involved in those decisions.

#### Culturally-representative schools

 Consider how images of students and staff around the school support these values. What do they communicate or suggest about who is successful, included, or excluded? Ensure that images do not confirm stereotyped associations as this can increase the likelihood stereotype threat and implicitly reinforce stereotypes. To illustrate the connected nature between implicit bias and stereotype threat<sup>2</sup>, Kiefer and Sekaguaptewa (2007) demonstrated that women who were high in an implicit male-math association were more likely to perform poorly on a math assessment than those with less implicit bias. Thus, school personnel should be mindful of how values are communicated through images and other forms of messaging.

High expectations for disabled and minority youth in all domains

Teachers' expectations are one of the best predictors of student outcomes. However teacher expectations are also susceptible to the effects of implicit bias. Indeed, researchers have found teachers' implicit biases to be predict differences in their expectations of students based on race. Examples of these differing expectations included ratings of ethnic minority students as "being less intelligent" and "having less promising prospects for their school careers" (Van den Bergh et al., 2010, p. 518). Alarmingly, the researchers also found correlations between teachers' implicit biases and the racial/ethnic achievement gap exhibited in the teacher's classroom (Van den Bergh et al., 2010). This suggests a self-fulfilling prophecy effect—where predictions of negative behavior cause the behavior itself—particularly if students are part of a stigmatized group (Jussim, Eccles, & Madon, 1996).

**Staff Culture & Development:** Recruiting a school staff comprised of different races, cultures, and genders offers opportunity for perspective taking and valuable collaborative input. However, mere contact with individuals is typically insufficient for bridging cultural barriers (Pettigrew, 1998). Thus, ensuring

<sup>&</sup>lt;sup>2</sup>Stereotype Threat is defined as "being at risk of confirming, as self-characteristic, a negative stereotype about one's group (Steele & Aronson, 1995, p. 797)



meaningful contact though trainings and other cooperative interactions has the potential to limit implicit biases. Ways to utilize staff development to as a means to reduce implicit bias include:

Using professional development time to provide opportunities for education on implicit bias and other types of cultural competency-focused training

Trainings should incorporate the opportunity to take the Implicit Association Tests<sup>3</sup>
(IAT) so that staff can be aware of biases they may possess toward students of different races, disability statuses, genders, etc. Awareness of one's implicit associations is a critical first step to countering them.

Creating an atmosphere where staff can identify, discuss, and find solutions for instances of bias

• Although this may be challenging at first, failure to acknowledge one's biases can instead perpetuate them, particularly when race is a relevant factor (Apfelbaum, Sommers, & Norton, 2008). Thus, opportunities to continually engage with diverse partners and safely create dialogue around race and other forms of identity can help reduce implicit bias. Examples may include a staff book club<sup>4</sup> that encourages discussion around relevant research literature on implicit racial biases.

### **Student Level Strategies**

Young children are not immune to the presence of implicit biases. In fact, the ability to categorize and learn new information is a critical component of early childhood devel-

opment. Moreover, the formation of in-group bias, that is, the preference for similar others, is well documented in children (Cvencek, Nasir, O'Connor, Wischnia, & Meltzoff, 2014; Salès-Wuillemina et al., 2014), and is shown to emerge as early as preschool (Patterson & Bigler, 2006). As the likelihood of internalizing these biases increases with age and exposure, early intervention in a Pre-K classroom can serve as an excellent strategy for students to develop positive attitudes towards others both implicitly and explicitly. With this focus in mind, scholars have explored several ideas for mitigating students' implicit biases in early childhood education. These ideas encompass approaches to classroom instruction as well as behavior management and discipline.

Classroom Instruction: Utilizing story-telling, and asking students to take the perspective of others can make education about bias accessible for early childhood students. Other methods for incorporating bias-reducing strategies into instruction include:

Using materials and photos that counter stereotypical associations, such as featuring images of multiple races as doctors, teachers, and other professionals when describing career choices. Ensure that all races are represented in positions of power

Researchers have reduced implicit racial bias by exposing participants to positive Black exemplars and negative White exemplars (Dasgupta & Greenwald, 2001). Additionally, photos of minority individuals in a positive context (e.g. dressed as a lawyer) reduced implicit racial biases more than pictures of minorities in a negative context (e.g. dressed as a prisoner)

<sup>&</sup>lt;sup>4</sup>A suggested reading by the developers of the IAT is Blindspot: Hidden Biases of Good People (Banaji & Greenwald, 2013).



<sup>&</sup>lt;sup>3</sup>For more for information on the Implicit Association Test or to participate online, access Project Implicit at https://implicit.harvard.edu/implicit/selectatest.html

(Barden, Maddux, Petty, & Brewer, 2004).

Using music, books, and other forms of literature to share the cultural values of individuals across the world. These creative interests can be an outlet for exploring diversity. For example, a cross-cultural music program was designed to reduce intergroup conflict between Portuguese students; By uniting students around the common interest of music students' implicit biases decreased (Neto, Pinto, & Mullet, 2015).

Classroom Dynamics: Re-designing classroom dynamics to be more inclusive may decrease ingroup-outgroup biases and promote positive outcomes for a variety of students. For example, utilizing an inclusion classroom model for students with disabilities promotes better outcomes than separate instruction (Rea, McLaughlin, & Walther-Thomas, 2002), and exposure to ethnically diverse individuals has been linked to positive social development in higher education populations (Hurtado, 1999; Milem & Hakuta, 2000). Examples of ways to create inclusive classroom structure include:

Facilitating intergroup contact between peers

- Intergroup contact has demonstrated reductions in prejudice across a variety of settings and group membership (Pettigrew & Tropp, 2006).
- As schools provide extensive opportunities for intergroup peer interactions, educational settings may be the most beneficial atmosphere for youth to develop cross-race friendships, which have the opportunity to reduce implicit racial biases (Telzer, Humphreys, Shapiro, & Tottenham, 2013).
- Creating heterogeneous learning groups to

include students at multiple ability levels and cultural backgrounds that can support cooperative learning without the detrimental effects of ability tracking (Kuykendall, 1989).

 Cooperative learning strategies have demonstrated both academic and social benefits. For example, the Jigsaw Classroom, which specifically focuses on establishing positive intergroup contact between students of different racial backgrounds, improved educational outcomes, reduced intergroup competition, and reduced racial bias. (For a brief overview of Jigsaw Classrooms, see American Psychological Association, 2003).

Utilizing interventions focused on stress reduction

• Using stress alleviation strategies such as mindfulness mediation have reduced implicit biases with adults and have demonstrated improved academic and social outcomes in student populations (Kang, Gray, & Dovidio, 2014; Kirp, 2014). To illustrate, The Quiet Time transcendental meditation program has been shown to reduce violence, improve academic achievement, and increase attendance in schools where it has been implemented (San Francisco Unified School District).

**Decrease Ambiguity in Behavior Management & Discipline:** Increased reliance on mental heuristics—i.e. shortcuts, such as implicit biases — occur when there is high ambiguity when making decisions (Levinson & Young, 2010). For example, mock jurors with a pro-White implicit bias were more likely to make harsh judgments towards Blacks in light of

ambiguous case evidence (Levinson, Cai, & Young, 2010). To reduce ambiguity in discipline, school staff and educators can:

Provide examples of behavior expectations in measureable terms, and ensure they are highly visible throughout the school

- Defining all of infractions (regardless of severity) and designating an appropriate response can equip teachers to diffuse behavior before it occurs (American Psychological Association Zero Tolerance Task Force, 2008).
- Standardize evaluation procedures by eliminating vague language in discipline rationale such as "disobedient" or "disruptive," which is more susceptible to the influence implicit bias (Staats & Contractor, 2014).

These examples address both the organizational and individual factors most commonly associated with implicit bias. However, there is still a great need for innovative strategies to address

these effects in early education. In an era that stresses the importance of programs and initiatives, one can easily overlook a simple solution to any intergroup bias—empathy. As a means to increase empathy , taking the perspective of others has been shown to reduce implicit biases toward a variety of outgroup members (Galinsky & Moskowitz, 2000; Todd, Bodenhausen, Richardson, & Galinsky, 2011).

With all of the increasing requirements for personnel in the early education systems, executing strategies aimed at reducing the effects implicit bias likely requires a time investment. However, the advantage of early intervention for our youth and our society is certainly worth this effort as it will enable students to get the most from their early academic experiences. Moreover, taking steps to mitigate implicit bias will ultimately make educators more successful in their profession and increase the likelihood of student achievement as they grow and take more ownership of their learning.

### References

American Psychological Association. (2003). How to Build a Better Educational System: Jigsaw Classrooms. from http://www.apa.org/research/action/jigsaw.aspx

American Psychological Association Zero Tolerance Task Force. (2008). Are Zero Tolerance Policies Effective in the Schools?: An Evidentiary Review and Recommendations. American Psychologist, 63(9), 852-862.

Apfelbaum, E. P., Sommers, S. R., & Norton, M. I. (2008). Seeing Race and Seeming Racist? Evaluating Strategic Colorblindness in Social Interaction. Journal of Personality and Social Psychology, 95(4), 918-932.

Banaji, M. R., & Greenwald, A. (2013). Blindspot: Hidden Biases of Good People. New York, NY: Delacorte Press.

Barden, J., Maddux, W. W., Petty, R. E., & Brewer, M. B. (2004). Contextual Moderation of Racial Bias: The Impact of Social Roles on Controlled and Automatically Activated Attitudes Journal of Personality and Social Psychology, 87(1), 5-22.

Bertrand, M., Chugh, D., & Mullainathan, S. (2005). Implicit Discrimination. American Economic Review, 95(2), 94-98.

Cvencek, D., Nasir, N. S., O'Connor, K., Wischnia, S., & Meltzoff, A. N. (2014). The Development of Math–Race Stereotypes: "They Say Chinese People Are the Best at Math". Journal of Research on Adolescence.

Dasgupta, N., & Greenwald, A. G. (2001). On the Malleability of Automatic Attitudes: Combating Automatic Prejudice with Images of Admired and Disliked Individuals. Journal of Personality and Social Psychology, 81(5), 800-814.

Engle, P., L., & Black, M. M. (2008). The Effect of Poverty on Child Development and Educational Outcomes. Annals of the New York Academy of Sciences, 1136(1), 243-256.

Galinsky, A. D., & Moskowitz, G. B. (2000). Perspective-taking: Decreasing Stereotype Expression, Stereotype Accessibility, and In-Group Favoritism. Journal of Personality and Social Psychology, 78(4), 708-724.

Gilbert, D. T., & Hixon, G. J. (1991). The Trouble of Thinking: Activation and Application of Stereotypic Beliefs. Journal of Personality and Social Psychology, 60(4), 509-517.

Glock, S., & Karbach, J. (2015). Preservice Teachers' Implicit Attitudes Toward Racial Minority Students: Evidence from Three Implicit Measures. Studies in Educational Evaluation, 45, 55-61.

Goff, P. A., Jackson, M. C., Leone, B. A. I. D., Culotta, C. m., & DiTomasso, N. A. (2014). The Essence of Innocence: Consequences of Dehumanizing Black Children. Journal of Personality and Social Psychology, 106(4), 526-545

Greenwald, A. G., Rudman, L. A., Nosek, B. A., Banaji, M. R., Farnham, S. D., & Mellot, D. S. (2002). A Unified Theory of Implicit Attitudes, Stereotypes, Self-Esteem and Self-Concept. Psychological Review, 109(1), 3-25.

Hamre, B. K., & Pianta, R. C. (2001). Early Teacher-Child Relationships and the Trajectory of Children's School Outcomes through Eighth Grade. Child Development, 72(2), 625-638.

Hartlep, N. D. (2015). Unwilling or Unable? Measuring Anti-Asian Implicit Biases of Pre-Service Teachers in Order to Impact Teacher Effectiveness. GAUISUS, 3, 1-10.

Hojnoski, R. L., Gischlar, K. L., & Missall, K. N. (2009). Improving Child Outcomes WithData-Based Decision Making: Collecting Data. Young Exceptional Children, 12(3), 32-44.

Hurtado, S. (1999). Reaffirming Educators' Judgment: Educational Value of Diversity. Liberal Education, 85(2), 24-31.

Jussim, L., & Harber, K. D. (2005). Teacher Expectations and Self-Fulfilling Prophecies: Knowns and Unknowns, Resolved and Unresolved Controversies. Personality and Social Psychology Review, 9(2), 131-155.

Kang, Y., Gray, J. R., & Dovidio, J. F. (2014). The Nondiscriminating Heart: Lovingkindness Meditation Training Decreases Implicit Intergroup Bias. Journal of Experimental Psychology, 143(3), 1306-1313.

Kawakami, N., & Miura, E. (2014). Effects of Self-Control Resources on the Interplay between Implicit and Explicit Attitude Processes in the Subliminal Mere Exposure Paradigm International Journal of Psychological Studies, 6(2), 98-106.

Kern, M. L., & Friedman, H. S. (2008). Early Education Milestones as Predictors of Lifelong Academic Achievement, Midlife Adjustment, and Longevity. Journal of Applied Developmental Psychology, 30(4), 419-430.

Kiefer, A. K., & Sekaquaptewa, D. (2007). Implicit Stereotype and Women's Math Performance: How Implicit Gender-Math Stereotypes Influence Women's Susceptibility to Stereotype Threat. . Experimental Social Psychology, 43(5), 825-832.

Kirp, D. L. (2014). Meditation transforms Roughest San Francisco Schools. SF Gate. Retrieved from http://www.sfgate.com/opinion/openforum/article/Meditation-transforms-roughest-San-Francisco-5136942.php

Kumar, R., Karabenick, S. A., & Burgoon, J. N. (2014). Teachers' Implicit Attitudes, Explicit Beliefs, and the Mediating Role of Respect and Cultural Responsibility on Mastery and Performance-Focused Instructional Practices. Journal of Educational Psychology.

Kuykendall, C. (1989). Improving Black Student Achievment by Enhancing Students' Self Image. In T. M. A. E. Center (Ed.), Chevy Chase, MD.

Levinson, J. D., Cai, H., & Young, D. M. (2010). Guilty by Implicit Racial Bias: The Guilty/Not Guilty Implicit Association Test. The Ohio State Journal of Criminal Law, 8, 187-208.

Levinson, J. D., & Young, D. (2010). Different Shades of Bias: Skin Tone, Implicit Racial Bias and Judgments of Ambiguous Evidence West Virginia Law Review, 112(2), 307-350.

Milem, J., & Hakuta, K. (2000). The Benefits of Racial and Ethnic Diversity in Higher Education. Washington, D.C.: American Council on Education

Mitchell, J. P., Banaji, M. R., & Nosek, B. A. (2003). Contextual Variations in Implicit Evaluation. Journal of Experimental Psychology: General, 132(3), 455-469.

Neto, F., Pinto, M. d. C., & Mullet, E. (2015). Can music reduct anti-dark-skin prejudice? a test of a cross-cultural musical education programme. Psychology of Music.

Okonofua, J. A., & Eberhardt, J. L. (2015). Two Strikes: Race and the Disciplining of Young Students. Psychological Sciences.

Patterson, M. M., & Bigler, R. S. (2006). Preschool Children's Attention to Environmental Messages About Groups: Social Categorization and the Origins of Intergroup Bias. Child Development, 77(4), 847-860

Peisner-Feinberg, E. S., Burchinal, M. R., Clifford, R. M., Culkin, M. L., Howes, C., Kagan, S. L., & Yazejian, N. (2001). The Relation of Preschool Child-Care Quality to Children's Cognitive and Social Developmental Trajectories through Second Grade. Child Development, 72(5), 1534-1553.

Pettigrew, T. F. (1998). Intergroup Contact Theory. Annual Review of Psychology, 49, 65-85.

Pettigrew, T. F., & Tropp, L. R. (2006). A Meta-Analytic Test of Intergroup Contact Theory. Journal of Personality and Social Psychology, 90(5), 751-783.

Rea, P. J., McLaughlin, V. L., & Walther-Thomas, C. (2002). Outcomes for Students with Leaning Disabilities in Inclusive and Pullout Programs. Exceptional Children, 68(2), 203-223.

Salès-Wuillemina, E., Masseb, L., Urdapilletab, I., Pullinc, W., Kohlerb, C., & Gueraudb, S. (2014). Linguistic intergroup bias at school: An exploratory study of black and white children in France and their implicit attitudes toward one another. International Journal of Intercultural Relations.

San Francisco Unified School District. The Quiet Time Program: Restoring a Positive Culture of academics and well-being in high-need school communities. In The David Lynch Foundation (Ed.).

Schubert Center for Child Studies. (2014). Play, Implicit Bias and Discrimination in Early Childhood: Implications for Childhood Development In C. W. R. University (Ed.), (pp. 1-6). Cleveland, OH.

Staats, C. (2013). State of The Science: Implicit Bias Review.

Staats, C., & Contractor, D. (2014). Race and Discipline in Ohio Schools: What the Data Say. In The Kirwan Institute (Ed.): The Ohio State University

Steele, C. M., & Aronson, J. (1995). Stereotype Threat and the Intellectual Test Performance of African Americans. Journal of Personality and Social Psychology, 1995(69), 5.

Telzer, E. H., Humphreys, K. L., Shapiro, M., & Tottenham, N. (2013). Amygdala Sensitivity to Race is Not Present in Childhood but Emerges Over Adolescence. Journal of Cognitive Neuroscience, 25(2), 234-244.

Todd, A. R., Bodenhausen, G. V., Richardson, J. A., & Galinsky, A. D. (2011). Perspective Taking Combats Automatic Expression of Racial Bias. Journal of Personality and Social Psychology, 100(6), 1027-1042.

Van den Bergh, L., Denessen, E., Hornstra, L., Voeten, M., & Holland, R. W. (2010). The Implicit Prejudice Attitudes of Teachers: Relations to Teacher Expectations and the Ethnic Achievement Gap. American Educational Research Journal, 47(2), 497-527.

Van Knippenberg, A., Dijksterhuis, A., & Vermeulen, D. (1999). Judgement and Memory of a Criminal Act: the Effects of Stereotypes and Cognitive Load. European Journal of Social Psychology, 29(2), 191-201.

Yates, T. M., & Marcelo, A. K. (2014). Through Race-Colored Glasses: Preschoolers' Pretend Play and Teachers' Ratings of Preschooler Adjustment. Early Childhood Research Quarterly, 29, 1-11.