

**The relationship of implicit bias to perceptions
of teaching ability:**

examining good looks, race, age, and gender

A relação entre preconceitos implícitos e as percepções

sobre a capacidade de ensino:

examinando boa aparência, raça, idade e sexo

La relación de los prejuicios implícitos y las percepciones

sobre la capacidad de enseñanza:

analizando la buena apariencia, raza, edad y sexo

Eric Haas

California State University, East Bay/CA – Estados Unidos

Mariama Smith Gray

California State University, East Bay/CA – Estados Unidos

Gustavo Fischman

Arizona State University

Abstract

Education leaders consistently make quick decisions that have substantial impacts on the students and educators, with whom they work, often based on ambiguous and incomplete information. Thus, in this fast-paced, imperfect decision-making environment, implicit, unconscious biases can influence their decisions. To become better decision-makers, education leaders must learn to identify their implicit biases and then minimize their negative influences. In this study of 1,751 U.S. participants, we examine perceptions of teaching ability based solely on a person's appearance and how this initial perception of teaching ability relates to the person's attractiveness rating, as well as race, age, gender, and some identifiable markers of religious devotion. Using linear regression and ANCOVA to analyze participant ratings of photographs of potential teachers, we found attractiveness to have a moderate to strong influence on perceived teaching ability. By group, there were only small differences in perceived teaching ability by race, gender, and age, with the exception of Sikh men wearing turbans and Muslim women wearing hijabs, where both groups had the lowest ability ratings. However, for individual photographs, across combinations of race, religion, age, and gender, ratings generally favored female over male teachers and disfavored Sikh men in turbans and Muslim women in hijabs.

Keywords: Implicit bias, Decision making, Education leaders, Attractiveness, Race, Gender, Age, Religion

Resumo

Em termos gerais as pessoas que ocupam posições de liderança na educação tomam decisões rápidas e consistentes, frequentemente com base em informações ambíguas e incompletas, que têm impactos substanciais nos alunos/as e educadores/as com quem trabalham. Assim, em ambientes imperfeitos e acelerados de tomada de decisões, preconceitos implícitos e inconscientes podem influenciar decisões. Para se tornarem melhores tomadores de decisão, pessoas que ocupam posições de liderança na educação devem aprender a identificar seus preconceitos implícitos e minimizar suas influências negativas. Neste estudo, examinamos quais as percepções que 1.751 pessoas tinham nos EUA, sobre a capacidade de ensino com base apenas na aparência e como essa percepção inicial da capacidade de ensino se relaciona com a classificação de atratividade do indivíduo, bem como raça, idade, sexo e alguns marcadores identificáveis da devoção religiosa. Usando um modelo de regressão linear e ANCOVA para analisar as avaliações dos participantes de fotografias de potenciais docentes, descobrimos que a atratividade tem uma influência entre moderada e forte na percepção sobre a capacidade de ensino. Por grupo, houve apenas pequenas diferenças na nessa percepção por raça, gênero e idade, com exceção dos homens sikh, que usavam turbantes, e mulheres muçulmanas, que usavam hijabs, os dois grupos tiveram as menores classificações. No entanto, para fotografias individuais, em combinações de raça, religião, idade e gênero, as classificações geralmente favorecem as mulheres em detrimento dos homens e desfavorecem os homens sikh com turbantes e mulheres muçulmanas em hijabs.

Palavras-chave: Preconceito implícito, Tomada de decisão, Líderes em educação, Atratividade, Raça, Gênero, Idade, Religião

Resumen

En general, las personas que ocupan posiciones de liderazgo en educación toman decisiones rápidas y consistentes, a menudo basadas en informaciones ambiguas e incompletas, que tienen impactos sustanciales en los estudiantes y educadores con los que trabajan. Por lo tanto, en entornos de toma de decisiones imperfectos y acelerados, los prejuicios implícitos e inconscientes pueden influir en las decisiones. Para convertirse en mejores tomadores de decisiones, las personas que ocupan posiciones de liderazgo en educación deben aprender a identificar sus prejuicios implícitos y minimizar las influencias negativas. En este estudio, examinamos qué percepciones tenían 1.751 personas en los EEUU sobre la capacidad de enseñanza basada en la apariencia y cómo esta percepción inicial de la capacidad de enseñanza se relaciona con la clasificación de atractivo de un individuo, así como con la raza, edad, género y algunos marcadores identificables de devoción religiosa. Usando un modelo de regresión lineal y ANCOVA para analizar las calificaciones de los participantes de las fotografías de los docentes potenciales, encontramos que el atractivo tiene una influencia de moderada a fuerte en las percepciones de capacidad de enseñanza. Por grupo, sólo hubo ligeras diferencias en esta percepción por raza, género y edad, a excepción de los hombres Sij que utilizaban turbantes y mujeres musulmanas con hijabs, ambos grupos obtuvieron las clasificaciones más bajas. Sin embargo, para fotografías individuales, en combinaciones de raza, religión, edad y género, las clasificaciones generalmente favorecen a las

mujeres sobre los hombres y desfavorecen a los hombres Sij con turbantes y a las mujeres musulmanas en hijabs.

Palabra clave: Prejuicio implícito, Toma de decisiones, Líderes en educación, Atractivo, Raza, Género, Edad, Religión

1. Introduction

Education leaders consistently make unconscious decisions that have substantial impacts on the lives of the students and educators with whom they work. In an environment where they are expected to make quick decisions, such as how to interpret discipline scenarios or resolve multiple conflicts, education leaders rarely have the extended periods of time and complete information they need (KAHNEMAN, 2013). This stressful decision-making environment is ideal for the activation of implicit biases, “bias that operates beyond an individual’s conscious awareness” (BANKS; EBERHARDT; ROSS, 2006, p. 1170). Implicit biases are more likely to manifest in environments that “involve ambiguous or incomplete information, the presence of time constraints, and circumstances in which our cognitive control may be compromised, such as through fatigue or having a lot on our minds” (STAATS, 2016, p. 31). In the fast-paced decision-making environment in which education leaders work, implicit biases about race, sex, religion, class, and other social locations influence the unconscious aspects of their decision-making, “even among individuals who staunchly profess egalitarian intentions” (STAATS, 2016, p. 38). Therefore, to become better decision-makers, education leaders must learn to identify their implicit biases and minimize the negative influences of these biases, so that their automatic unconscious reactions can more consistently align with their consciously stated intentions to make equitable decisions (BANAJI; GREENWALD, 2016; DAMASIO, 2010; HAIDT, 2001; KAHNEMAN, 2013).

Given the influence of implicit biases, it is important to understand and describe how they relate to education leaders’ decisions. In this study, we examine perceptions of teaching ability based solely on a person’s appearance and how this perception of teaching ability relates to the person’s attractiveness rating, as well as race, age, gender, and some identifiable markers of religious devotion. We hope to improve education leaders’ decision-making by sensitizing leaders to the influence of appearance on ability

determinations and to the influence of implicit bias, more generally. By doing so, we hope to enable education leaders to reflect on how their implicit biases negatively influence decision-making. We also hope to inspire them to seek out ways to better develop their unconscious thinking and harness it with their conscious deliberations to reach more consistently equitable decisions that benefit the people and educational organizations they lead.

In exploring the relationship between ratings of visible physical characteristics and initial perceptions of teaching ability, we begin with an overview of the unconscious aspects of decision-making, including the influence of implicit bias on decision-making in education. After a description of the study's methodology, we then explain the findings about attractiveness and teaching ability, and the associations with gender, ethnicity, age, and identifiable markers of religious devotion. Next, we turn to a discussion of unconscious prototypes of good and not very good teachers. We conclude with recommendations for practice to identify and minimize the negative influence of implicit bias on the decision-making of educational leaders.

2. Implicit bias and decision-making

A conceptual framework that contains five foundational principles guide our study:

- All human thinking, including decision-making, involves interactions between fast, unconscious mental model reactions, and slower conscious deliberations;
- Mental models involve prototypes that are socially constructed and usually include implicit biases, generally referred to as stereotypes;
- Expert decision-making requires unconscious and conscious thinking to be in-sync such that our automatic reactions support our deliberate expressed intentions;
- People attribute abilities to others based on visible physical attributes, including level of attractiveness, race, age, gender, and wearing of religious articles of faith;
- Educational leaders have various implicit biases that impact their decisions, which can result in negative experiences for their teachers as well as to the students.

In the following sections, we describe each principle in more detail, with an emphasis on how each impacts decisions by education leaders and perceptions about teachers.

2.1 Thinking and the role of mental models and implicit bias

As human beings, our thinking involves the interaction of an automatic (and therefore fast) unconscious system (sometimes referred to as “system 1”) and a deliberate (and therefore slow) conscious system (sometimes referred to as “system 2”) (KAHNEMAN, 2013). Typical estimates put unconscious or fast thinking at well over 90 percent of all thinking (AYAN, 2008; BARGH, 1997). In other words, our unconscious thinking occurs continually and is essentially interrupted or complemented by conscious thinking.

Our automatic unconscious thinking involves mental models, which include experience-based (direct and indirect) internal representations of concrete physical reality (e.g., apples, birds, and teachers), cultural concepts (e.g., gender, race, and being old), and abstractions (e.g., the achievement gap, teaching, and learning) (ARMSTRONG, GLEITMAN; GLEITMAN, 1983; BARSALOU, 1983; 1991; EBERHARDT, 2019; HAAS; FISCHMAN, 2010; HAAS; FISCHMAN; BREWER, 2014; LAKOFF, 1987; 2002; LAKOFF; JOHNSON, 2003; ROSCH, 1999; SHENKER-OSORIO, 2012). A collection of related representations is generally labeled as a “category” and the predominant or idealized representation of a category is generally labeled as a “prototype” (LAKOFF, 1987). For example, the automatic image of a “bird” is more likely to be a sparrow than a penguin, which makes a sparrow a prototypical bird. A penguin is generally considered to be in a radial category of “flightless birds”, because it, in essence, requires additional descriptors to connect it to our unconscious prototype of bird, which flies (LAKOFF, 1987; ROSCH, 1999). For human beings, we see this conscious recognition of unconscious prototypes when people say “male nurse” (prototype is female) or perhaps “female scientist” (prototype is male).

As human beings, our mental models, including prototypes, create automatic responses that usually include emotional reactions and judgments (DAMASIO, 2010; HAIDT, 2001). When these emotional reactions and judgments are negative or prejudicial, they are often referred to as implicit bias or, in the case of prototypes, as

stereotypes (EBERHARDT, 2019)¹. Generally, the farther a representation is from the prototype of its category, the less it represents the qualities of that prototype. When the prototype has positive qualities, then an example from a radial category often has, at least some, negative connotations. Building on a previous example, if the prototype of a nurse is a female, then a male nurse likely evokes an implicit bias reaction toward this person as someone who is perhaps simultaneously less of a man and less of a nurse. Similarly, if the prototype of a teacher is that the race is White, then someone named as a Latinx teacher may evoke a subtle judgment that the person is somehow less able to teach. When the prototype has negative qualities, such as “criminal” then “white-collar criminal” is often considered less harmful, even when the crime involves large-scale fraud (BONN, 2017; MICHEL, 2016). Given that automatic unconscious reactions are both natural and on-going in all human thinking (BANAJI; GREENWALD, 2016), implicit biases will negatively influence our decisions and the people impacted by them, unless we act to counter them.

2.2 Mental models, implicit bias, and expert decision-making

Research has consistently shown that experts, regardless of the field or task, rely on their unconscious mental models to consistently make the right decisions, especially under stress (DREYFUS, 2004). Sometimes referred to as “unconscious competence” (HAAS; FISHMAN; BREWER, 2014, p. 43), research has shown that experts across multiple fields utilize larger, more complex gestalt understandings or mental models of their contexts than do novices when they make decisions (BASCOM, 2012; LAKOFF; JOHNSON, 2003; MILTON; SMALL; SOLODKIN, 2004; MILTON et al, 2007). Further, inherent in an expert’s mental models are accurate representations of their contexts, which means that the prototypes should have minimal implicit bias and the expert has additional conscious actions for overcoming the implicit bias that does exist (BANAJI; GREENWALD, 2016; EBERHARDT, 2019; KENDI, 2019). As a result of these more advanced and accurate mental models, plus conscious actions to limit what implicit biases

¹ Some researchers would say any favoritism, positive or negative, is implicit bias (see, e.g., Kirwan Institute, n.d.; RUDMAN; FEINBERG; FAIRCHILD, 2002). In this article, we follow Eberhardt (2019) and define implicit bias and stereotype as including a negative connotation.

and limitations remain, experts are able to make successful decisions in their contexts faster and more consistently than novices (Bascom, 2012; Dreyfus, 2004). Specific to this study, expert education leaders are those leaders who can make decisions about teaching ability with little to no influence from common implicit biases related to visible physical characteristics of their teachers.

2.3 Common implicit biases related to attractiveness, race, gender, age, and religious articles of faith

There is an extensive body of research on various, common stereotypes based on implicit biases resulting from visible physical characteristics (BANAJI; GREENWALD, 2016; EBERHARDT, 2019; GOFF et al, 2008; LANGLOIS et al, 2000; RUDMAN; FEINBERG; FAIRCHILD, 2002), including some studies concerning the physical characteristics of teachers (WESTFALL; MILLAR; WALSH, 2016). Numerous studies have documented the attractiveness stereotype, where people tend to assign positive attributes to more attractive people (EAGLY et al, 1991; LANGLOIS et al, 2000). Studies have consistently found that people judge more attractive people to be more intelligent and more socially skilled than less attractive people, including evidence of both “beauty is good” and “unattractiveness is bad” dimensions (GRIFFIN; LANGLOIS, 2006). In addition, an experimental study on perceptions of teaching ability by Westfall, Millar & Walsh (2016) found that college students rated more attractive professors significantly higher on a multiple measure teacher competence index for an otherwise identical online lesson, though attractiveness explained only 3% of the variation in the scores.

Numerous studies have also found implicit bias related to race. We located studies on implicit bias and stereotyping relating to numerous non-White groups, including Blacks or African Americans (CORRELL et al., 2002; 2007; EBERHARDT, 2019; GOFF et al, 2008), Asian Americans (LEE; KUMASHIRO, 2005; RUDMAN; FEINBERG; FAIRCHILD, 2002), including the importance of de-clustering ethnic groups from a stereotyped monolithic Asian racial group (AGBAYANI-SEIWERT, 2004), Native Americans or American Indian persons (CHANEY; BURKE; BURKLEY, 2011; DVORAKAOVA, 2018; FRENG; WILLIS-ESQUEDA, 2011; STEINFELDT et al, 2010), and Pacific Islanders (LEE; KUMASHIRO, 2005). We did not find any studies that directly addressed race and

implicit bias toward teachers and their ability to teach. However, we did find several qualitative studies that indirectly described negative experiences of teachers of color in majority White school environments, which appeared to result from race-based implicit biases against their ability to teach (LANDER; SANTORO, 2017; MILNER; HOY, 2003; TOURE; DORSEY, 2018).

The literature we did find on implicit bias varied for Native Americans, Pacific Islanders, and observant Muslims. We searched for studies of implicit bias among Native Americans using the terms American Indian, Native American and Indian as a stand in for Native American ethnicity, and implicit bias, unconscious bias, stereotypes, and racism. We found only two studies that addressed either implicit biases or biases in education. Chaney, Burke and Burkley (2011) examined implicit biases against Native Americans concerning mascots, including some used in educational institutions, and Dvorakova (2018) studied 40 Native American academics' experiences of racism. Chaney, Burke and Burkley (2011) found a strong negative bias toward American Indian people. Similarly, the Native American academics in Dvorakova's (2018) study described their everyday experiences of racism in education, including a lack of role models, stereotypes about their abilities, and pressures to culturally assimilate to their predominantly White educational institutions.

Our review of the literature yielded even fewer studies of Pacific Islanders' experiences of implicit bias than the review for Native Americans, and no studies that addressed implicit bias toward educators with ancestry from the Pacific Islands. This was somewhat surprising, since Asian American Pacific Islanders (AAPI) are the fastest growing ethnic group in the U.S. and the working age AAPI population is expected to grow 62% from 2005 to 2030 (U.S. Equal Employment Opportunity Commission, n.d.). Given these demographics and the likely increase in AAPI teachers in the next decade, it is important to understand how their employment may be affected by implicit biases. We used the boolean search term Pacific Island*, the phrase "Southeast Asian" as well as select AAPI sub-groups, including Filipino, Hawaiian, Lao, Hmong and Vietnamese, together with implicit bias, unconscious bias, stereotypes and racism to find relevant literature. Only one study, a report commissioned by the U.S. Equal Opportunity Commission (n.d.), identified common biases against Asian American Pacific Islanders

(AAPI), and explained that these biases likely affected their employment opportunities. While our study did not ask participants to identify their biases against people with AAPI ethnicity, we would not be surprised to find that many of the same biases that the commission identified were activated when the participants engaged in our study.

Unlike Native Americans and Pacific Islanders, there is a wide variety of literature about Muslims and implicit bias. The availability of implicit bias literature focused on Muslims and those who are perceived to be Muslims (e.g. Sikhs and Arabs) is not surprising in a post-9/11 context where Islam is frequently and unfairly associated with terrorism and violence. A number of studies have shown individual implicit bias toward religious groups, including toward Muslims and Sikhs, by persons outside the religious group (CASHIN, 2010; ROWATT; FRANKLIN; COTTON, 2005; RUDMAN; FEINBERG; FAIRCHILD, 2002); however, none of the literature we located focused on implicit bias toward Muslim educators.

Studies also suggest that wearing articles of religious devotion trigger implicit biases by persons outside that religious group (EVERETT et al, 2015; UNKELBACH; FORGAS; DENSON, 2008). Further, these studies suggest that the strength of the implicit bias triggered, up to and including mistreatments and attacks, is related to how easily an outsider can identify their target as a member of a particular religious group. In their study, Everett et al. (2015) found significantly greater negative emotional responses by White, non-Muslim students toward photographs of Muslim women depending on whether the women pictured were wearing no veil, a hijab, or a full veil. In a study based on the “shooter bias” paradigm, Unkelbach, Forgas, and Denson (2008) found that participants playing a video game where they were instructed to shoot only at armed targets as quickly as they could, were significantly more likely to shoot at images of men wearing Muslim-styled turbans and women wearing hijabs than the exact images without Muslim-styled turbans and hijabs. The authors concluded that there was “indeed a negative stereotype associated with Muslim appearance” (p. 3). We did not find any studies specifically examining levels of implicit bias toward men wearing Sikh-styled turbans. We also did not find any studies about levels of implicit bias based on the religious affiliation or devotion of teachers.

We located only one study that directly examined age and bias on perceptions of teaching ability and it examined explicit bias. In this qualitative interview study, conducted in Taiwan, college students were interviewed about their perceptions of older elementary school teachers (CHEN; WANG, 2012). The results were a mix of positive and negative stereotypes about their likely teaching ability. Positive stereotypical attributes included the belief that older elementary teachers were likely better than younger teachers, because they were more experienced. At the same time, the college students expressed the negative stereotype attributes of older teachers being out of touch with current teaching practices and also more resistant to change than younger teachers.

We did not find any studies that directly examined implicit biases related to gender on perceptions of teaching ability. However, two qualitative studies that described negative experiences of teachers of color in White majority school environments, named above, included female participants (LANDER; SANTORO, 2017; MILNER; HOY, 2003). Some of the described negative experiences of these female teachers of color were also related to gender-based biases against their ability to teach. For example, in a single-person case study by Milner & Hoy (2003), Dr. Watson, the Black female participant who earned a PhD and two Masters degrees, describes her everyday battle against stereotypes in terms of both race and gender: “I want them [her high school students the majority of whom are White] to see a Black woman with Black features and how yes, I am OK, and I am smart, a reader, successful, you see? I tell them about how I’ve traveled the world, and they look at me in awe” (p. 269).

Like Dr. Watson, we expect that participants in all these studies likely experienced biases, both positive and negative, that went beyond the physical characteristic that was the focus of the study. Nevertheless, we did not find any study that examined the intersectionality of implicit biases across multiple visible physical characteristics on perceptions of teaching ability. This gap in the research literature on implicit bias motivates our study: how do implicit biases based on visible physical characteristics, both individually and collectively, influence perceptions of teaching ability?

3. Methods

Our study was guided by an overarching research question based on three sub-questions. Our overarching research question is, to what extent do physical characteristics influence people's perceptions of teaching ability? And, more specifically,

1. Do subjective ratings of good looks influence ratings of perceived teaching ability? If so, by how much?
2. Are there differences in group ratings of perceived teaching ability by the physically visible characteristics of race, age, and gender? If so, how large are these differences?
3. To what extent, across these four visible characteristics, do consistent prototypes emerge for good and bad teachers? If so, what are the characteristics of each prototype?

To answer these questions, we created a 5-part online survey using Qualtrics,² a survey platform, to examine elements of decision-making in education. The survey requests responses for two different studies: one study examines aspects of implicit or unconscious bias in education decision-making using photographs of possible teachers; and the second study examines aspects of the relationship between school experience and decisions on education policy by comparing remembered experiences of very good teachers with levels of agreement on policy vignettes. This paper describes the first study: two reactions to photographs of possible teachers, found in parts one and three of the survey, plus participant demographic information, found in part 5. We combined the two studies in one survey for convenience and alternated parts of the two studies in the survey to limit the ability of participants to anticipate response patterns.

We presented the survey as follows: "This survey is about market research for a movie that is being developed about education, teachers, and schools. We want to know what you think so we can create the most realistic movie possible." The first part of the survey presented participants with a random selection of seven headshots of people with various physical characteristics described as finalists to play a "very good real-life teacher." We selected photographs from an online website that sold photographic

² More information on the Qualtrics survey platform is available in <www.Qualtrics.com>.

images.³ We selected one photograph to represent each combination of three characteristics: race or ethnicity (White, African American, Native American or Pacific Islander, Asian, Latinx, and Middle Eastern), gender (male or female), and age (younger—approximately 25 to 35 years old—and older—approximately 45 to 60 years old). This resulted in 24 photograph combinations (e.g., Asian-Male-Younger, Latinx-Female-Older). In addition, we selected four photographs to represent two ethnic and religious combinations with visible dress manifestations: South East Asian Sikh males wearing a turban and South East Asian Muslim females wearing a hijab. Our determinations of whether a photograph represented each combination of characteristics were based on how the website from which we purchased the photographs grouped them by characteristic and our own judgment.

Survey participants were randomly placed into one of four groups. Each participant group viewed seven photographs, presented in a random order to each participant, which included a photograph from each of the six racial groups and combinations of gender, and age, plus one of the four photographs that represented the South East Asian Sikh men and Muslim women. Thus, each participant was asked to rate a sub-set of all the photographs and we asked the participants to rate each photograph quickly, in no more than 5 seconds. The photograph groupings and the mean participant ratings are presented in Table 4.

The objective of this rating activity was to reflect their unconscious reaction to each photograph, which is the basis of implicit bias (KAHNEMAN, 2013). We limited the number of participant ratings in order to limit the full survey, which contained two studies, to an expected completion time of 20 – 30 minutes. We discussed the likely impact of these decisions in the limitations section.

We asked participants to rate the photographs from 0 (not at all likely to be able to play a very good real-life teacher) to 10 (extremely likely to be able to play a very good real-life teacher). The second part of the survey asked participants to state their level of agreement with five education vignettes involving an issue with two possible conflicting outcomes. We presented the education vignettes as possible plots or storylines for the movie. The level of agreement ranged from 0 (strongly disagree) to 10 (strongly agree).

³ The photographs were purchased from the website, Shutterstock (<www.shutterstock.com>).

The third section presented each participant their same random selection of seven headshots from part one (though in another random order) and we asked them to rate how “good looking” they thought this person was for casting in a movie about a very good real-life teacher. The rating scale ranged from 0 (not good looking) to 10 (very good looking). The fourth part concerned participants own personal experiences as a student during kindergarten to 12th grade. Finally, in part 5, we asked the participants to report their demographic information in seven areas: age, preferred gender, preferred primary race, current annual family income (range), description of themselves as a high school student from A+ to F, highest level of schooling completed, and current employment status. Again, this paper presents results from the second study concerning implicit or unconscious bias, based on the data gathered from parts one, three, and five of the survey.

We administered this survey anonymously and online through a solicitation on Amazon Mechanical Turk (MTurk) in April 2018, an increasingly common practice in social science research, including education research (FOLLMER; SPERLING; SUEN, 2017; THOMAS; TURKAY; PARKER, 2017). To participate, interested persons (workers) on MTurk had to state that they were at least 18 years old (also a requirement to do tasks on MTurk) and that they experienced all their K–12 education in the United States, plus consent to the study. We paid each person \$2.75 if they stated that they met the criteria, consented to participate, and completed the survey, including an accurate answer to an attention check question. An attention check question has an obvious, required answer that is embedded in the middle of a question that initially looks like all the other ones. We included the attention check question to help ensure that participants were actually reading each question and responding appropriately, which is a common practice for MTurk surveys (HAUSER; SCHWARZ, 2016). When a participant answered the attention check question incorrectly, he/she was immediately exited from the study and his/her partial data was not included in the analytic sample.

In approximately four hours, our limit of 2,000 adults finished the survey. We removed the data from 249 participants who had either incomplete data (skipping a question) or overly consistent data, which we set at 4 or more zeros or 10s for the seven questions for either of the photo rating activities, or six or more zeros for the 10 questions

about how their very good teacher taught. This latter criterion of six or more zeros for the very good teacher questions resulted in exclusion because it was extremely unlikely that a very good teacher would have a majority of highly negative scores. After the data cleaning, we had 1,751 full responses or 87.5 percent of the 2,000 responses. Nearly every participant completed the survey in less than 30 minutes.

3.1 Limitations

The results of this study are limited in their application to the likelihood of implicit bias of education leaders in two ways. First, our analytic sample was from the general population, not specifically of educational leaders. However, we expect that at an unconscious level, educational leaders share similar implicit biases to those of the general public, even if they were to espouse different explicit beliefs (BANAJI; GREENWALD, 2016; EBERHARDT, 2019). Second, participants rated a subset of photographs. Thus, comparisons of individual photographs may not fully represent interpretations of the entire sample. However, given the large sample size, at least 480 randomly selected members of the analytic sample rated each photograph, which should strongly represent the group as a whole. In the Conclusion, we discuss how we can fine-tune the design in future studies to address these limitations.

3.2 Results

To answer our research questions, we calculated descriptive statistics for the participant demographic characteristics and the rating of photographs for “likely to be able to play a very good real-life teacher” and how good looking for playing this very good real-life teacher. We then conducted a linear regression to describe the level of predictive influence of the rating of good looks on the rating for ability to play a very good real-life teacher. Finally, we conducted an ANCOVA to describe levels of group difference in the very good real-life teacher ratings by the visible photograph characteristics of race plus religion in some cases, gender, and age. Overall, we found that the ratings of our participants showed that the good looks rating had a moderate to strong predictive influence on the ratings of perceived ability of a very good teacher. Further, by group, there were only small differences in perceived teaching ability by race, gender, and age,

with the exception of Sikh men wearing turbans and Muslim women wearing hijabs, where both groups had the lowest ability ratings. Comparing these levels of influence, we found that the good looks rating explained a greater part of the teaching ability ratings by group than race, age, and gender. At the same time, patterns of very good teacher perceptions for individual photographs, which embodied combinations of race plus religious in some cases, age, and gender, showed ratings that favored female over male teachers and disfavored Sikh men in turbans and Muslim women in hijabs. The results of each analysis are described below.

3.3 Sample Demographics

The majority of participants were White (72.5%), while the other participants were Asian (9.4%), African American (7.9%), Latinx (6.1%), Native American or Pacific Islander (1.8%), and Middle Eastern (0.2%), with 2.1% responding with Other or Prefer Not to Answer. Further, the participants were 35.7 years old on average, and they were nearly perfectly split between males and females. In addition, 41.1% of them held a 4-year college degree; they came from households with an annual family income of \$30,000-\$59,000 (32.7%), and had an average personal student rating of B+.

In the following sections, we describe the results of the regression and ANCOVA analyses of participants' survey responses. Each participant rated seven photos for his/her perceptions of the ability to play a very good real-life teacher in a movie and good looks. Removing incomplete data (responses missing one or both ratings for a photograph) and results from participants with five or more rating out of seven of 10s or 0s in either rating category (interpreted as simply answering at the high or low end of the scale without judgment), resulted in 13,868 pairs of ratings.

3.4 Perception of teaching ability and good looks ratings: a strong influence

We conducted a simple linear regression to test whether ratings of good looks significantly predicted (or influenced) ratings of perceived teaching ability. The results of the regression indicated that ratings of good looks explained nearly 28% of the variance ($\eta^2 = .277$) and that the model was significant [$F(1,13868) = 5325.37, p < .001$]. The final predictive model, based on possible ratings from 0 to 10 in both Perceived Teaching

Ability and Good Looks, was: Perceived Teaching Ability Rating = $3.67 + .473(\text{Good Looks Rating})$.

The regression results indicate that the initial subjective perceptions of good looks influenced how people perceived likely teaching ability. Imagining a hiring interview for an inexperienced teacher, we interpret this influence to be a strong one. As an example of this influence, our model equation would predict a difference in the perceived teaching ability, at least on an initial visual first impression, of persons with good looks ratings of 3 and 9 to be 2.84 points out of 10 (5.09 versus 7.93). In other words, a less good-looking person would need to improve the perception of their teaching ability by 56% ($2.84/5.09$) above their initial physical impression to equal the initial perception of a very good-looking person. Even a person with a Good Looks rating of 6 would need to improve their perception of teaching ability rating by 22% ($1.42/6.51$) over their initial physical impression to equal the initial impression of a very good-looking person.

3.5 By race, age, and gender groups, only small differences in perceived teaching ability ratings

Next, we conducted three one-way ANCOVAs to describe differences in perceived teaching ability across the groups within each of the three characteristic categories (race plus religion, age, and gender), using ratings of good looks as a covariate to control for any group variation. The results for each characteristic category are described in turn. For each one, more variance was explained by the good looks ratings than by membership in a characteristic category group.

3.5.1 Race and religion in some cases: quite small differences, with little explanatory value

As shown in Table 1, there was a significant difference in perceived teaching ability between the racial or religious groups when controlling for good looks ratings [$F(7,13860)=54.359, p<.001$]. However, the amount of variability explained by racial group membership was quite small ($\eta^2 = .027$), while the variability explained by good looks ratings was nearly nine times larger ($\eta^2 = .234$).

Table 1. Means perceived teaching ability by race or religion adjusted by good looks ratings and difference from highest mean

Group	Adjusted Mean	Difference
African American	7.094	—
Latinx	6.622	.472*
White	6.541	.553*
Asian	6.491	.603*
Middle Eastern	6.268	.826*
Native American or Pacific Islander	6.207	.887*
South East Asian Man with Turban	5.991	1.103*
South East Asian Woman with Hijab	5.901	1.193*

*significant at $p < .05$ after adjusting for multiple comparisons using the Bonferroni method.

As a group, African American photographs had the highest adjusted mean for perceived teaching ability when controlled for good looks ratings, while South East Asian men wearing turbans and women wearing hijabs had the lowest two adjusted means. The post hoc tests showed that the African American adjusted means were significantly higher than all other groups.

3.5.2 Age: a small difference with small explanatory value

Table 2 shows the results of the ANCOVA comparing photograph ratings of the two age groups, an older one, intended to be ages from 45 to 60 years old, and a younger one, intended to be ages from 25 to 35 years old, while controlling for the good-looking rating.

Table 2. Means perceived teaching ability by age adjusted by good looks ratings, plus difference from highest mean

Group	Adjusted Mean	Difference
Older	6.971	—
Younger	5.933	1.038*

*significant at $p < .05$ after adjusting for multiple comparisons using the Bonferroni method

There was a significant difference in perceived teaching ability between the age groups when controlling for good looks ratings, [$F(1,13866) = 807.870, p < .001$]. However, the amount of variability explained by age group membership was small ($\eta^2 = .055$), while the variability explained by good looks ratings was just over 5 1/2 times larger ($\eta^2 = .316$).

3.5.3 Gender: again, quite small differences with almost no explanatory value

Table 3 presents the results of the ANCOVA comparing photograph ratings of the two gender groups, while controlling for the good-looking rating.

Table 3. Means perceived teaching ability by gender adjusted by good looks ratings, plus difference from highest mean

Group	Adjusted Mean	Difference
Female	6.581	
Male	6.325	.256*

*significant at $p < .05$ after adjusting for multiple comparisons using the Bonferroni method

There was a significant difference in perceived teaching ability between the male and female groups when controlling for good looks ratings, [$F(1,13866)=56.131, p < .001$]. However, the amount of variability explained by gender group membership was extremely small ($\eta^2 = .004$), while the variability explained by good looks ratings was nearly 69 times larger ($\eta^2 = .275$).⁴

Examining the results of these four analyses together, perceived teaching ability was strongly influenced by general perceptions of good looks, while the observable differences based on race, age, and gender had little explanatory value. Additionally, for this racially diverse but predominantly White, participant sample, photographs of persons intended to be African Americans and Latinx had higher adjusted means for perceived teaching ability than the photographs of persons intended to be White. All other photographs intended to represent other racial groups plus the racial-religious group South East Asian Sikh men wearing turbans and South East Asian Muslim women wearing hijabs had lower adjusted means than the photographs intended to be White persons. Finally, for this participant sample, which averaged 35.7 years old, the photographs of persons intended to be between 45 – 60 years old had a higher adjusted mean for perceived teaching ability than the group of photographs intended to represent adults between 25 – 35 years old.









⁴ Note that we conducted this ANCOVA by gender group with all the data (presented here in the main text) and also with data excluding the photographs of the South East Asian Sikh males wearing a turban and South East Asian Muslim females wearing a hijab. We did this second analysis because we were concerned about possible differences in participant ratings due to the additional element of religious representation. However, our results were substantively the same. The adjusted means for females and males with this smaller data set were 6.760 and 6.434, respectively, with a statistically significant difference of .326. The partial eta squared due to gender group membership was .007, while the partial eta squared for good looks rating was .250.

In our final results section, we present patterns we observed across the 28 individual photographs in order to describe how the four characteristics (good looks, race and sometimes with religion, age, and gender) might interact to influence initial perceptions of teaching ability.

3.5.4 By individual photographs, teaching ability perceptions favored women, and disfavored men of color, South East Asian Sikh men in turbans, and South East Asian Muslim women in hijabs

Table 4 presents the 28 photographs that participants rated in the survey. The photographs are presented in the four groups (A – D) of seven photographs each. Each participant was randomly placed into one of these four groups to rate the seven photographs in their group on perceived teaching ability and good looks. The photographs are ranked from one to seven by mean rating for perceived teaching ability within their group. In addition, each photograph lists its overall ranking across all groups from 1 to 28 along with its mean perceived teaching ability rating in parentheses and its mean good looks rating in square brackets.

Table 4. Photographs by participant group, ordered by perceived teaching ability rating from highest to lowest

Group	Group A	Group B	Group C	Group D
Rank				
1				
	#1A (7.64) [8.68]	#1B (7.64) [5.74]	#5 (7.29) [7.34]	#3 (7.63) [6.11]
2				
	#7A (7.02) [5.35]	#6 (7.04) [8.64]	#9 (7.01) [8.08]	#4 (7.37) [7.77]

3				
	#12 (6.67) [6.23]	#7B (7.02) [4.70]	#10 (6.81) [6.50]	#11 (6.72) [7.93]
4				
	#13 (6.63) [4.68]	#16A (6.28) [7.80]	#15 (6.37) [6.97]	#16B (6.28) [4.71]
5				
	#14 (6.61) [5.30]	#19 (5.97) [5.63]	#18 (6.24) [4.87]	#22 (5.83) [3.99]
6				
	#21 (5.85) [5.02]	#23 (5.72) [4.21]	#20 (5.95) [7.20]	#24 (5.57) [6.65]
7				
	#27 (5.34) [4.67]	#26 (5.39) [4.50]	#28 (4.42) [3.29]	#25 (5.52) [4.24]

Note: Number rankings are overall order of perceived teaching ability. Number in parentheses are mean perceived teaching ability ratings. Numbers in square brackets are mean good-looking ratings.

Examining the interaction of the four visible characteristics of the photographs within the 10 highest and 10 lowest mean ratings for perceived teaching ability, we see the following patterns. For the 10 photographs with the highest mean ratings, we see the following four key patterns:

- 1) More photographs of women (7) than men (3);
- 2) A mix of intended races (African American [4], White [3], Latinx [2], and Asian [1]);
- 3) An equal mix of photographs intended to be of younger and older persons; and
- 4) The 10 photographs predominantly came from near the top of the good-looking mean ratings (median = 5.67), including five of the photographs were in the top

seven of good looks ratings and the photograph with the highest mean rating on good looks (#1A) was tied for the highest mean rating for perceived teaching ability.

For the 10 photographs with the lowest mean ratings, we see the following six key patterns:

- 1) All 10 of these photographs were intended to be people of color, with none being White or Asian;
- 2) Both photographs intended to be of South East Asian Sikh men wearing turbans are in this group;
- 3) Both photographs intended to be of South East Asian Muslim women wearing hijabs are in this group;
- 4) All four photographs intended to be of Native American or Pacific Islanders (#s 19, 21, 22, and 28) are in this group;
- 5) An equal mix of photographs intended to be of younger and older persons; and
- 6) The 10 photographs predominantly came from near the bottom of the good looking mean ratings (median = 5.67), including among these 10 photographs, the lowest six in mean good looks ratings and the lowest mean rating on good looks (#28) was also the lowest mean rating on perceived teaching ability.

There was also one prominent exception to the patterns in the group of 10 lowest mean ratings for perceived teaching ability. The photograph intended to represent a younger South East Asian woman wearing a hijab had a highly ranked good-looking rating of 8th, while having a lower ranked perceived teaching ability rating of 20th.

Taking all these analytic results together, we concluded that our participants had some initial perceptions of who likely would be and not be a very good teacher based just on visible physical characteristics. In presenting this summary of our findings, we remember the characteristics of our analytic sample: racially diverse but predominantly White, evenly balanced between men and women, and with a mean age of 35.7 years old. For our participants, people who initially appeared as likely to be very good teachers varied by race, gender, and age, though there was a preference for females and African Americans and nearly all were considered good to very good-looking. People who initially appeared as unlikely to be very good teachers were people of color, specifically people

who appeared to be Native Americans or Pacific Islanders, men who wore turbans and women who wore hijabs, and nearly everyone was considered to be not very good-looking. Further, within these visible physical characteristics, the single strongest influence by a wide margin on initial perceptions of teaching ability was how good-looking you were.

While there are some positives in these patterns of implicit bias about perceived teaching ability, we remain concerned about the implications for education leaders charged with decisions on hiring, developing, and retaining very good teachers. Nearly always education leaders must make these decisions about teachers with less than complete information and many times with insufficient time to deliberate (BANKS; EBERHARDT; ROSS, 2006; KAHNEMAN, 2013; STAATS, 2016). Thus, they likely will rely, at least in part, on their implicit biases to make these decisions. Implicit biases that, at least for these four visible physical characteristics, are not related to actual teaching ability.

4. Conclusion

Great teachers come in all types. A look at the recipients of the global teacher prize, an international competition that awards \$1 million to “an exceptional teacher who has made an outstanding contribution to the profession” quickly dispels any notions of what a good teacher looks like (VARKEY FOUNDATION, n.d., para. 1). Recent award winners include teachers who are from Kenya, Quebec, England, and Palestine, and practitioners of Islam and Catholicism, and of diverse ages and phenotypes, demonstrating that a good teacher cannot be judged by their appearance. Like the winners of the global teacher prize, our findings mostly aligned with this understanding of the attributes of a good teacher. On the one hand, we found that perceptions of good teachers included people of diverse ethnicities, genders, and ages. However, we also found implicit biases, or prototypes, of good and not good teachers. This finding illustrates the activation of implicit bias(es) in determinations of teaching ability. Teachers who were perceived to be attractive were rated as having greater teaching ability, while the ones who wore turbans or hijabs, and teachers who were Native American or Pacific Islanders, were rated as having lesser teaching ability. These findings expand the growing literature

on implicit (and explicit) biases against Native Americans, Pacific Islanders and observant Muslims and Sikhs, and have important implications for our understanding of the potential impacts of biases for teachers, students, and education leaders.

This study's findings have important implications for the recruitment and retention of a diverse teaching force and their impact on students. Recent research shows that teachers of color help improve academic outcomes for students of color, including increasing reading and math test scores, graduation rates, and ambitions to attend college (GERSHENSON et al., 2017). Teachers of the same race as their students boost outcomes even more. Studies show that students who have teachers of their same race demonstrate improved attendance, reduced suspension, feel cared for, and are more interested in their schoolwork (EGALITE; KISIDA, 2018). Diverse teachers also benefit White students. Students of color and White students alike prefer teachers of color and report that they hold them to "high academic standards...support their efforts to help them organize content and to explain clearly ideas and concepts...and provide useful feedback" (CHERNG; HALPIN, 2016, p. 411).

These findings suggest that not only do education leaders need to actively recruit teachers of color, but they must also proactively confront their privileges and biases if they are to retain them (DIXON; GRIFFIN; TEOH, 2019). There appears to be some hope for this approach to dismantling institutionalized racism as our findings show that little difference in perceptions of attractiveness and teaching ability among prospective teachers along lines of race/ethnicity, age, and gender, with a small exception among teachers who are Native American, Pacific Islander, or observant Muslims.

The study's findings also point to the need for continued critical reflection on how we develop and support educational leaders who are expert decision-makers. Education leaders who are expert decision-makers are those who have their unconscious reactions in sync with their desired and stated conscious thinking intentions. They have learned to eliminate negative biases that limit their ability to make sound decisions for the best educational interests of their faculty and students and to prevent systematic errors (JOLLS; SUNSTEIN, 2006). Given these understandings and the findings of this study, it is therefore important that education leaders – if they are to become expert decision-makers – must challenge internalized discriminatory ideologies, beliefs, and actions. To

be clear, we do not advocate for eliminating all unconscious thinking for that is not possible. Rather, we advocate for building awareness of discriminatory unconscious biases and their negative effects, as well as learning how to address bias in practice (FIARMAN, 2016).

Fortunately, negative implicit bias activation is thought to be remediable and there are several promising strategies for improving equity in decision-making practices. A useful first step for identifying biases is the implicit association test (IAT) (BANAJI; GREENWALD, 2016; SUKHERA; WATLING, 2017). The IAT measures the strength of a person's unconscious association between concepts like (teaching) and evaluations (beauty, good). However, the IAT is not without its critics who question its validity (BLANTON et al., 2015; NOON, 2018). A second step many schools and institutions have taken is unconscious bias training. Unconscious bias training programs are designed to make participants aware of their implicit biases, provide tools to adjust unconscious patterns of thinking, and eliminate prejudicial conduct. Studies show that two strategies, intergroup contact across religious groups and providing counter-stereotypes, help to reduce implicit bias against people with Muslim appearance and the communities associated with them, like Sikhs and Arabs (EVERETT et al., 2015; ROWATT; FRANKLIN; COTTON, 2005; UNKELBACH; FORGAS; DENSON, 2008).

Sukhera and Watling (2018) have developed a fourth strategy, a six-point framework for addressing implicit bias in health education that is applicable to other education and organizational settings. The six features of the framework include

- 1) creating a safe and nonthreatening learning context;
- 2) increasing knowledge about the science of implicit bias;
- 3) emphasizing how implicit bias influences behaviors and outcomes;
- 4) increasing self-awareness of existing implicit biases;
- 5) improving conscious efforts to overcome implicit bias; and
- 6) enhancing awareness of how implicit bias influences others (p. 2-3).

Sukhera and Watling's framework is premised on the idea that approaches to eliminating bias cannot be accomplished in a singular session. Moreover, they cannot remain at the interpersonal level. Instead, any approach to racial (or other) bias must address it at the individual, organizational, community, and societal levels. The approach must include a clear definition of the bias to be eliminated and a vision of the desired

outcomes for the organization. When applied to our study, Sukhera and Watling's framework makes it clear that the elimination of implicit biases alone will not increase the number of teachers who are Native Americans, Pacific Islanders, Southeast Asians and/or observant Muslims. Additional measures that address institutionalized racism, white supremacy, and Islamophobia are needed. British educators Shirley Ann Tate and Damien Page (2018) explain:

(Un)conscious bias in institutional contexts diverts our attention from white power, societies structured through racial dominance and the coloniality of power, being, knowledge and affect, which it drags into the twenty-first century. Much like epistemologies of ignorance, the continuous production and tenacious fixation on and maintenance of unconscious bias as part of equality, diversity, and inclusion, mean that we go from institutional to personal knowledge, focusing on individual practices rather than ideological values and their imbrication with white institutional power. (p. 147)

Thus, expert education leaders will work to eliminate racial bias (and other biases) in teacher selection by minimizing their individual implicit biases while also working to address institutionalized white supremacy within their educational organizations and the ways in which institutionalized white supremacy creates barriers to equitable and diverse teacher selection.

The apparent interrelatedness of Native Americans, Pacific Islanders and observant Muslims with not very good teaching deserves further study. Our study examined the implicit biases of nearly 2,000 participants using an online platform. The limitations of this study provide several ideas for future examinations of the implicit biases of education leaders. We were surprised at some of the findings, including the lack of bias against African American and older teachers, given the findings from previous studies of implicit bias against African Americans and older adults (GOFF et al, 2008; GONSALKORALE; SHERMAN; KLAUER, 2014; LEVY; BANAJI, 2002).

We believe this lack of implicit bias may be a result of the survey conditions. While we asked participants to respond within 5 seconds per photograph, we did not monitor their actual reaction times. Because differences in reaction times are used to indicate bias, monitoring of reaction times may help to identify any bias for African American or older teachers. Therefore, we recommend that future studies simulate an implicit bias scenario by limiting participants' reaction times. Our survey also relied on a self-selected sample of nearly 2,000 participants who were predominantly White. A recommendation

for future studies is to recruit a more diverse group of participants who are also practicing education leaders. Surveying a representative sample of education leaders will enable us to generalize the results across a more diverse group of education leaders.

We selected photographs from an online website and made determinations about the characteristics (i.e., race/ethnicity, age, and gender) of each person in the photographs we showed; however, we did not ensure that our perceptions matched the participants' perceptions. Therefore, it is possible that we have incorrectly classified some of the people who appear in our photographs as compared to the perceptions of our participants. Additionally, we did not ask the participants' explicit stated perceptions of the various groups of people (e.g., old/young, Muslim/Sikh, Native American) and their ability to teach. If we were to repeat this study, we would survey the participants several weeks before or after the survey about the qualities of a good teacher and their stated beliefs about each of the groups studied in this test. Gathering data about participants' stated beliefs may help interpret the ratings of good/not good teachers, which would add to our understanding of why education leaders perceive some teachers to be good or not good and it will help schools and districts address any biases in leaders' perceptions. Moreover, it could enable us to see the difference between participants' conscious statements and their unconscious reactions, especially if the participants are interviewed about any similarities or differences between the two assessments.

In conclusion, this study sought to understand the extent to which physical characteristics influence people's perceptions of teaching ability. We found that prospective teachers whom we identified as Native Americans, Pacific Islanders, Muslims, Sikhs and who our study's participants found unattractive were less likely to be perceived to be a good teacher, perceptions which may impact their ability to secure or retain a teaching position. Therefore, we recommend that education leaders work to eliminate their implicit biases as well as the structural barriers to recruiting, hiring, and retaining a diverse teaching force. Our youth benefit significantly from having diverse teachers, and the benefits are plentiful for youth of color. The question for education leaders is will they commit to making the individual and institutional changes necessary to ensure equitable selection and retention of teacher candidates and maintain an equitable educational organization?

References

- AGBAYANI-SIEWERT, P. Assumptions of Asian American similarity: the case of Filipino and Chinese American students. *Social Work*, v.49, n.1, p.39-51, 2004.
- ARMSTRONG, S. L.; GLEITMAN, L. R.; GLEITMAN, H. What some concepts might be. *Cognition*, n.13, p.263–308, 1983.
- AYAN, S. *Speaking of memory: Q&A with neuroscientist Eric Kandel*. *Scientific American*, 2008, October 9. Available in: <<http://integral-options.blogspot.com/2008/10/scientific-american-speaking-of-memory.html>>. Access in: September, 22, 2019.
- BANAJI, M.; GREENWALD, A. *Blindspot: Hidden biases of good people*. New York: Bantam Books, 2016
- BANKS, R. R.; EBERHARDT, J.; ROSS, L. Discrimination and implicit bias in a racially unequal society. *California Law Review*, n. 94, p.1169-1190, 2006
- BARGH, J. Reply to the commentaries. In: WYER, R. J. (Ed.). *The automaticity of everyday life: advances in social cognition*. Mahwah, NJ: Erlbaum, 1997. V. 10. p. 231-246.
- BARSALOU, L. W. Ad hoc categories. *Memory & Cognition*, n.11, p. 211–227, 1983.
- _____. Deriving categories to achieve goals. In: BOWER, G. H. (Ed.). *The psychology of learning and motivation: Advances in research and theory*. New York, NY: Academic Press, 1991.V. 27. p. 1–64.
- BASCOM, N. Brainy ballplayers: elite athletes get their heads in the game. *Science News*, v.181, n.1, p.22 – 30, 2012.
- BLANTON, H. et al. Toward a meaningful metric of implicit prejudice. *Journal of Applied Psychology*, v.100, n.5, p.1468 –1481, 2015.
- BONN, S. Why elite white-collar criminals are rarely punished: The system. protects White-collar criminals. *Psychology Today* [online]. 2017, April 9. Available in: <<https://www.psychologytoday.com/us/blog/wicked-deeds/201704/why-elite-white-collar-criminals-are-rarely-punished>>. Access in: September, 22, 2019
- CASHIN, S. To be Muslim or “Muslim-looking” in America: a comparative exploration of racial and religious prejudice in the 21st century. *Duke Forum for Law & Social Change*, n.2, p.125-139, 2010.
- CHANEY, J.; BURKE, A.; BURKLEY, E. Do American Indian Mascots = American Indian People? Examining implicit bias towards American Indian People and American Indian mascots. *American Indian and Alaska Native Mental Health Research: The Journal of the National Center*, v.18, n.1, p.42-62, 2011.
- CHEN, H. J.; WANG, Y. H. Age stereotypes of older primary teachers in Taiwan. *Educational Gerontology*, n.38, p.362-371, 2012.
- CHERNG, H. Y.; HALPIN, P. F. The importance of minority teachers: student perceptions of minority versus white teachers. *Educational Researcher*, v.45, n.7, p.407-420, 2016.

- CORRELL, J. et al. The police officer's dilemma: Using ethnicity to disambiguate potentially threatening individuals. *Journal of Personality and Social Psychology*, v.83, n.6, p.1314-1329, 2002.
- _____ et al. The influence of stereotypes on decisions to shoot. *European Journal of Social Psychology*, n.37, p.1102-1117, 2007.
- DAMASIO, A. *Self comes to mind: constructing the conscious brain*. New York: Pantheon, 2010.
- DIXON, D.; GRIFFIN, A.; TEOH, M. *If you listen, we will stay: Why teachers of color leave and how to disrupt teacher turnover*. Washington, DC: The Education Trust, 2019.
- DREYFUS, S. The five-stage model of adult skill acquisition. *Bulletin of Science, Technology & Society*, v.24, n.3, p.177-181, 2004.
- DVORAKOVA, A. Negative stereotypes deconstructed and transformed in the experience of Native American academics. *American Journal of Education*, n.124, p. 345-371, 2018.
- EAGLY, A. et al. What is beautiful is good, but . . . : A meta-analytic review of research on the physical attractiveness stereotype. *Psychological Bulletin*, v.110, n.1, p.109-128, 1991.
- EBERHARDT, J. (). *Biased: Uncovering the hidden prejudice that shapes what we see, think, and do*. New York: Viking, 2019.
- EGALITE, A.J.; KISIDA, B. The effects of teacher match on students' academic perceptions and attitudes. *Educational Evaluation and Policy Analysis*, v.40, n.1, p.59–81, 2018.
- Everett, J. A. et al. Covered in stigma? The impact of differing levels of Islamic head-covering on explicit and implicit biases toward Muslim women. *Journal of Applied Social Psychology*, v.45, n.2, p.90-104, 2015.
- FIARMAN, S. E. Unconscious bias: When good intentions aren't enough. *Educational Leadership*, v.74, n.3, p.10-15, 2016.
- FLESSNER, C. et al. (). The parenting anxious kids rating scale-parent report (PAKRS_PR): Initial scale development and psychometric properties. *Child Psychiatry & Human Development*, n.48, p.651-667, 2017.
- FOLLMER, D. J.; SPERLING, R.; SUEN, H. The role of MTurk in education research: advantages, issues, and future directions. *Educational Researcher*, v.46, n.6, p.329-334, 2017.
- FRENG, S.; WILLIS-ESQUEDA, C. A question of honor: Chief Wahoo and American Indian stereotype activation among a university based sample. *The Journal of Social Psychology*, v.151, n.5, p.577–591, 2011.
- GERSHENSON, S. et al. *The long-run impacts of same-race teachers*. No. w25254, Bonn, Germany: National Bureau of Economic Research, 2018.

- GOFF, P. A. et al. Not yet human: implicit knowledge, historical dehumanization, and contemporary consequences. *Journal of Personality and Social Psychology*, v.94, n.2, p. 292, 2008.
- GONSALKORALE, K.; SHERMAN, J. W.; KLAUER, K. C. Measures of implicit attitudes may conceal differences in implicit associations: The case of antiaging bias. *Social Psychological and Personality Science*, v.5, n.3, p.271-278, 2014.
- GRIFFIN, A. M.; LANGLOIS, J. Stereotype directionality and attractiveness stereotyping: Is beauty good or is ugly bad? *Social Cognition*, v.24, p.2, p.187-206, 2006.
- HAAS, E.; FISCHMAN, G. Nostalgia, entrepreneurship, and redemption: understanding prototypes in higher education. *American Educational Research Journal*, v.47, n.3, p.532-562, 2010.
- HAAS, E.; FISCHMAN, G.; BREWER, J. *Dumb ideas won't create smart kids: straight talk about bad school reform, good teaching, and better learning*. New York: Teachers College Press, 2014.
- HAIDT, J. The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychology Review*, n.108, p.814-834, 2001.
- HAUSER, D. J.; SCHWARZ, N. Attentive Turkers: MTurk participants perform better on online attention checks than do subject pool participants. *Behavior Research Methods*, v.48, n.1, p.400-407, 2016.
- JOLLS, C.; SUNSTEIN, C. R. The law of implicit bias. *California Law Review*, v.94(4), 969-996, 2006.
- KAHNEMAN, D. *Thinking fast and slow*. New York, NY: Farrar, Strauss and Giroux, 2013.
- KENDI, I. *How to be an antiracist*. New York: One World, 2019.
- KIRWAN INSTITUTE. *Understanding implicit bias* [webpage]. Available in: <<http://kirwaninstitute.osu.edu/research/understanding-implicit-bias/>>. Access in: September, 22, 2019.
- LAKOFF, G. *Moral politics: how liberals and conservatives think*. 2nded. Chicago: University of Chicago Press, 2002.
- _____. *Women, fire, and dangerous things: what categories reveal about the mind*. Chicago: University of Chicago Press, 1987.
- LAKOFF, G.; JOHNSON, M. *Metaphors we live by*. Chicago, IL: University of Chicago Press, 2003.
- LANDER, V.; SANTORO, N. Invisible and hypervisible academics: the experiences of Black and minority ethnic teacher educators. *Teaching in Higher Education*, v.22, n.8, p.1008-1021, 2017.
- LANGLOIS J. H. et al. Maxims or myths of beauty? A meta-analytic and theoretical review. *Psychological Bulletin*, n.126, p. 390–423, 2000.

- LEE, S. J.; KUMASHIRO, K. *A report on the status of Asian Americans and Pacific Islanders in education: beyond the "model minority" stereotype*. Washington, DC: National Education Association, 2005.
- LEVY, B.R.; BANAJI, M.R. Implicit ageism. In: NELSON, T.D. (Ed.), *Ageism: stereotyping and prejudice against older persons*. Cambridge, MA: The MIT Press, 2002. p. 49-75.
- MICHEL, C. Violent street crime versus harmful white-collar crime: a comparison of perceived seriousness and punitiveness. *Critical Criminology*, v.24, n.1, 127-143, 2016.
- MILNER, H. R.; HOY, A. A case study of an African American teacher's self-efficacy, stereotype threat, and persistence. *Teaching and Teacher Education*, n.19, p.263-276, 2003.
- MILTON, J.; SMALL, S. L.; SOLODKIN, A. On the road to automatic: dynamic aspects in the development of expertise. *Journal of Clinical Neurophysiology*, n.21, p.134-143, 2004.
- MILTON, J. et al. The mind of expert motor performance is cool and focused. *NeuroImage*, n.35, p.804-813, 2007.
- NOON, M. (2018). Pointless diversity training: unconscious bias, new racism and agency. *Work, Employment and Society*, v.32, n.1, p.198–209, 2018.
- ROSCH, E. Principles of categorization. *Concepts: Core Readings*, n.189, p.251-270, 1999.
- ROWATT, W. C.; FRANKLIN, L. M.; COTTON, M. (). Patterns and personality correlates of implicit and explicit attitudes toward Christians and Muslims. *Journal for the Scientific Study of Religion*, v.44, n.1, p.29-43, 2005.
- RUDMAN, L.A.; FEINBERG, J.; FAIRCHAILD, L. Minority members' implicit attitudes: automatic ingroup bias as a function of group status. *Social Cognition*, v.20, n.4, 294-320, 2002.
- SHENKER-OSORIO, A. *Don't buy it: the trouble with talking nonsense about the economy*. New York: PublicAffairs, 2012.
- STAATS, C. Understanding implicit bias: what educators should know. *American Educator*, n.43, p.29-33, 2016, Winter. Available in: <<https://files.eric.ed.gov/fulltext/EJ1086492.pdf>>. Access in: September, 22, 2019.
- STEINFELDT, J. et al. Racism in the electronic age: role of online forums in expressing racial attitudes about American Indians. *Cultural Diversity and Ethnic Minority Psychology*, v.16, n.3, p.362-371, 2010.
- SUKHERA, J.; WATLING, C. A framework for integrating implicit bias recognition into health professions education. *Academic Medicine*, v.93, n.1, p.35-40, 2018.
- TATE, S. A. ; PAGE, D. Whiteness and institutional racism: hiding behind (un)conscious bias. *Ethics and Education*, v.13, n.1, p.141-155, 2018.
- THOMAS, M.; TURKAY, S.; PARKER, M. (2017, November). Explanations and interactives improve subjective experiences in online courseware. *International Review*

of *Research in Open and Distributed Learning*, v.18, n.7. Available in: <<http://www.irrodl.org/index.php/irrodl/article/view/3076/4436>>. Access: September, 22, 2019.

TOURE, J.; DORSEY, D. Thompson. Stereotypes, images, and inclination to discriminatory action: the White racial frame in the practice of school leadership. *Teachers College Record*, v.120, n.2, p.1-38, 2018.

UNKELBACH, C.; FORGAS, J. P.; DENSON, T. F. The turban effect: the influence of Muslim headgear and induced affect on aggressive responses in the shooter bias paradigm. *Journal of Experimental Social Psychology*, v. 44, n.5, p.1409-1413, 2008.

U.S. EQUAL EMPLOYMENT OPPORTUNITY COMMISSION. *Asian American and Pacific Islander Work Group Report to the Chair of the Equal Employment Opportunity Commission* [webpage]. s/d. Available in: <<https://www.eeoc.gov/federal/reports/aapi.html>>. Access: September, 22, 2019.

VARKEY FOUNDATION. *Global teacher prize* [webpage]. (n.d.). Available in: <<https://www.globalteacherprize.org/>>. Access: September, 22, 2019.

WESTFALL, R.; MILLAR, M.; WALSH, M. Effects of instructor attractiveness on learning. *The Journal of General Psychology*, v.143, n.3, p.161-171, 2016.