

The Effect of Student Ethnicity on Teacher Perceptions

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Abstract

Prospective teachers (N = 171) read an essay that manipulated the ethnicity of the student-author (European American, African American, Asian American, or none mentioned). They then rated the author's intelligence and probable future success and estimated the author's GPA. The Asian American student was seen as more intelligent than the control student, but ethnicity did not affect the other dependent variables. The findings may be explained by the stereotype validity model as the essay suggested the author might have characteristics stereotypical of an Asian American. Future research should examine whether experienced teachers will evidence a similar lack of bias.

Students from minority groups often face difficulty in the United States' educational system. For example, in 2001, while only about half of Hispanic and African American students entering ninth grade graduated from high school, approximately 3/4 of European American and Asian American students did (Orfield, Losen, Wald, & Swanson, 2004). Furthermore, National Assessment of Educational Progress (NAEP) scores in recent years (1983-2003) show that African American students have generally performed at a lower academic level than their European American counterparts. Although progress toward racial equality in NAEP scores was made up to the 1980s, the gap has remained steady since 1988 (Thernstrom & Thernstrom, 2003). This experiment explored whether or not teachers may hold different expectations of students of different ethnicities, as these biases may contribute to the academic achievement gap.

Research has suggested that teachers' expectations of students can have profound effects on students' actual achievement. Rosenthal and Jacobson (1968) found that higher teacher expectations led to an increase in the IQ scores of students. Many researchers have suggested that this "Pygmalion Effect" may have an effect on how students of minority ethnicities perform in school (Parks & Kennedy, 2007; Tenenbaum & Ruck, 2007; Williams & Muehl, 1978). That is, if teachers expect less of minority students, it is possible that these expectancies cause a self-fulfilling prophecy inhibiting students' academic achievement.

Perceptions of Intelligence and Estimated Grade Point Average (GPA)

Past research suggests that teachers often hold more negative perceptions of African American students' intelligence and academic ability compared to European American students. One such study found that when preschool teachers were given a picture of an African American or European American student, both African American and European American teachers rated the European American children as higher in terms of intellectual ability and academic achievement than the African American children (Adams, 1978). Another experiment showed that education

majors at several American universities believed a European American student hired by the researcher would be better able to learn words than an African American student hired by the researcher. After working with one of the students, teachers believed that the European American student would be able to spell more words correctly than the African American student (Bennett, 1976). However, these studies were performed in the 1970s, and it is unclear whether contemporary teachers harbor the same prejudices.

More recently research has shown that when college students enrolled in a teacher education course were given a picture of a student, African American children were perceived to have lower GPAs and IQ scores than European American students (Richman, Bovelsky, Kroovand, Vacca, & West, 1997). However, a 2007 study by Parks and Kennedy found that ethnicity did not have a simple main effect on how participants rated 10-year-old students in terms of academic achievement, although they did find an interactive effect between ethnicity and attractiveness in which unattractive African American children were rated the lowest in academic and social competence. In addition, research from both the 1970s and this decade shows that teachers criticize African American students more often and that they are less willing to recommend them for gifted and talented programs than European American students (Elhoweris, Mutua, Alsheikh, & Holloway, 2005; Rubovits & Maehr, 1973).

Perceptions of Academic Success and Future Career Success

Teachers may believe that African American students have less academic potential than European American students. A study conducted by Pigott and Cowen (2000) found that randomly selected African American students were perceived by teachers to be less likely to graduate from high school and more likely to have problems with future school work than randomly selected European American students. In 1988, Wong, Derlega, and Colson found that undergraduate students enrolled in psychology and teacher education classes expected an African American student described in a vignette to do worse on a test on nutrition and believed the African American student would do worse in terms of future academic achievement than a European American student.

Additionally, past research suggests that African American students may also be perceived by teachers to be less likely to succeed in their future careers than European American students. Simpson, Smith, and Means (1974) found that both European American and African American college students given an essay purported to be written by either a European American or an African American student rated the European American student as more likely to gain successful employment than the African American student. Wong et al. (1988) also found that a male African American student described in a vignette was expected to do worse in his future career than a male European American student. Another recent study found that teachers who viewed pictures of either four African American or four European American children rated the African American children as less self-confident, less ambitious, and taking less initiative (Richman et al., 1997). Because these qualities would affect a person's future career success, African American students also may be perceived as less likely to succeed at their future careers than European American students.

Teachers' Perceptions of Asian American Students

Little research has experimentally tested whether teachers have different perceptions of Asian American students and students of other ethnicities. Asian Americans are sometimes lauded as a “model minority,” and stereotypes exist that Asian American students are hard-working and do well academically (Allis, 1991; Lee, 1994; Lee & Ying, 2001). Wong, Lai, Nagasawa, and Lin (1998), for example, found that university students interviewed via telephone reported that Asian Americans perform better academically than African American students, are more motivated to do well in college and are more likely to succeed in their careers than Caucasian and African American students.

Some past research suggests that those involved in education may exhibit some biases toward Asian American students. For example, Yeh in 2001 found that about 75% of school counselors described Asian-American students as hardworking or academic. Furthermore, Chang and Demyan (2007) found that when teachers were asked to list up to six traits describing Asian American, European American, and African American students in general, teachers referred to Asians as intelligent and industrious more often than they described European American and African American students with these terms. Given these stereotypes, it is reasonable to suspect that teachers might have even higher expectations for students of Asian descent than for their European American peers. Stereotyping is detrimental to all students, whether the stereotypes are positive or negative. In the case of Asian American students, the stereotype of Asian Americans as a group that does well academically can cause stress or anxiety for those who do not excel in education (Cocchiara & Quick, 2004).

To determine if the ethnicity of a target influences teachers' perceptions of the student's intelligence, the estimated GPA of students, and perceptions of a student's future academic and career success, the following hypotheses were tested: 1) Compared to an African American student, an Asian American and European American student will be thought to: A) have a higher GPA, B) to be more intelligent, C) have greater potential for future academic success, and D) have greater potential for future career success. 2) Compared to a European American student, an Asian American student will be thought to: A) have a higher GPA, B) be more intelligent, C) have greater potential for future academic success, and D) have greater potential for future career success.

Method

Participants

Data were collected in secondary education classes at a university in suburban New York during the spring of 2010. The sample consisted of 171 participants, 110 (64.3%) graduate students and 60 (35.1%) undergraduate students. The response rate was 88.6%, and participants did not receive any academic or extra credit for their participation. The majority of the participants were European American (81.9%) and the sample consisted of 72 (42.1%) male and 98 (57.3%) female students. The participants planned to teach a variety of academic subjects: math (14%), science (6%), English (14%), history (24%), art/music (20%), foreign language (3%), and business (18%).

Experimental Stimulus

An essay was created to serve as the experimental stimulus. The ethnicity of the author of the essay was systematically varied between the four conditions. An essay was chosen because it was believed that this form of work would be sufficiently ambiguous as to allow possible teacher prejudices to be revealed.

The essay was purported to be written by Michael, a 17-year-old junior, for his English class. The essay was five paragraphs long, and the topic of the essay was how friendship impacted the writer's life. The four versions of the essay were identical except for two sentences which manipulated the ethnicity of the author. One-fourth of the participants received a version in which the author referred to himself as "black", one-fourth received a version where the author referred to himself as "white", one-fourth received a version where the author referred to himself as "Asian," and the last fourth received a version of the essay where the author did not mention his ethnicity. The version of the essay without the mention of the author's ethnicity had 392 words and the other three versions had 394 words. The essay can be found in Appendix A.

Dependent Measures

The survey consisted of three scales: the Perceived Intelligence Scale, the Perceived Future Academic Success Scale, and the Perceived Future Career Success Scale (see Appendix B). In addition, a single item measured the estimated GPA of the student. The Perceived Intelligence Scale consisted of five items and had a Cronbach's alpha of .82 on this sample. It was created by the researchers but modeled after the Perceived Academic Ability scale used by Good and Adams (2008). A sample item on the scale is, "The writer is probably capable of obtaining good grades in school."

The Perceived Future Academic Success Scale was created by the researchers based on questions asked in the study by Simpson et al. (1974). The scale consists of five items, and a sample item is "The writer will probably get into the college of his choice." The scale had a Cronbach's alpha of .83 on this sample of prospective teachers.

The Perceived Future Career Success Scale was created by the researchers and was based on criteria commonly used to measure extrinsic career success (Judge & Kammeyer-Mueller, 2007). The scale consists of three items, had a Cronbach's alpha of .82 on the sample, and a sample item is, "The writer will probably be able to get a high-paying job in the future."

Procedure

Participants were told that the purpose of the study was to look at how an essay might affect prospective teachers' perceptions of students. The participants were told that participation was voluntary and that all responses would be kept anonymous.

Participants were randomly assigned to read one of the four versions of the essay and fill out the survey. After the participants completed the survey, they filled out a manipulation check, which

asked about the ethnicity of the author and included four other items to prevent participants from discerning that the study was about ethnicity and possibly contaminating the rest of the data collection process.

Results

Data Analysis

Analyses of variance (ANOVAs) were used to determine if the purported ethnicity of the student writing the essay influenced prospective teachers' perceptions of the students' intelligence, probable future academic and career success, and the expected GPA of the student. Data were analyzed using SPSS version 18, and a p -value of .05 was used as the cutoff for statistical significance.

The Effect of Purported Ethnicity of Student on Perceived Intelligence

A one-way ANOVA revealed a significant main effect for purported ethnicity on perceived intelligence, $F(3, 136) = 2.77, p < .05, \eta_p^2 = .06$. A Tukey-Kramer post-hoc test revealed that the perceived intelligence of the Asian American student ($M = 4.61$) was significantly greater than that of the control student ($M = 4.10$), $p < .05$. On the other hand, contrary to the hypotheses, the differences between the perceived intelligences of the Asian American, African American, and European American students were not statistically significant. Figure 1 displays the means for each group.

Estimated GPA, Perceived Academic Success, and Perceived Career Success

No significant effect was found for the ethnicity of the student on estimated GPA, $F(3, 130) = 0.61, p = .61, \eta_p^2 = .01$. As can be seen in Table 1, the estimated GPAs of the four different conditions were almost the same. Similarly, ANOVAs revealed no significant effects for the purported ethnicity of the student on perceived academic success, $F(3, 135) = .99, p = .40, \eta_p^2 = .02$, or on the perceived career success of the student, $F(3, 135) = .52, p = .77, \eta_p^2 = .01$.

Discussion

This experiment suggests that the ethnicity of students has little effect on future teachers' perceptions of a student's intelligence, GPA, or future career and academic success, at least when a large amount of information about the student is provided. This finding is encouraging as numerous previous studies (Adams, 1978; Bennett, 1976; Elhoweris et al., 2005; Richman et al., 1997; Rubovits & Maehr, 1973; Wong et al., 1988) have suggested that teachers and prospective teachers may, in fact, hold biases toward students of different ethnicities.

Purported ethnicity was found to have an unanticipated effect on perceived intelligence in which the Asian American student was seen as more intelligent than the control student. However, there was no difference in perceived intelligence between the Asian American, European American, or African American students.

The difference between the perceived intelligence of the Asian American and that of the control student can be partly explained by the stereotype validity model (Madon, Guyll, Hilbert, Kryiakatos, & Vogel, 2006). According to this theory, people are more willing to judge a target based on stereotypes when individuating information is in line with the stereotypes. Since the information provided within the essay seems to be in line with common stereotypes that Asian Americans are intelligent (e.g., the writer plays chess and goes to the library to learn about Native American culture), it may have made participants a bit more willing to rely on stereotypes when rating the intelligence of the Asian American student.

On the other hand, ethnicity did not have an effect on the other dependent variables. Again, individuating information may provide the reason why. Details within the essay may have influenced the participants' ratings more than the writer's ethnicity. In some of the previous studies (e.g., Richman et al., 1997), little information about the target was provided (e.g., just a photo) and the lack of information may have led participants to rely on using ethnic stereotypes.

Furthermore, since the essay provided information that may seem counter to common stereotypes regarding African Americans, the information may have made participants even less willing to rely on stereotypes in forming perceptions of the student. A way to test this would be to run a 4 x 2 experiment (ethnicity x type of individuating information) to contrast the effect of information that supports and contradicts common stereotypes.

Alternatively, the general lack of bias may reflect something about this time period or these students. It is possible that the students, enrolled in teacher education courses, are especially sensitized to the ethnicity of the student. Since the participants have most likely been exposed to the issue of the academic achievement gap between students of different backgrounds, the participants may have tried to avoid basing their responses on the ethnicity of the student and any stereotypes they may hold. While these data do not necessarily generalize to other universities in the nation, it appears that the specific education program may have done a good job at making students aware of the issue of racial equality in education.

Another possible cause for the general lack of significant differences may have been the sensitivity of the dependent measures. While the measures are based on scales used in past research, it is possible that they may not have been sensitive enough to measure the differences in the prospective teachers' perceptions of the students. Although a cover story was provided, it is also possible that some participants may have guessed the true purpose of the study and therefore responded in a way to appear less biased.

An interesting question to investigate would be whether non-European American teachers' perceptions of the students differ from the perceptions of European American teachers. Statistical analyses run to investigate the effect of the student's ethnicity on only the European American participants yielded similar results to the results with the sample as a whole. Since the vast majority (82%) of the participants in this study were European American, it was not possible to investigate the effect of the prospective teachers' ethnicities fully.

Another way to expand on this study would be to look at whether teachers with a similar background who have been teaching for several years display a similar lack of bias. It is possible

that teachers who have some experience teaching may have developed more biases or that as proximity from the university environment decreases, prejudice takes hold. While the results of this study suggest that biases in prospective teachers may be on the decline, the academic achievement gap remains a critical issue that demands further research.

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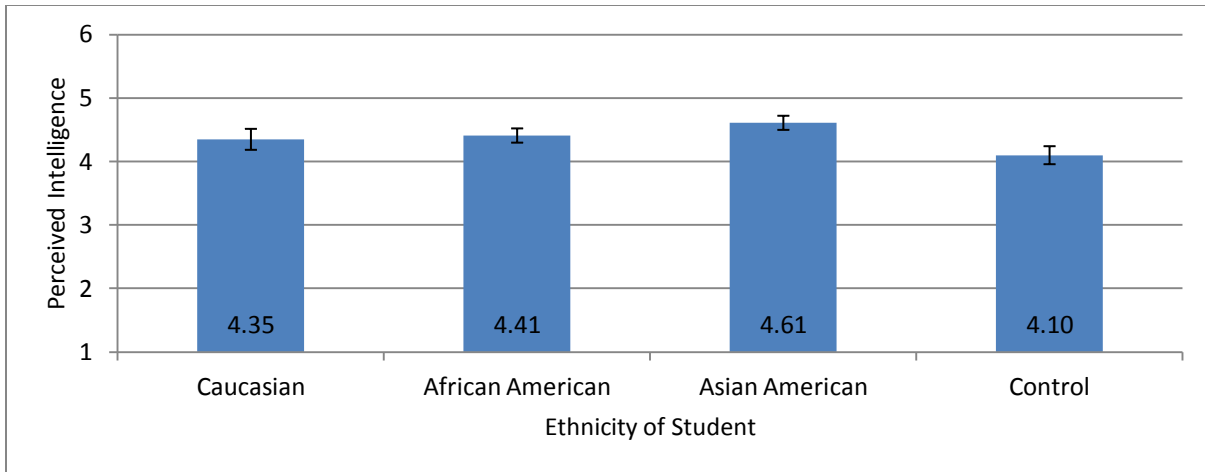


Figure 1. The Effect of Purported Ethnicity on Perceived Intelligence

Table 1.

Means Table for Dependent Variables

Ethnicity	Intelligence	Estimated GPA	Perceived Academic Success	Perceived Career Success
European American	4.35 (0.14)	87.19 (6.26)	3.93 (0.79)	3.73 (0.78)
African American	4.41 (0.12)	85.62 (6.27)	4.00 (0.80)	3.74 (0.81)
Asian American	4.61 (0.12)	86.24 (6.52)	4.15 (0.74)	3.86 (0.65)
Control	4.10 (0.14)	86.14 (5.11)	3.76 (0.69)	3.67 (0.69)

Appendix A
Experimental Stimuli

The following essay was given to participants.

Question: How have your friends impacted your life and the way you live?

Friends are an important part of my life. They are always there for me and are fun to be with. They are like a second family to me and have greatly impacted my life. My friends have led me to try new hobbies and sports, introduced me to the ideas and beliefs of other cultures, and taught me that people of different religions or different backgrounds can get along despite the differences between them.

My friends led me to try new hobbies, some of which I still enjoy doing. As a child, I often played basketball and football with my friends. They led me to try new sports, such as swimming, soccer, baseball, and handball. They taught me how to play some games such as chess and checkers. Although I never really got the hang of some of the sports, like soccer, other sports and hobbies interested me greatly. I still swim and play baseball occasionally, and I enjoy playing chess with my friends.

Growing up (**white, black, Asian**)* in a multi-ethnic community, I befriended people of other races. Many of them had different beliefs and ideas, and through my friendship with them, I was introduced to new cultures. I remember becoming friends with a Native American boy named Sam. He would tell me stories that his father told him. On multiple occasions I went to the library to read many books about Native American culture. I spent several hours there, reading through Indian folk tales and books about how they lived. My friends opened my eyes to a wider world and introduced me to other cultures and beliefs.

Some of my friends have also helped me realize that people with differing beliefs or different backgrounds can still get along. When I was in elementary school, I met a Muslim boy from Afghanistan, who just moved into our class. As a(n) (**white, black, Asian**)* Christian, I did not really understand his religious beliefs. Similarly, he didn't really understand my religious beliefs. At first, we barely knew each other, but as the year went on, we became best of friends. Our differing religious beliefs did not affect our friendship in any way. People can get along with others despite any differences between them.

I believe that friends are invaluable. They can greatly impact a person's life and allow him or her to see the world through a broader perspective.

*For the control group, the ethnicity of the student is not mentioned.

Appendix B
Dependent Measures

Estimated GPA: Participants were asked to answer an item regarding the GPA they would expect the student to have.

1. Please estimate the GPA of the student, on a 0-100% scale. ____%

*Perceived Intelligence Scale:

1. The writer probably does well in school compared to other students.
2. The writer is probably capable of obtaining good grades in school.
3. The writer probably doesn't do well in school. (reverse-scored)
4. The writer usually does not produce high-quality work in school. (reverse-scored)
5. The writer is probably smarter than most of the other students in his grade.

*Perceived Future Academic Success Scale:

1. The writer will probably get into the college of his choice.
2. The writer will most likely do poorly in college. (reverse-scored)
3. The writer has a good chance of getting an academic scholarship to college.
4. The writer will most likely earn good grades in college.
5. The writer will likely have difficulty with college-level work. (reverse-scored)

*Perceived Future Career Success Scale:

1. The writer will probably be able to get a high-paying job in the future.
2. The writer will probably be successful in his future career.
3. The writer will probably be promoted often.

*Participants were asked to answer the questions on a 6-point Likert-type scale, with 1 being "strongly disagree" and 6 being "strongly agree."