

An experiment in Peru shows that when prompted by subtle socio-economic cues, teachers exhibit unconscious biases that significantly affect their evaluation of low-income students.

## Even Teachers are Bested by Their Biases

**Deep-rooted biases can inhibit our best intentions. Research has found that we all have unconscious biases and preferences related to gender, race, sexual orientation, socio-economic background, or other aspects of identity. Unconscious bias is just that – “unconscious,” and often unrelated to our goals and intentions.**

The science behind this is that our brains have evolved to categorize the world to help us simplify it. We all use mental shortcuts to process information and make decisions quickly. These shortcuts can be useful when making decisions with limited information, bandwidth, or time, but can sometimes lead to harmful stereotypes. So, *how much can unconscious bias influence a school teacher's assessment of students' achievement and their potential?*

## The Project

In an experiment involving 600 public school teachers in Lima, Peru, the World Bank tested whether teachers who were asked to evaluate the scholastic aptitude, behavior, and education potential of a student named “Diego” were unconsciously biased towards him when prompted by socio-economic markers. To do so, we asked teachers to evaluate Diego’s performance after watching a video where he takes an exam.

In addition, to prime teachers to recognize Diego’s socio-economic background, teachers first watched a video that simply introduced Diego and showed what he did outside of school. This introductory video had two versions showing Diego in two different social-economic settings: middle- and low- income.

To assess the extent to which teachers use social background as a short cut to assess aptitude and behavior, teachers were presented with one of two variants of the video in which Diego takes an exam. In the first version, Diego’s performance is ambiguous. He correctly answers some difficult questions but also incorrectly answers easy questions. Sometimes he is paying attention; sometimes he is distracted. In the second version, Diego’s performance is less ambiguous. He correctly answers most questions and behaves like a model student.

In the experiment, each teacher received a tablet and were randomly assigned a combination of the two introductory and two exam videos. After seeing these videos, they were asked to evaluate the student’s scholastic and behavioral performance. If Diego’s social background does not matter for teachers, then their assessment of Diego’s aptitude, behavior, and potential should be the same no matter which introductory video they saw. If, however, teachers do use social background to assess students, then we might expect them to interpret the same exam video differently, depending on which introductory video they saw.



## The Results



### In ambiguity, unconscious bias greatly influences how teachers assess students.

In the ambiguous performance variant, teachers end up being influenced by Diego's socio-economic background when they assess his scholastic aptitude. "Poor" Diego was 22% more likely to be rated as performing below grade level, a difference equivalent to two months of school delays. By contrast, in the high-performance variant where "poor" Diego answers most questions correctly, teachers assess his performance as better than that of "non-poor" Diego.



### Removing ambiguity is not enough to eliminate all unconscious bias.

Even when Diego unambiguously performs well, teachers are significantly harsher evaluating his behavioral scores when they think he comes from a poorer background. For example, teachers score "poor" Diego's motivation and character 11% and 6% lower, respectively, than the "non-poor" Diego. Thus, it seems that when teachers cannot apply their stereotype to their assessment of Diego's scholastic aptitude, as he unambiguously does very well in the second exam variant, it gets transferred to another dimension. In this case, to their behavioral assessment.

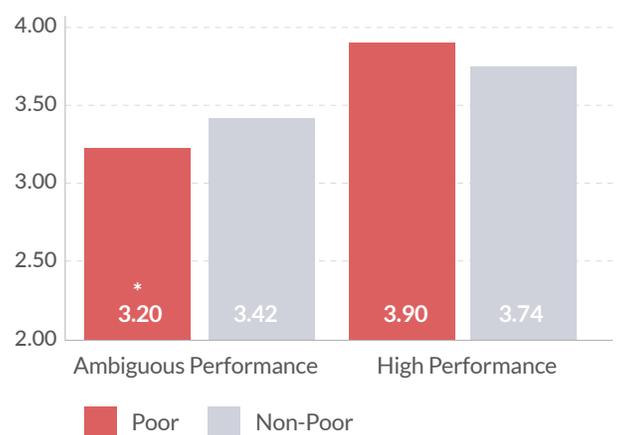


### Expectations for poor students are always low.

Regardless of which variant was used, teachers have lower expectations for Diego's final educational attainment when they are primed to think that he is poor. In the ambiguous variant, teachers' expectation of Diego continuing past high school decreased from 60% to 40% when they were primed to think that he was "poor." The difference is only slightly smaller in the high-performance variant. Interestingly, however, teachers' expectation for "poor" Diego continuing past high school in the high-performance variant increased from 40% to 70%. Understanding teachers' expectations of students is critical as they have been shown to influence student's own expectations and aspirations.

### DIEGO'S PREDICTED GRADE LEVEL

*Difference between poor and non-poor Diego*



*Note: Each decimal point can be interpreted as one month of schooling. The \* indicates statistical significance at the 10% level.*



## Policy Implications

---

The use of teachers' unconscious judgments towards students' scholastic aptitude and behavior based on their perceived socio-economic background can affect a child's lifelong academic trajectory. It is possible that by unconsciously inferring a student's performance using environmental cues other than actual performance, teachers may inadvertently "penalize" students from poorer backgrounds by extending pre-conceived notions of learning and outcomes that, while true on average, may not be true for the actual student at hand.

Evidence suggests that one way to counteract unconscious bias is to develop interventions

***One way to counteract unconscious bias is to develop interventions and policies that replace negative associations with positive ones.***

and policies that replace negative associations with positive ones. Interventions that use positive role models can help change people mindsets on what a child from a poorer background can achieve if given the opportunity, subsequently changing pre-conceived ideas about intelligence. Similarly, creating a setting where teachers and students are exposed to positive examples of academically successful adults, that come from poor backgrounds, can provide evidence for teachers and students to shift their attitudes towards learning and their aspirations. Finally, interventions that promote empathy and perspective-taking can help override existing social norms among teachers that the poor are less qualified.

## About eMBeD

---

The Mind, Behavior, and Development Unit (eMBeD), the World Bank's behavioral science team in the Poverty and Equity Global Practice, works closely with project teams, governments, and other partners to diagnose, design, and evaluate behaviorally informed interventions. By collaborating with a worldwide network of scientists and practitioners, the eMBeD team provides answers to important economic and social questions, and contributes to the global effort to eliminate poverty and enhance equity.

## Stay Connected

---

 [eMBeD@worldbank.org](mailto:eMBeD@worldbank.org)

 [#embed\\_wb](https://twitter.com/embed_wb)

 [worldbank.org/embed](http://worldbank.org/embed)

 [bit.ly/eMBeDNews](https://bit.ly/eMBeDNews)



Last Update: April 26, 2018