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# Tell Me More About Alex: Helping Instructors Uncover and Mitigate Their Implicit Biases

Cait S. Kirby and Heather N. Fedesco

## Abstract

All instructors bring a set of unconscious or implicit biases to the classroom. These biases can negatively impact the way they interact with students, thus affecting important student outcomes (e.g., grades, sense of belonging). Facilitators leading programming on inclusive teaching may struggle to identify strategies they should include in sessions to help unearth and address these biases in others. We have created an activity that can be tailored to fit a variety of teaching contexts and audiences and that helps unveil implicit biases while potentially mitigating some challenges associated with participant responses to such conversations.

**Keywords:** instructor implicit bias, unconscious bias, inclusive teaching, professional development activity

In a study of the best college teachers, Ken Bain (2004) stated, “excellent teachers develop their abilities through constant self-evaluation, reflection, and the willingness to change” (p. 172). Regardless of how long a person has been teaching, the best instructors never stop trying to improve their craft. One important area of development that all instructors would benefit from revisiting throughout their career is to constantly examine the unconscious or implicit biases they bring to

the classroom, giving thought to how this might affect the ways they interact with their students and how they can reduce the negative impact of these biases on their students. Fortunately, institutions often offer programming opportunities that can assist instructors with this important developmental work. Yet leading these professional development initiatives can be quite challenging, especially as facilitators consider the strategies they want to include in these sessions to help unearth and address biases in others. The choice of strategies is especially important since discussion of bias has the potential to lead to participant resistance, defensiveness, or apathy (Howell et al., 2015; Howell & Ratliff, 2017). We have created an activity that can be tailored to fit a variety of teaching contexts and audiences and that helps unveil unconscious biases while potentially mitigating some challenges associated with participant responses to such conversations.

## **Implicit Bias**

Everyone possesses a set of implicit biases that we receive from socio-cultural influences, including the media, opinions of friends and family, and beliefs of groups to which we belong. These biases develop and are internalized from an early age (Collins, 2008). They are automatic associations between words or concepts that occur without our conscious input. The automatic nature of these assumptions allows our brains to quickly categorize things and people around us. From a biological standpoint, this can be useful in some instances when individuals need to identify outsiders to protect themselves. However, these quick associations are based on limited information about the individuals themselves and can lead to often undesirable stereotypical assumptions, associations, and expectations that we have about groups of people based on their age, race, gender, sexuality, religion, socio-economic status, and so on (Devine, 1989). Implicit biases often exist below the surface, without our conscious awareness, and once activated, can have a powerful influence over our thoughts and behaviors

(Carnes et al., 2012; Carnes et al., 2005; Devine et al., 2012). Activation of implicit biases can occur simply by being exposed to a member of a stereotyped group. Thus, it is important for all people to work toward inhibiting the automatic associations caused by implicit biases.

It is especially imperative for instructors to intentionally identify and actively mitigate their own biases due to the detrimental effects biases can have on students. A host of studies demonstrate that instructor implicit biases can lead to an underestimation of student ability, which can negatively impact student grades, opportunities for mentorship, their ability to get hired, and their salary assignments. For example, in a study of high school teachers, Cherng (2017) found that “math teachers perceive their classes to be too difficult for Latino and Black students, and English teachers perceive their classes to be too difficult for all non-White students” (p. 178). Using propensity score matching to account for other variables, the author found that this underestimation of academic ability was associated with lower student grade point averages.

Similarly, results from a meta-analysis revealed that teachers are less likely to refer African American and Latino students to gifted and talented testing and are more likely to refer them to special education testing compared to White and Asian American students (Tenenbaum & Ruck, 2007). In addition, high school math teachers were more likely to report that their white male students were in a math course that was “too easy” for them, compared to white female students who had the same grade point average and math test scores in the same course (Riegle-Crumb & Humphries, 2012).

As evidence of implicit biases in higher education contexts, Milkman et al. (2015) sent identical emails from fictional prospective graduate students that varied only by name to a diverse group of professors across a range of disciplines and institutions in the United States. They found that faculty were more willing to respond to a request for future mentorship if a stereotypically white male name was used, particularly when the faculty were in higher-paying disciplines and at private institutions. Moreover, Moss-Racusin et al. (2012) conducted a

randomized double-blind study in which science faculty from a research-intensive university rated the application materials of a student who was randomly assigned a male or female name. Regardless of the faculty participants' gender, faculty "rated the male applicants as significantly more competent and hireable than the (identical) female applicant. These participants also selected a higher starting salary and offered more career mentoring to the male applicant" (Moss-Racusin et al., 2012, p. 16474).

Holding negative stereotypes about particular groups of students also has negative implications for students' sense of belonging in the course, the field, or the institution. In an educational context, sense of belonging is often influenced by others in the learning environment and refers to the perception that students are valued, are supported, and feel like an integral part of the classroom. A student's sense of belonging has a strong impact on that student's behaviors and performance in the class (Goodenow, 1993; Strayhorn, 2012). For example, Black women in STEM report that negative stereotypes such as being considered too aggressive, assertive, or demanding, or not being smart or intellectually curious enough, reduce their feelings of belonging (Dortch, 2016; Dortch & Patel, 2017). Together, the data demonstrate that instructor implicit biases negatively impact student success.

## **Reducing the Negative Impact of Implicit Biases**

Knowing the detrimental effects of unconscious and implicit biases, scholars have explored how to reduce the negative impact of these thoughts and expectations. Evidence suggests that individuals need to become aware of their own biases (Devine & Monteith, 1993), need to increase their empathy and perspective-taking of those who are different from them (Dovidio et al., 2004; Okonofua et al., 2016), and should focus on the unique attributes of individuals rather than on the social categories they belong to (Blair, 2002; Goodwin et al., 2000).

Those who facilitate professional development sessions for instructors may be familiar with these strategies for reducing implicit biases but may struggle to identify *how* to encourage participants to adopt these behaviors during workshops and seminars. We have developed and implemented an activity that can be utilized and tailored for such sessions. This professional development activity (a) helps participants recognize that they may have biases that could be impacting how they respond to particular groups of students, (b) provides participants a chance to empathize with the challenges that certain groups of students might face in the academy, and (c) allows facilitators to embed concrete strategies for how to ensure one's biases do not negatively impact students. In what follows, we present the steps needed to execute this activity, including what to do before the activity, how it should unfold, ways to debrief the activity, and opportunities to revisit the activity throughout the duration of the session. We then provide an assessment of the activity based on our implementation of it.

## **Implicit Bias Activity**

### ***Activity Framing***

This activity is a discussion-based activity. It is useful for promoting empathy and understanding of different student experiences as well as drawing out implicit biases of teaching assistants (TAs) and instructors. We have used this activity four times: three times with graduate student TAs and once with instructors of record. Attendees of all four sessions served a teaching role in a STEM field, although the activity can be applied across any discipline. This activity typically takes about 60 minutes but can be tailored for more or less time as needed. It provides a launching point for discussions about equity in the classroom while uncovering participant biases. Finally, this activity fits into a larger discussion on in-group/out-group dynamics and how those dynamics can play a role in student success. We have employed this ac-

tivity in single-session workshops on promoting belonging and reducing unconscious bias in the classroom and in a week-long intensive pedagogy course. This activity can also be used in semester-long courses on topics of pedagogy, unconscious bias, and equity in the classroom, with participants revisiting the scenarios throughout the course as they learn more pedagogical tools.

### **Overview**

In this activity, participants are given a short role-playing prompt. This prompt situates the participants as instructors of a class. They are given information about Alex, a student who is underperforming in this class. Among other questions, they are asked to identify the cause(s) and solution(s) for Alex's underperformance. Participants work on their own and then in groups to answer these questions. While all participants are given the same basic information about Alex, each group surreptitiously receives different demographic markers for Alex. Importantly, all members of the same group must receive the same demographic markers, and we provide tips on how best to facilitate this assignment. Participants are given the first half of the worksheet, including the scenario, Alex's demographic markers, and four questions to consider. We use the think-pair-share model wherein participants first work alone, then in pairs, until we finally discuss answers together as a large group. If desired, facilitators could have one pair discuss with another pair before sharing out to the larger group (i.e., think-pair-square-share). Next, we introduce material about bias and belonging in the classroom. Finally, we distribute the second half of the worksheet, which includes three more reflection questions and an opportunity for participants to share their thoughts with peers.

### **Possible Scenarios**

Below are two scenarios that we have used. These scenarios can be tailored as facilitators see fit. Other common student issues could be used

based on the types of issues that the group of participants most likely will face (e.g., falling asleep in class, spotty attendance, coming to class unprepared, etc.). Moreover, all scenarios can be adjusted to reflect that the participant is either the TA or the instructor of record for the course.

### **Scenario 1**

You are the TA for a course. The instructor of record is very busy and leaves the day-to-day decision-making to you. However, the grading scheme and course structure are not changeable. The syllabus dictates that assignments must be turned in on time. It is the middle of the semester, and Alex turned in an assignment late *again*. This assignment is worth 10% of the grade in this course, and it is the third assignment Alex has turned in late.

### **Scenario 2**

Alex is a student in your course and comes to class every day. It is over a month into the semester, and Alex received another D on a quiz, resulting in a current quiz average of 66% combined with a 70% Exam 1 score.

### ***Demographic Details***

Worksheets will contain one set of demographic details shown below. Option 1 reflects the baseline demographic student, which is devoid of demographic details such as race, gender, nationality, employment, or family education status. As such, participants will most likely assume Alex is white, male, and American, especially because the teaching context for our participants was within the STEM disciplines. This same description will be used across all options with slight tweaks to the last sentence to reflect a different demographic marker. For example, to reflect that Alex is a woman, the same description will be included but she/her pronouns will be used.



Members of the same small group will receive the same demographic details. Facilitators should select the demographic details that best suit their session needs. We recommend that for sessions with fewer participants, Option 1 serve as the baseline demographic student, and other options reflect that Alex is either Black, an international student, a first-generation college student, a woman, and/or works part-time to pay for college. Alternatively, if the session is larger and if the facilitator would like to include more direct comparison groups, we have added additional demographic markers that could be included.

1. Alex is a second semester first-year at [Your Institution] and lives in [Name of Institution Dorm] dorm on campus. Alex's favorite TV show is *Stranger Things*, favorite book is *Harry Potter and the Prisoner of Azkaban*, and favorite musician is Calvin Harris. Alex is on an intramural volleyball team and is part of the American Institute of Chemical Engineers.
2. Alex is on an intramural volleyball team and is part of the American Institute for Black Engineers.
3. Alex is on an intramural volleyball team, is from China, and is part of the American Institute of Chemical Engineers.
4. Alex is on an intramural volleyball team and is part of the American Institute of Chemical Engineers. Alex's parents are excited to send their child to [Your Institution] because they never attended college.
5. Her favorite TV show is *Stranger Things*, favorite book is *Harry Potter and the Prisoner of Azkaban*, and favorite musician is Calvin Harris. She is on an intramural volleyball team and is part of the American Institute of Chemical Engineers.
6. Alex is on an intramural volleyball team, works part-time at Panera Bread, and is part of the American Institute of Chemical Engineers.

### **Optional Demographic Markers**

7. Alex is on an intramural volleyball team, is from Alabama, and is part of the American Institute of Chemical Engineers.

8. Alex is on an intramural volleyball team and is part of the American Institute of Chemical Engineers. Alex's parents are excited to send their child to [Your Institution] because that is where they attended college.
9. His favorite TV show is *Stranger Things*, favorite book is *Harry Potter and the Prisoner of Azkaban*, and favorite musician is Calvin Harris. He is on an intramural volleyball team and is part of the American Institute of Chemical Engineers.

### ***Introducing the Activity (5 Minutes)***

To help facilitate this activity and to set expectations and norms for conversations around unconscious bias, we suggest providing the following disclaimer at the start of the session. Then facilitators can provide the instructions for the activity.

#### **Disclaimer Script**

"Today we will be discussing equity in the classroom, which may lead to some difficult conversations. Having conversations about difficult topics is the first step in making necessary changes. For this session, we will assume that everyone has good intent. We are here to learn, so we will give everyone the benefit of the doubt. As such, if someone says something that is uncomfortable or painful for you, feel free to say 'ouch.' This will gently inform the person that they are being offensive. We will then follow up with why or how that is painful or upsetting to you. If someone says 'ouch' to something you've said, you should not get defensive but remain open to hearing why what you've said is offensive. You can respond by saying 'oops.' Similarly, you can say 'oops' anytime you feel you have said something that didn't reflect your intentions and could be potentially offensive to others in the group, even if no one has expressed such."

### **Instructions Script**

“To get us started in today’s discussion, we want to work with a common scenario you may have faced in your class. Take about 7 minutes to think through the scenario on your own and provide answers to the corresponding questions about what you would do in this situation. Then you will pair up with a partner to together discuss your thoughts for about 10 minutes. Finally, you can share out to the larger group some of the ideas that you and your partner discussed.”

### **Activity Execution**

Once the instructions for the activity have been introduced, facilitators can execute Part One of the activity, followed by a large group discussion. We provide some suggestions for assigning participants into groups at the start of the activity to help improve the activity execution and facilitation of the group discussion. Facilitators should then lead a review of the implicit bias research. Toward the end of the session, facilitators can execute Part Two of the activity, followed by a small and/or large group discussion.

### **Activity Part One (17 Minutes)**

Each participant should be given a worksheet with demographic details describing Alex, the teaching scenario they are faced with, and four questions to answer on their own. Each worksheet will have the same scenario and reflection questions but slightly different demographic markers. For an example, see Figure 1.

The prompt used in Scenario 1 is reflected below but should be updated based on the scenario chosen by the facilitator and whether participants are TAs or instructors of record. Participants can take about 7 minutes to answer these questions on their own and then should discuss with a partner who has the same demographic markers as them for approximately 10 minutes. As participants are discussing

Alex is a second semester first-year at [Your Institution] and lives in [Name of Institution Dorm] dorm on campus. Alex's favorite TV show is *Stranger Things*, favorite book is *Harry Potter and the Prisoner of Azkaban*, and favorite musician is Calvin Harris. Alex is on an intramural volleyball team and is part of the American Institute for Black Engineers.

Alex is a student in your course and comes to class every day. It is over a month into the semester and Alex received another D on a quiz, resulting in a current quiz average of 66% combined with a 70% Exam 1 score.

1. List some plausible reasons why Alex is underperforming on these assessments. Then, write down the reason you think is most likely on the provided notecard.

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•	•

2. Why is it important for Alex to perform better on these assessments?

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3. What is your immediate response to Alex following this most recent quiz?

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4. What features of the context (e.g., attributes/characteristics of Alex) contributed to your response to question 3?

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Figure 1. Sample Part One worksheet featuring the demographic details of Alex (including the unique marker of being in the American Institute for Black Engineers), the teaching scenario, and the list of questions participants should reflect on.

within their pairs, facilitators can review the responses to Question 1 that participants provided on the notecard or classroom response system (see below).

1. List some plausible reasons why Alex turned in the assignment late. Then write down the reason you think is most likely on the provided notecard. (Facilitators should collect the notecards as pairs are discussing. Alternatively, participants can identify their number one reason using a classroom response system like Poll Everywhere or Top Hat, and responses can be revealed later in the session.)
2. Why is it so important that Alex turn in the assignment on time?
3. What is your immediate response to Alex following this most recent assignment?

4. What features of the context (e.g., attributes/characteristics of Alex) contributed to your response in Question 3?

### ***Part One Large Group Discussion (13 Minutes)***

After participants have worked in pairs, they are encouraged to share their answers with the larger group. Facilitators could start by reviewing the common reasons why participants think Alex is struggling in class based on the responses they turned in before they paired with a partner. Facilitators can then solicit any other reasons that were discussed in their pairs, or facilitators can jump to asking participants what they would do in this situation and to provide their reasoning behind their solutions. For example, a participant might suggest that Alex is simply partying too much and that it is the responsibility of the student to reorganize their own priorities. When the facilitator asks why he thinks Alex is partying, the participant might explain that anyone who is doing this poorly must not be focused on schoolwork. Another participant might suggest that she would explain the goals for office hours and invite Alex to attend. The facilitator would ask why she thinks Alex needs information about office hours. At that point, the participant might point out that her student is first-generation and might not know about the hidden curriculum of office hours. As suggested in the title of this article, facilitators should prompt participants to “tell me more about Alex.”

As participants begin to share specifics about their Alex that others in the room may not have had identified in their scenario, the facilitator should highlight these different characteristics. For example, when the participant brings up the point about Alex being a first-generation college student, the facilitator can ask, “Did anyone else consider that Alex could be a first-generation college student when generating solutions to this problem? Why or why not?” If participants do not raise some of the varying attributes in their responses, facilitators could call on different groups to offer up some of their solutions. For example, by knowing which groups have which scenarios, the facilita-

tor could call on the group that indicated Alex was part of the American Institute for Black Engineers to see what their solutions were. The facilitator can continue to probe this group or ask the participants more generally, "Did you consider what it might be like for a Black, first-year college student to be in this class? What challenges might they face that perhaps their white peers may not face in this course?"

During this discussion, the facilitator is starting to uncover some of the assumptions that participants have made about Alex. For example, when pronouns are not provided, our participants often assume that Alex is male. Or when Alex's country of origin is not provided, participants often assume Alex is from the United States. Importantly, since each group has different demographic markers in their scenario, participants might be surprised by the solutions other groups suggest. Astute participants will notice when another group references a demographic marker that does not match those of their Alex. In this instance, participants' suggestions might be contradictory. For example, a group who assumes Alex is from the United States might be confused as to why another group has put so much emphasis on Alex being an international student when identifying solutions. It is our observation that participants do not often voice this confusion to the group; thus, it is useful for facilitators to point out instances when participants look confused or unsure in order to name the assumptions that are being made. Some questions that can prompt participants to reflect on the assumptions they made would be to ask, "How many of you assumed Alex was a woman? Why or why not?" or "How many of you assumed Alex needed to work part-time in order to afford to attend college? Why or why not?" Follow up questions could include, "How might these assumptions influence your reasoning and responses to Alex in this scenario?"

### ***Assigning Groups***

Participants do not know going into the activity that each group has a slightly different Alex. As participants discuss their rationales for their

responses to Alex based on the given scenario, differences among demographic markers should become obvious, especially as facilitators probe for more information. This reveal should prompt important participant reflection and can stimulate good discussion.

To ensure that this activity goes smoothly, there are some logistical points that we encourage you to consider. First, to prevent the reveal from occurring too early, all partners in small groups should receive the same scenario. Second, to ensure that participants notice the demographic marker differences, it can be useful for the facilitator(s) to know the Alex that each group is working with. Knowing the demographic markers of Alex allows a facilitator to prompt the group about Alex's markers without spoiling the natural reveal.

One technique for managing these logistics is to assign each Alex a sticky note color. The facilitator should place the sticky notes on tables or desks available to participants. When the facilitator hands out the Alex scenarios, she should consult her sticky note chart. Participants should be instructed to pair up with others at a desk with the same color sticky note, under the guise that the sticky notes help with group assignments. Together, the sticky notes allow facilitators to ensure participants with the same Alex work together, and the facilitator can help emphasize the differences between Alexes during discussion. While it is not necessary to know which Alex each group is working with, it can be useful in making the reveal more conspicuous. This method works particularly well if there is only one facilitator of the session. As another option, if there are multiple facilitators that could pass out the worksheets, every facilitator could be assigned to a subset of scenarios. Before handing out the worksheets, the facilitators can first confirm which pairs plan on working together after first working independently. In this way, keeping track of three scenarios as opposed to six or more, while not making it obvious that each group is being given a different worksheet, becomes much more manageable.

### ***Implicit Bias Research Review (15 Minutes)***

At this point in the session, participants should start to realize that various assumptions about students can influence how we approach different classroom scenarios. Of course, some participants may still be skeptical about the problems of holding particular assumptions about students, or they may not be ready to admit that they make faulty negative assumptions about groups of students. In either case, it is important to turn to the evidence-based research demonstrating the detrimental effects implicit biases play in educational settings.

Facilitators should review the literature on unconscious biases, including some of the research we presented in our introduction regarding the relationship between instructor biases and student outcomes, as well as the Hinton (2017) review on implicit stereotypes. Next, facilitators should review teaching strategies to mitigate the negative effects of bias on student outcomes. A discussion of these strategies is beyond the scope of this article, but we list some examples below:

- employing universal design for learning
- using active learning techniques
- fostering a growth mindset
- organizing formal study groups
- teaching study skills
- using rubrics
- grading assessments without names
- including multiple forms of assessment
- including no- or low-stakes assessments
- including multiple examples, especially if using culturally specific examples
- getting to know students using surveys and games



### **Activity Part Two (7 Minutes)**

After participants understand the connection between instructor bias and student outcomes and have been given concrete techniques for mitigating bias, facilitators can pass out the Part Two worksheet questions. Participants can spend approximately 7 minutes reflecting on their own before they pair up with a partner to discuss. Again, the prompt used in Scenario 1 is reflected below but should be updated based on the scenario chosen by the facilitator and whether participants are TAs or instructors of record.

5. Later, Alex tells you that they are struggling to feel like they belong in your class. How would you respond?
6. As the due date for the next assignment approaches, how might you follow up with Alex?
7. Consider the next time you teach this course. What strategies will you employ from the beginning of the course to help all students, including Alex?

### **Part Two Discussion (15 Minutes)**

Participants can spend approximately 10 minutes sharing their responses with a partner. This will allow them to hear from their colleagues various techniques for mitigating the effects of bias that they may not have considered. Facilitators can decide whether pairs should take about 5 to 10 minutes to share out in some fashion to the larger group, or perhaps they can share their responses to another pair of participants. Ultimately, participants should offer up some of the bias-reducing suggestions that appealed to them during the review of implicit bias research. Additionally, participants might also share additional strategies from when they were a teacher or student that would be relevant and helpful.

### **Assessment of Activity**

After executing this activity on four occasions, we noticed several common reactions and outcomes. First, participants appeared to be more comfortable reflecting with the larger group on how certain demographic markers might influence a student's performance in the class over others. More specifically, participants were comfortable reflecting on what it might be like for a first-generation college student or an international student to be in this particular class and the additional challenges they might face. Yet participants did not voluntarily discuss what it might be like for women or Black students to be taking a STEM course with peers and instructors who are most likely white men or what it must be like for students who need to work part-time in order to offset the costs of attending college.

Second, participants seemed to fixate on Alex being a first-year student and suggested that Alex was struggling to balance extra-curricular activities with getting work done in the class. This, of course, raised a set of assumptions that instructors had about first-year students and their ability to manage their time. Similarly, when generating reasons why Alex may be underperforming, participants overwhelmingly attributed it to Alex not working hard enough, having poor study habits, or simply not prioritizing the class. It should be noted that the institution where these sessions took place is ranked among the top 15 universities in the United States, suggesting that students who are admitted to the school are high-achieving, hard-working, and highly competent students. Yet instructors were quick to suggest that any deficiencies a student faces are because of internal attributes as opposed to external factors. Moreover, instructors in our sessions never considered the role an instructor plays in potentially creating a learning environment that made it challenging for all their students to succeed. We recommend that facilitators of this activity draw out reflections on all the demographic markers provided in the scenarios. They should also be prepared to ask participants to reflect on the assumptions they are making about college students in general

(e.g., they party too much), students in various years in college, and whether it is fair to make only dispositional attributions about the cause of students' performances in a class.

Qualitative feedback received at the end of each session suggested that participants met the workshop's objectives. Specifically, participants indicated that they left with a deeper appreciation for the importance of creating more inclusive learning environments, they plan to include a variety of teaching strategies in their courses to ensure student success from the outset, they wanted to continue to reflect on their own unconscious biases, and they felt that the workshop activities kept them engaged.

In one session, we asked participants to complete evaluation forms about this activity. When asked how much they liked this activity, the average rating from eight participants was 4.63 out of 5. When asked how much thought participants had given to implicit bias in their own classroom, one participant responded, "I don't think I had thought of it in concrete terms of how it would affect my perceptions of my students and motivations behind their behavior." Another reported, "I honestly had not thought much about it. Especially when I get nervous, I don't always explain things the way I intended to or use the words I meant to, which could cause problems without me knowing and is definitely something I need to be aware of moving forward." These responses support the need for increased training and awareness of implicit biases in teacher development programs.

When asked what was useful about this activity, one participant answered, "It was a good exercise to realize that as instructors we often jump to conclusions about students and why they may be doing well or poorly in a class. The question that asked us to think of the different possibilities of why they may not be doing well was illuminating, since it made me think beyond the initial assumptions I had." Another participant responded, "I think it was useful to walk through how we would address the situation and help the student. Sometimes I think professors/teachers assume that the performance of a student is wholly on [the student], and that it's only the professor's job to teach."

When asked how participants would apply what they learned in this activity to their own teaching, one participant answered, "I will be open-minded about what factors may be influencing a student's success, and first evaluate my own teaching before blaming the student." Another participant responded, "I will apply what I learned in my own teaching by trying to be consciously aware of and mitigate my implicit bias during teaching. I also will use what I learned to be intentional with the words I choose when I discuss issues with students to be sure I'm not placing blame on the students and ensuring I'm being self-reflective on my teaching style as well."

Finally, participant responses to the activity questions demonstrated an understanding of the importance of inclusion and mitigating bias in the classroom. When asked what strategies they will employ in the future to help all students, one participant responded, "I would spend more time in the course planning phase thinking about how each aspect of the class may privilege certain students while leaving others feeling excluded."

## **Conclusion**

Given the impact of instructor implicit biases on student success, it is crucial that instructors challenge their own biases. Here we described a professional development activity we developed that promotes reflection on teaching, challenges implicit assumptions, and fosters empathy for students. Part One of this activity serves to surface biases for participants. The Implicit Bias Research Review provides data to further convince instructors that their biases exist and are detrimental to students but that pedagogical strategies exist to help instructors mitigate their biases. Finally, in Part Two, participants apply their new knowledge to the scenario to strengthen their understanding and prompt questions. The large group discussion of this application also communicates that instructors are actively considering and combating their own biases, thus normalizing the effort to be

more inclusive. This activity can be customized to a given field, instructor level, and student population and can be returned to over time to reinforce learning.

In our workshops, some participants enter with a long-standing commitment to inclusion and belonging, while others enter with resistance and doubt, and the majority has a perspective somewhere in between. We have found that participants—no matter where they fall on that spectrum when they enter—leave our workshops with an understanding that they harbor implicit biases and that they are responsible for mitigating their own biases, especially in their classrooms.

## Biographies

**Cait S. Kirby** is a PhD candidate in the Department of Biological Sciences at Vanderbilt University. She is interested in biological questions regarding homeostasis, inheritance, and adaptation. Cait works with the Vanderbilt University Center for Teaching, leading the annual orientation for new graduate student teaching assistants in her department and other pedagogy workshops beyond her department. She is interested in teaching strategies, activities, and materials that promote equity, belonging, and access in STEM classrooms. <https://orcid.org/0000-0003-1563-560X>

**Heather N. Fedesco** is an Assistant Director at the Center for Teaching at Vanderbilt University, where she leads programming to prepare graduate students and postdoctoral scholars to be effective and intentional teachers. Heather has a PhD in Interpersonal Communication from Purdue University and researches the ways in which features of the learning environment, especially instructor connectedness, can influence student motivation. <https://orcid.org/0000-0002-1163-1903>

## References

- Bain, K. (2004). *What the best college teachers do*. Harvard University Press.
- Blair, I. V. (2002). The malleability of automatic stereotypes and prejudice. *Personality and Social Psychology Review*, 6(3), 242–261. [https://doi.org/10.1207/s15327957pspr0603\\_8](https://doi.org/10.1207/s15327957pspr0603_8)
- Carnes, M., Devine, P. G., Isaac, C., Manwell, L. B., Ford, C., & Byars-Winston, A., Fine, E., & Sheridan, J. (2012). Promoting institutional change through bias literacy. *Journal of Diversity in Higher Education*, 5(2), 63–77. <https://doi.org/10.1037/a0028128>
- Carnes, M., Handelsman, J., & Sheridan, J. (2005). Diversity in academic medicine: The stages of change model. *Journal of Women's Health*, 14(6), 471–475. <https://doi.org/10.1089/jwh.2005.14.471>
- Cherng, H.-Y. S. (2017). If they think I can: Teacher bias and youth of color expectations and achievement. *Social Science Research*, 66, 170–186. <https://doi.org/10.1016/j.ssresearch.2017.04.001>
- Collins, N. M. (2008). Stereotype. In F. T. L. Leong (Ed.), *Encyclopedia of Counseling* (pp. 1333–1339). Sage.
- Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology*, 56(1), 5–18. <https://doi.org/10.1037/0022-3514.56.1.5>
- Devine, P. G., Forscher, P. S., Austin, A. J., & Cox, W. T. L. (2012). Long-term reduction in implicit race bias: A prejudice habit-breaking intervention. *Journal of Experimental Social Psychology*, 48(6), 1267–1278. <https://doi.org/10.1016/j.jesp.2012.06.003>
- Devine, P. G., & Monteith, M. J. (1993). The role of discrepancy-associated affect in prejudice reduction. In D. M. Mackie & D. L. Hamilton (Eds.), *Affect, cognition, and stereotyping: Interactive processes in group perception* (pp. 317–344). Academic Press.
- Dortch, D. (2016). The strength from within: A phenomenological study examining the academic self-efficacy of African American women in doctoral studies. *The Journal of Negro Education*, 85(3), 350–364. <https://doi.org/10.7709/jnegroeducation.85.3.0350>
- Dortch, D., & Patel, C. (2017). Black undergraduate women and their sense of belonging in STEM at predominantly white institutions. *NASPA Journal about Women in Higher Education*, 10(2), 202–215. <https://doi.org/10.1080/19407882.2017.1331854>
- Dovidio, J. F., ten Vergert, M., Stewart, T. L., Gaertner, S. L., Johnson, J. D., Esses, V. M., Riek, B. M., & Pearson, A. R. (2004). Perspective and prejudice: Antecedents and mediating mechanisms. *Personality and Social Psychology Bulletin*, 30(12), 1537–1549. <https://doi.org/10.1177/0146167204271177>

- Goodenow, C. (1993). Classroom belonging among early adolescent students: Relationships to motivation and achievement. *The Journal of Early Adolescence*, 13(1), 21–43. <https://doi.org/10.1177/0272431693013001002>
- Goodwin, S. A., Gubin, A., Fiske, S. T., & Yzerbyt, V. Y. (2000). Power can bias impression processes: Stereotyping subordinates by default and by design. *Group Processes and Intergroup Relations*, 3(3), 227–256. <https://doi.org/10.1177/1368430200003003001>
- Hinton, P. (2017). Implicit stereotypes and the predictive brain: Cognition and culture in “biased” person perception. *Palgrave Communications*, 3(1), 1–9. <https://doi.org/10.1057/palcomms.2017.86>
- Howell, J. L., Gaither, S. E., & Ratliff, K. A. (2015). Caught in the middle: Defensive responses to IAT feedback among whites, blacks, and biracial black/whites. *Social Psychological and Personality Science*, 6(4), 373–381. <https://doi.org/10.1177/1948550614561127>
- Howell, J. L., & Ratliff, K. A. (2017). Not your average bigot: The better-than-average effect and defensive responding to Implicit Association Test feedback. *British Journal of Social Psychology*, 56(1), 125–145. <https://doi.org/10.1111/bjso.12168>
- Milkman, K. L., Akinola, M., & Chugh, D. (2015). What happens before? A field experiment exploring how pay and representation differentially shape bias on the pathways into organizations. *Journal of Applied Psychology*, 100(6), 1678–1712. <https://doi.org/10.1037/apl0000022>
- Moss-Racusin, C. A., Dovidio, J. F., Brescoll, V. L., Graham, M. J., & Handelsman, J. (2012). Science faculty’s subtle gender biases favor male students. *Proceedings of the National Academy of Sciences*, 109(41), 16474–16479. <https://doi.org/10.1073/pnas.1211286109>
- Okonofua, J. A., Paunesku, D., & Walton, G. M. (2016). Brief intervention to encourage empathic discipline cuts suspension rates in half among adolescents. *Proceedings of the National Academy of Sciences*, 113(19), 5221–5226. <https://doi.org/10.1073/pnas.1523698113>
- Riegler-Crumb, C., & Humphries, M. (2012). Exploring bias in math teachers’ perceptions of students’ ability by gender and race/ethnicity. *Gender & Society*, 26(2), 290–322. <https://doi.org/10.1177/0891243211434614>
- Strayhorn, T. L. (2012). *College students’ sense of belonging: A key to educational success for all students*. Routledge.
- Tenenbaum, H. R., & Ruck, M. D. (2007). Are teachers’ expectations different for racial minority than for European American students? A meta-analysis. *Journal of Educational Psychology*, 99(2), 253–273. <https://doi.org/10.1037/0022-0663.99.2.253>