

# Teaching Evals: Bias and Tenure

New studies on student evaluations of teaching say a simple intervention can fight gender bias, at least in the short term, and that perceived teaching effectiveness declines after tenure.

By Colleen Flaherty

**S**tudent evaluations of teaching -- which have been shown again and again to be subject to student biases, especially gender bias -- remain as controversial as ever. And two new studies of these evaluations, or SETs, are more fuel for the fire.

The first paper suggests that relatively simple changes to the language used in SETs can make a positive impact in assessments of female professors. Yet the authors warn that if these changes were widely adopted, students (and their biases) might adjust to the new system -- and the positive effect for female professors might wear off.

A second study finds that professors are seen by students as better teachers before they earn tenure. The authors say that this is not a reason to do away tenure entirely, just that increased job security inside or outside academe may come with decreased "quality of output."

## Mitigating Gender Bias

The bias paper, published in *PLOS ONE*, cites experimental research showing that gender bias accounts for up to a 0.5-point negative effect for women on a five-point scale. And yet, it says, "there are few effective evidence-based tools for mitigating these biases."

What if students were made aware of their potential biases, the authors wondered? While long-term reductions in student biases are beyond a simple intervention, they wrote, it may be possible to limit the immediate problem of biases in SET by "cuing students to be

aware of their biases, providing motivation to not rely on them, and suggesting alternatives to their stereotypes.”

To test their idea, the authors conducted an experiment in pairs of large introductory courses in biology and American politics at Iowa State University last spring. All four sections were taught by white professors, allowing the researchers to eliminate effects from confounding racial biases. One section in each field was taught by a man and the other by a woman.

SETs at Iowa State are conducted online, from a link in students’ email. For each course in the study, students received one of two evaluation formats: the standard department format or the “treatment” evaluation. Students were randomized within courses, not across courses, to receive different evaluation formats so that professors could be compared to themselves, not other professors who may actually be better teachers.

Unlike the standard evaluation, the treatment evaluation included the following language, which the researchers expected would mitigate gender biases:

“ *Student evaluations of teaching play an important role in the review of faculty. Your opinions influence the review of instructors that takes place every year. Iowa State University recognizes that student evaluations of teaching are often influenced by students’ **unconscious** and **unintentional** biases about the race and gender of the instructor. Women and instructors of color are systematically rated lower in their teaching evaluations than white men, even when there are no actual differences in the instruction or in what students have learned.*

*As you fill out the course evaluation please keep this in mind and make an effort to resist stereotypes about professors. Focus on your opinions about the content of the course (the assignments, the textbook, the in-class material) and not unrelated matters (the instructor's appearance).*

Among other questions, every student involved in the study was asked the following about their instructor, on a five-point scale:

- Your overall rating of this instructor is?
- What is your overall rating of the instructor's teaching effectiveness?
- And your overall rating of this course is?

Students were also asked about their gender, as is standard for Iowa State evaluations, allowing the researchers to examine that, as well. The authors guessed, based on existing literature, that male students would be more biased against female instructors than female students would be. The authors controlled for students' expected grades in a course.

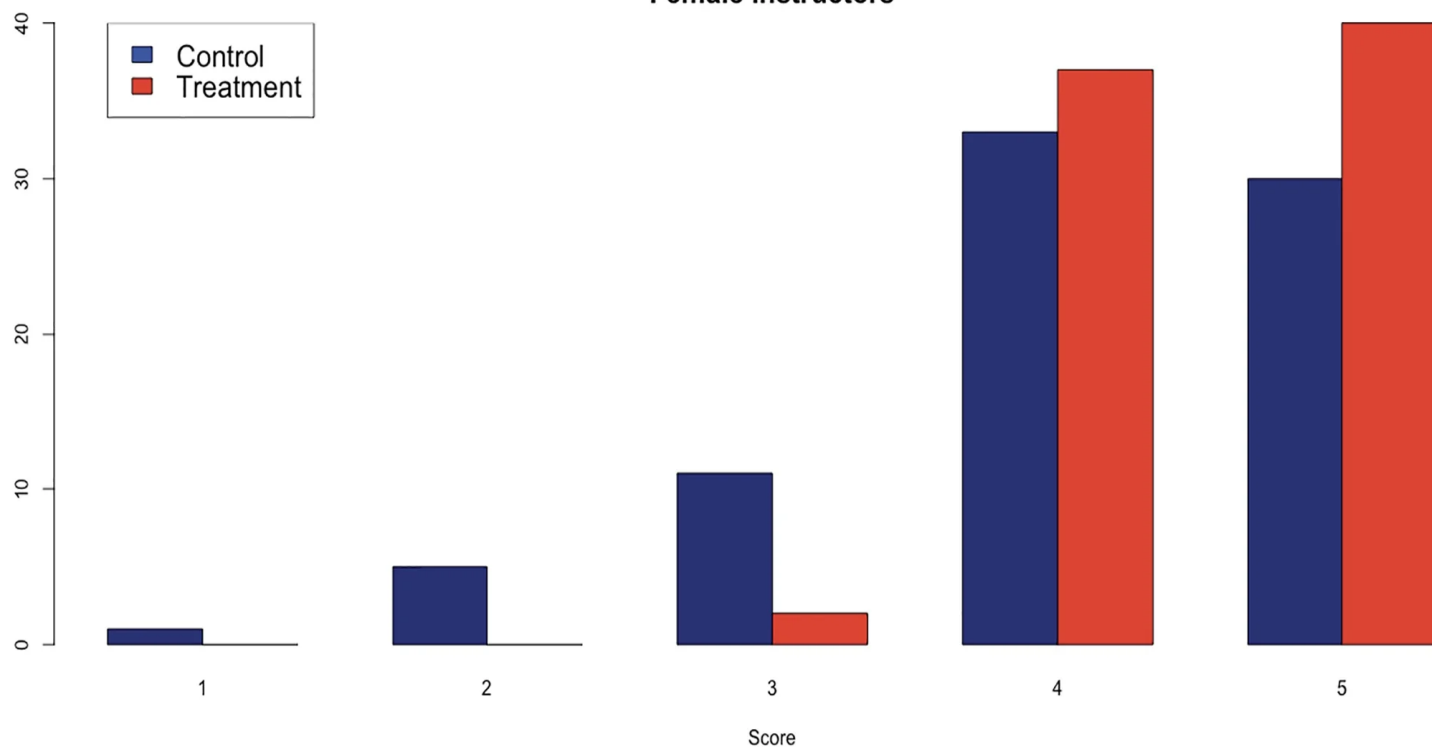
What happened? The language seemed to have a small but significant, positive effect for female faculty members on all three questions -- and no effect for men. The answers to the overall evaluation of teaching were 0.41 points higher in the treatment condition. The difference in the means for the teaching effectiveness question were 0.30 points. For the overall evaluation of the course, the treatment condition was 0.51 points higher than the control.

Regarding the student gender hypothesis, the researchers found that the intervention had no effect on women's evaluations of female professors. There was some evidence of an effect for male students rating female professors on overall rating of the course and the

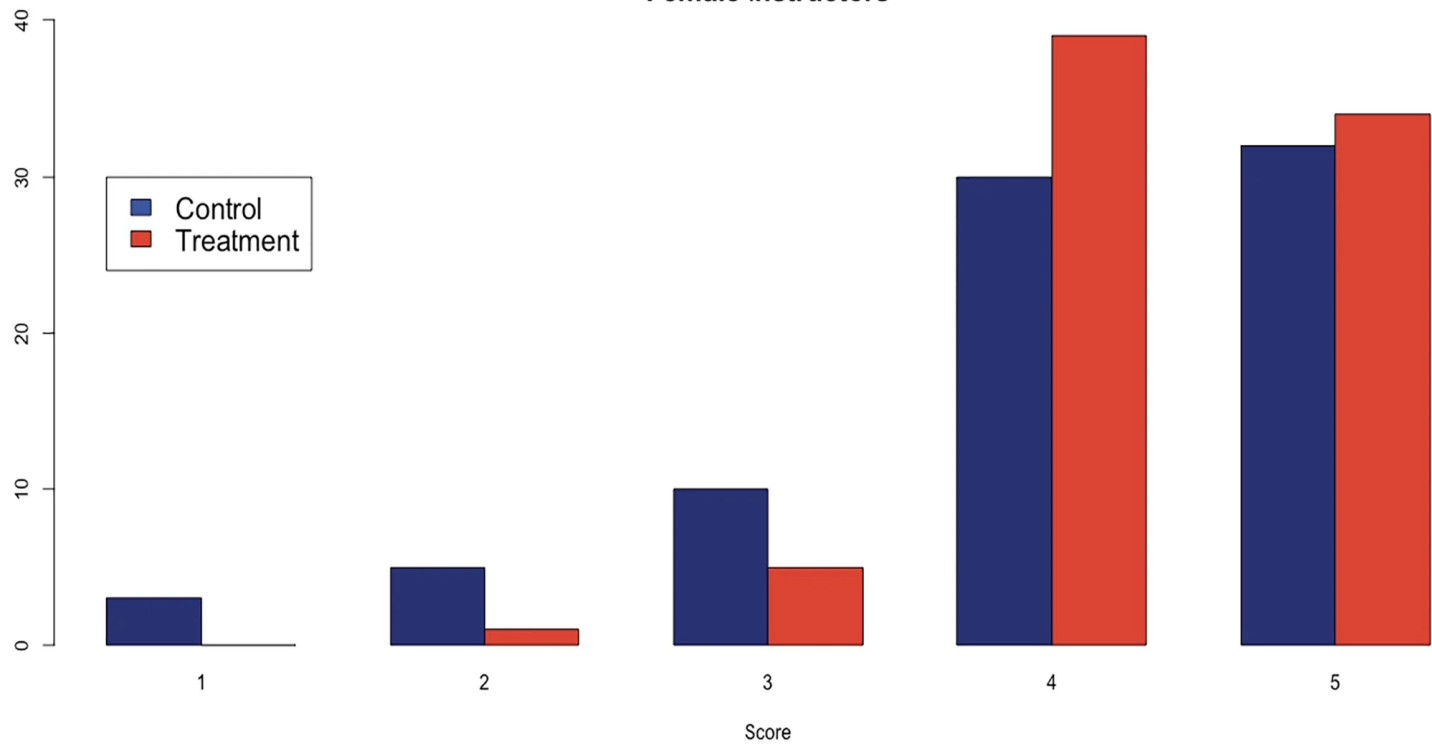
instructor, but not teaching effectiveness. A more advanced analysis reduced this effect, however.

Across courses, the effects of the evaluation language were “substantial in magnitude; as much as half a point on a five-point scale,” the paper says. “This effect is comparable with the effect size due to gender bias found in the literature. There is no evidence of a similar effect on the evaluation of male instructors. Given the outsized role SET play in the evaluation, hiring and promotion of faculty, the possibility of mitigating this amount of possible bias in evaluations is striking.”

Overall Rating by Treatment  
Female Instructors

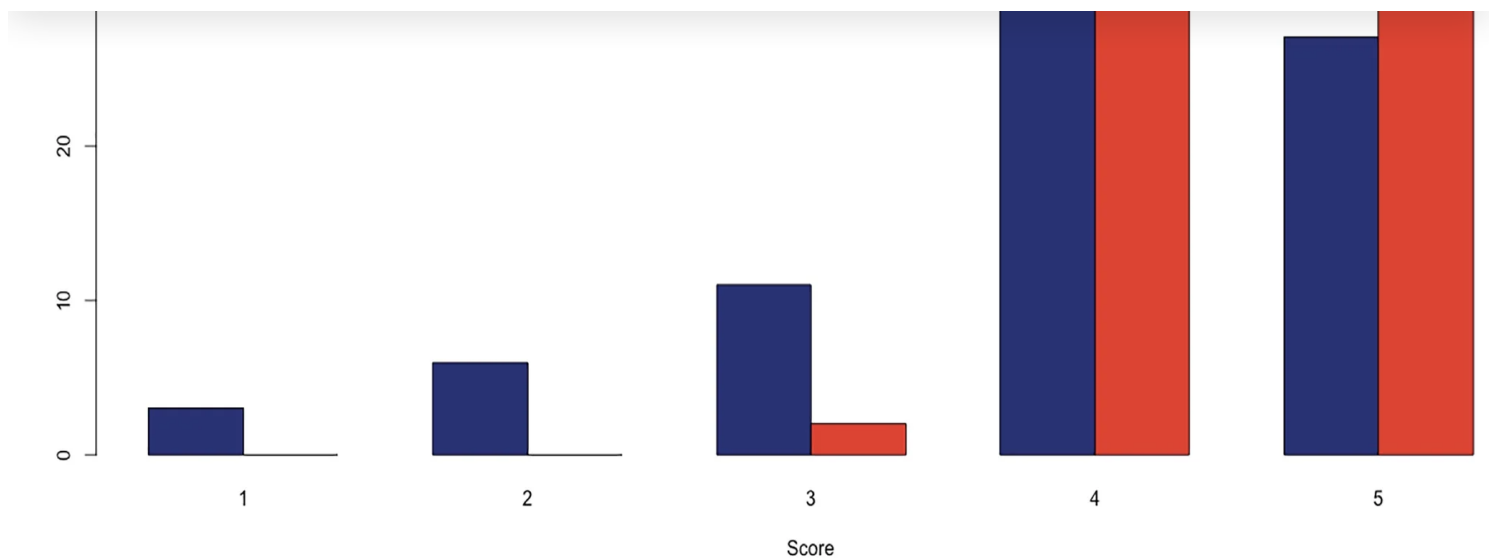


Rating of Teaching Effectiveness by Treatment  
Female Instructors



Overall Rating of Course by Treatment  
Female Instructors





Source: Peterson, PLOS ONE

A note of caution, however. “The implication of these results is that universities should adopt some form of this language to mitigate the gender biases in SET,” the study says, yet “we are somewhat uncertain about the broad applicability of these results.” Why? The effects observed “may be magnified by the unusual nature of the situation for the students,” meaning it’s possible that if an institution saw “widespread adoption of bias language students would be less likely to notice the language and its effects would lessen.”

Further research is needed, therefore, “to determine the most effective way to mitigate gender bias in SET on a large scale.”

## Teaching and Tenure

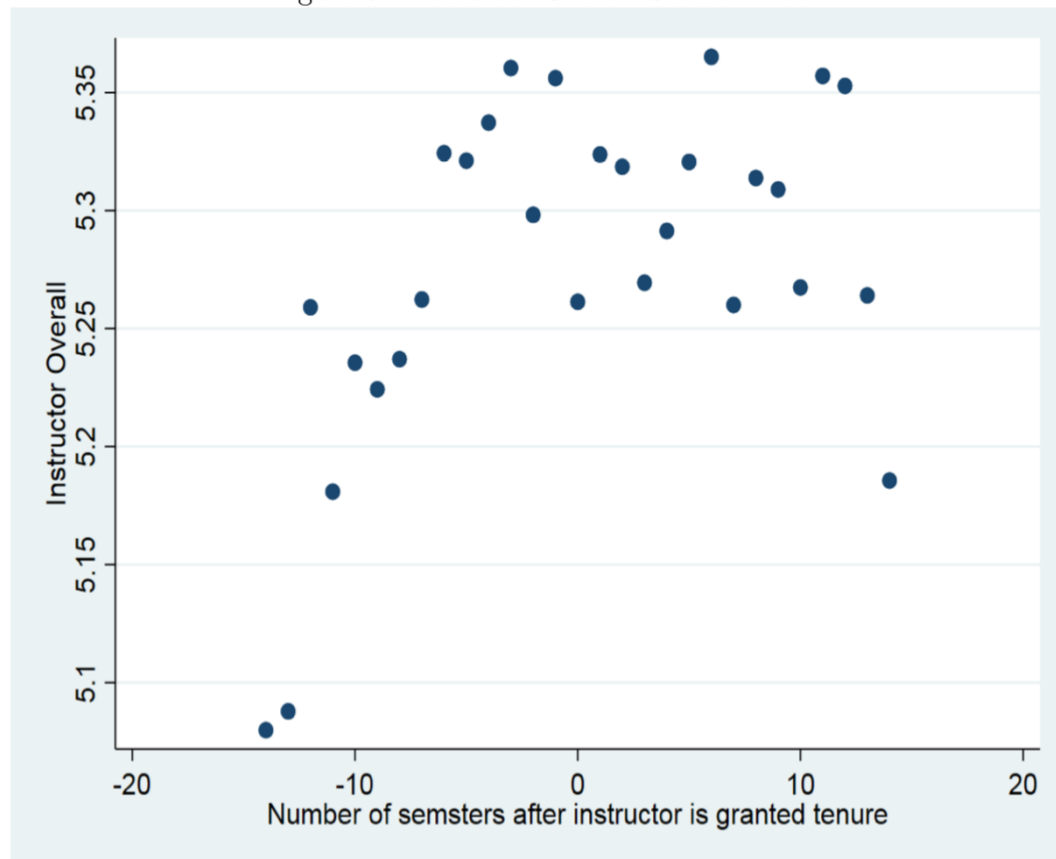
And what about tenure’s effect on teaching -- at least students’ perceptions of it? The [working paper](#) on that topic involves 250 professors granted tenure over 11 years at the University of Colorado at Boulder.

Together, the professors taught more than 6,000 courses to undergraduates and graduate students, and their many SETs of course included proxies for teaching effectiveness -- namely overall ratings for course and instructor.

All such questions are subjective and self-reported by students, the paper notes. But the authors say they looked “within instructors,” pre- and posttenure, “not across instructors,” for consistency.

Results of the instructors’ pre- and posttenure ratings show what the authors call “a small but persistent decrease” in the instructor over all and course over all score, equivalent to up to a sixth of a standard deviation.

Figure 3: Instructor Overall Scatter Plot



The above graph depicts the average Instructor Overall score grouped by each semester relative to a tenure decision. The first semester depicted, 14 semesters before tenure or -14 on the horizontal axis, is the beginning of a standard tenure clock.

*Source: Gourley*

While the results seems to show an “in-class behavioral change” in instructors after tenure, the paper says, there exist alternative explanations.

The authors were most concerned with the possibility that professors teach different courses after tenure. Yet the study's most restrictive specification or step compared the same instructor pretenure and posttenure in the "exact same course, leaving few possible alternative explanations to a tenure mechanism." The results are there are "qualitatively similar to the main set of results: instructors receive worse evaluations after tenure than they did prior."

The researchers also found a statistically significant decrease in an instructor's student-reported availability, instructor effectiveness and how much the student reported to have learned posttenure.

## **What Now?**

David A. M. Peterson, professor of political science at Iowa State and lead author on the gender bias paper, said the biggest takeaway for higher ed is that a small, relatively easy-to-adopt intervention can produce "sizable changes" in evaluations of female faculty members.

At the same time, he said, "The concern we have is that the effects will be much smaller if the change is universally adopted." More generally, "universities absolutely should not make this type of change and then assume that they have fixed the problem," Peterson added.

Like many critics of student evaluations of teaching, Peterson also said SETs probably shouldn't be used in high-stakes personnel decisions. They can be useful for "individual faculty members to get an assessment of their courses," but are "quite problematic for comparing faculty to one another or to some abstract standard."

Asked about possible other factors behind his findings, Patrick Gourley, assistant professor of economics at the University of New Haven and co-author of the posttenure paper, reiterated that the strength of his research design is that it's not comparing scores across professors.

“We even take into account the possibility that professors may teach different courses after gaining tenure. Still, the negative impact exists,” he said, adding, “Why else would professors suddenly change their teaching six to eight years after starting a faculty position?”

Gourley said that it’s possible that professors have a first child or more children as soon as they get tenure and “have less time to devote to teaching.” But even that would be an indirect effect of tenure.

Tenure critics will certainly seize on this research as evidence that tenured professors are “deadwood” -- even if other research on other dimensions of faculty work contradict that.

Asked about how his findings should be interpreted, Gourley said he’s currently working toward tenure himself and that the tenure debate is “complex with many good arguments on both sides.” So his own findings should “should first be kept in context,” in that the “magnitude of our effect is small,” he said.

Gourley also noted that the finding is based on “observation of student-perceived teacher quality,” and not an “objective measure of how much a student is learning.” And while it seems likely that professors work harder on teaching while on the tenure track, given the “large benefit” of getting tenure, he said, “the effect we find represents a reversion to what would have happened had no tenure system existed in the first place.”

In other words, he explained, “perhaps the tenure system makes teachers better at the beginning of their career than they would have been otherwise.” Gourley also noted that service requirements typically increase significantly posttenure, partially counterbalancing the negative effect on teaching.

“Those caveats aside, this does need to be included as a possible cost of the tenure system, and should be viewed as one of many in the list of costs and benefits.”

Gourley found no evidence of gender bias in his study. But he said it wasn't surprising with respect to this particular paper, in that it would imply that students "view the tenure-induced teaching change in professors to be larger in one gender than in the other."

To the contrary, he said, most students aren't aware of who's tenured and who isn't.

## Written By



Colleen Flaherty

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Diversity Equity & Inclusion - Impact & Society Mar /, 2019

# What are the key challenges facing women in academia?

*In the lead up to International Women's Day on Friday March 8th, we posed a series of questions to leading academics. Here [Kimberly A. Houser](#) examines the unconscious biases behind gender imbalances in academia.*

**By Kimberly A. Houser, Assistant Professor, Oklahoma State University**

Despite over half of all PhDs being awarded to women, the percentage of female tenured faculty hovers between 20% - 33% in the EU and US, and falls to as low as 5% in fields like engineering, demonstrating the difficulty women face moving up in academia. In many European countries these numbers are even more discouraging. Women occupy very few senior academic (Grade A) positions in Belgium (15.6%), Germany (17.3%), the United Kingdom (17.5%), France (19.3%), Switzerland (19.3%), and Sweden (23.8%). When women are hired, they are generally funneled into lower-paying non-tenure-track positions. The obstacles for women are present at all stages, including hiring, letters of recommendation, student evaluations, peer reviews, awarding of grants, funding, requests for service, and promotion to tenure. In addition, the pay gap is significant. In the UK, for example, female academics earn 12% less than their male counterparts.



## International Women's Day

Studies consistently demonstrate that women are hampered in their careers by the unconscious biases of decision-makers. This occurs at both the hiring and promotion levels. In one famous study, when names on lab managers' CVs were randomly assigned, faculty ranked the CVs with the male names as 'significantly more competent and hireable' than a female with identical criteria. Even when a woman was chosen, she was offered a lower

salary. Despite the numerous advantages of the presence of female professors - increasing class participation, providing diverse perspectives, acting as a role model for female students, and increasing female student grade performance - women in academia, especially in male-dominated fields, are at a serious disadvantage.

Social scientists have confirmed that humans are unaware of their own prejudices and are seemingly incapable of making unbiased, merit-based decisions. These unconscious biases include affinity bias, confirmation bias, and availability bias, to name a few. The concept of cognitive biases was first introduced by Daniel Kahneman and Amos Tversky, who explain that mental shortcuts result in errors in thinking.

**Affinity bias** occurs when we show a preference for people who are similar to us. This means that when decisions are made by a homogenous group, such as a committee of white male professors, there is a natural preference to hire those like themselves. **Confirmation bias** occurs when a decision-maker only values information that supports their gut instinct. For example, an interviewer will only note characteristics which confirm their initial evaluation of their preferred candidate.

**Availability bias** comes into play when people find it easier to bring to mind information they have viewed recently. Take this famous riddle as an example: *A father and son are in a horrible car crash that kills the dad. The son is rushed to the hospital. Just as he's about to go under the knife, the surgeon says, 'I can't operate—that boy is my son!'* Explain. A study at Boston University found that most participants could not answer because they were not able to easily envision the surgeon as the boy's mother.

Although many explanations have been put forward around the obstacles faced by women in academia, the unconscious biases of decision-makers should not be overlooked. This is a very difficult issue to address because decision-makers are almost always unaware of their own biases. Moreover, research has shown that informing people of their biases may actually result in additional bias.

A solution put forward in the Irish Gender Action Plan 2018-2020 is to create a limited number of women-only professorships. The goal is to ensure that by 2024, 40% of all professor-level positions in academia are held by women. The EU has previously set goals for gender-balanced public positions and board memberships, with consequences for failing to meet such goals ranging from requiring an explanation as to why the goal was not met (such as in Spain) to significant fines (such as in Italy). These types of measures have so far been successful in the EU.

Although a number of democratic countries have adopted gender balancing requirements, the US and UK appear loathe to employ such measures. As it stands, it's possible that with

the [EU's commitment to gender balance](#) we will see additional [voluntary and legislative action](#) to increase the presence of women in academia across that region.

### About

Kimberly A. Houser is an Assistant Professor at Oklahoma State University where she teaches courses in Business Law and the Law of Emerging Technologies. Her research focuses on areas in which the U.S. federal government has not kept up with changes in society and technology, highlighting how current law does not meet the needs of the people. Prior to teaching, Houser practiced law in Chicago and later for an Austin tech start-up.

Houser's research focuses on privacy, big data, artificial intelligence, and unconscious bias/gender diversity issues. Houser made national headlines last fall for her paper examining how the [IRS is breaking privacy and data security laws](#) by data mining citizens' personal information. Her new paper on solving the diversity crisis in the tech industry through the responsible use of artificial intelligence will appear in the [Stanford Technology Law Journal](#). She has presented at various international conferences and events, and authored one of the first commercial books addressing the risks of posting and hosting online, [The Legal Guide to Social Media](#). When Kimberly is not teaching, researching, or talking about how the IRS is stalking us, she loves playing fantasy football.

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## DIVERSITY

# The struggle to keep women in academia

Incremental gains in the number of women in chemistry faculty can't outpace the growing number who choose other careers

by **Linda Wang**, **Andrea Widener**

May 12, 2019 | A version of this story appeared in **Volume 97, Issue 19**

**W**hen Rachel Dorin started graduate school in materials science and engineering at Cornell University, she fully intended to become a professor. "That was my goal when I got there," she says.

But Dorin's career ambitions changed shortly after she started her program. Despite her adviser's telling her that she'd make a great professor and encouraging her to pursue an academic career, Dorin wasn't sure it was the life for her. "After the first year I realized that maybe I didn't want to be a professor," Dorin says. "I was concerned I might be limited in terms of location; there are only a few options, and you get pretty locked down to a school."

Dorin instead discovered that she enjoyed the business aspect of science, and in addition to earning her PhD in materials science and engineering, she minored in business. Today, Dorin is cofounder and CEO of TeraPore Technologies, which she launched after graduating in 2013 to manufacture high-performance filters for biopharmaceutical separations. "I love it," she says. "I get so much energy from being able to work on this technology with a bright and enthusiastic team of people."

Dorin's decision to pursue a career outside academia is not uncommon among chemists in training. In fact, many new graduates in chemistry go into industry or pursue a career away from the lab bench.

But a disproportionate number of women choose a nonacademic career. The problem with that, experts say, is that there aren't enough women serving as role models for the next generation of female faculty.

"If young women and minority students don't see women and minority faculty, they might be discouraged from going that way. It's kind of a vicious cycle," says Mary Jo Ondrechen, a chemistry professor at Northeastern University. And "science and academia need the perspectives of women and minorities. Diverse perspectives mean better science, better education, better institutions, and better culture."

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**Related: Few gains for minority chemistry professors**



Credit: Jack Wilson

Rachel Dorin cofounded TeraPore Technologies after earning her PhD.

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According to the latest survey conducted by the **Open Chemistry Collaborative in Diversity Equity (OXIDE)**, an initiative funded by the Alfred P. Sloan Foundation, the percentage of female faculty is creeping up slowly at the top 50 chemistry departments in the US, as ranked by federal research expenditures. In the 2016–17 academic year, an average of 20% of the roughly 1,500 chemistry faculty were women, up just 1 percentage point from the **data C&EN last reported** on the 2014–15 academic year. The percentage of assistant professors was up 1 percentage point to 27%, while the percentages of associate and full professors stayed flat over the same period. The overall percentage of women faculty was 16% in 2009–10, the first year OXIDE began collecting data on women faculty.

In 2016–17, Northeastern University had the highest percentage of total chemistry faculty who were women, at 32%, or 7 of 22. The University of Southern California’s was the lowest at 8%, or 3 of 37 faculty.

“The overall gender representation of women in chemistry faculties continues to move up, though slower than any of us would like,” says Rigoberto Hernandez, a chemistry professor at Johns Hopkins University and leader of the OXIDE effort. “The time constant for such increases is long because the typical residence time of a professor is well over 20 years, and hence the turnover is long.”

Notably, the proportion of women among assistant professors, 27%, is consistent with the pool of postdoctoral researchers, which was 26% in 2016, according to US National Science Foundation data, suggesting that departments aren’t discriminating in their hiring practices.

However, there is a steep drop from the percentage of female chemistry graduate students—41%—to the percentage of women postdocs. Almost 49% of chemistry undergraduates are women.

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## Uphill battle

**Women are increasing their ranks in chemistry departments, but improvement is slow.**

**ASSISTANT**

**27%**

Up **1 point** from 2014–15

**ASSOCIATE**

**30%**

No increase from 2014–15

**FULL**

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# 15%

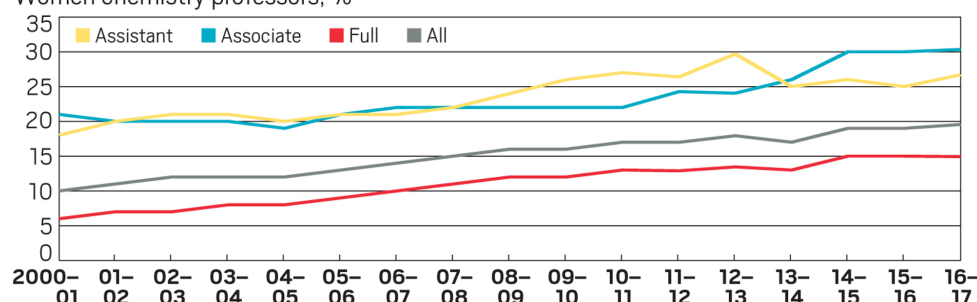
No increase from 2014–15

ALL

# 20%

Up **1 point** from 2014–15

Women chemistry professors, %



Source: Open Chemistry Collaborative in Diversity Equity (OXIDE) surveys, C&EN.

Note: Tenured and tenure-track women chemistry faculty at the top schools identified by the National Science Foundation as having spent the most on chemistry research.

Lifestyle choices may explain why some women don't pursue academic careers. "The tenure process often aligns with when people are starting families," says Erin A. Cech, a sociologist at the University of Michigan who studies career trajectories of new parents in science, technology, engineering, and mathematics. "In addition, there are often not a whole lot of support structures in place in the academy to help parents manage caregiving responsibilities."

Like TeraPore cofounder Dorin, Lucy Sanchez entered graduate school wanting to become a professor. "What really drew me to academia was that you really are your own boss," she says. But she experienced intense anxiety in graduate school at Indiana University Bloomington, she says. "I really lost the joy of my research at the very end. I felt like I wasn't doing this for myself, that I was doing this for somebody else."

Sanchez points out that of the half-dozen or so women that she knew from her graduate program, not one pursued an academic career. "We are all looking for a better work-life balance," she says. "We're reaching our late 20s and we really have never had a break. You either push yourself to keep climbing that mountain or you just have to stop and start your life."

After earning her PhD in December, Sanchez found a job in industry. "Overall, it was a lifestyle choice for me," she says.

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Cynthia Burrows, chair of the Chemistry Department at the University of Utah, says that few of her students—male or female—go on to do a postdoc. "They are taking different types of jobs. I've had people go to law school; a lot of my students go into the biotech industry."

# Women chemists in academia, 2016–17

Northeastern University had the highest percentage of female chemistry faculty in the most recent OXIDE survey.

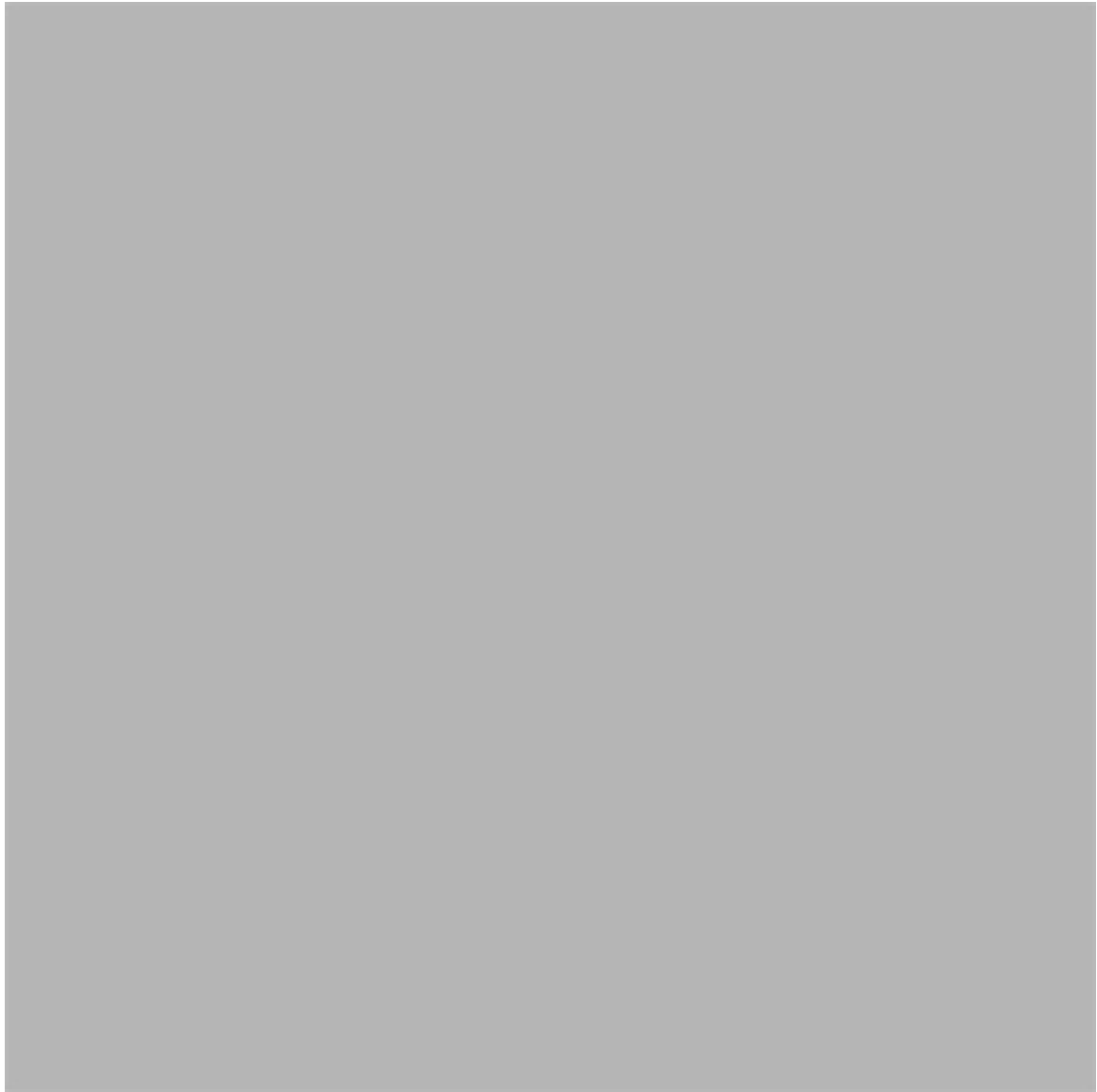
| INSTITUTION                          | ASSISTANT PROFESSORS |       |     | ASSOCIATE PROFESSORS |       |     | FULL PROFESSORS |       |     | ALL FACULTY |       |     |
|--------------------------------------|----------------------|-------|-----|----------------------|-------|-----|-----------------|-------|-----|-------------|-------|-----|
|                                      | TOTAL                | WOMEN | %   | TOTAL                | WOMEN | %   | TOTAL           | WOMEN | %   | TOTAL       | WOMEN | %   |
| Northeastern Univ.                   | 2                    | 1     | 50% | 9                    | 3     | 33% | 11              | 3     | 27% | 22          | 7     | 32% |
| Purdue Univ., West Lafayette         | 10                   | 4     | 40  | 10                   | 4     | 40  | 27              | 6     | 22  | 47          | 14    | 30  |
| Univ. of Utah                        | 7                    | 3     | 43  | 4                    | 2     | 50  | 20              | 4     | 20  | 31          | 9     | 29  |
| Univ. of Michigan, Ann Arbor         | 13                   | 7     | 54  | 3                    | 0     | 0   | 27              | 5     | 19  | 43          | 12    | 28  |
| Univ. of Massachusetts, Amherst      | 6                    | 3     | 50  | 3                    | 2     | 67  | 13              | 1     | 8   | 22          | 6     | 27  |
| Univ. of California, Los Angeles     | 5                    | 1     | 20  | 7                    | 2     | 29  | 35              | 9     | 26  | 47          | 12    | 26  |
| Univ. of California, Irvine          | 7                    | 2     | 29  | 9                    | 6     | 67  | 36              | 5     | 14  | 52          | 13    | 25  |
| Univ. of Illinois, Urbana-Champaign  | 8                    | 3     | 38  | 1                    | 0     | 0   | 27              | 6     | 22  | 36          | 9     | 25  |
| Harvard Univ.                        | 3                    | 2     | 67  | 1                    | 1     | 100 | 17              | 2     | 12  | 21          | 5     | 24  |
| Univ. of California, Davis           | 11                   | 4     | 36  | 5                    | 2     | 40  | 31              | 5     | 16  | 47          | 11    | 23  |
| Ohio State Univ., Columbus           | 10                   | 2     | 20  | 7                    | 3     | 43  | 30              | 6     | 20  | 47          | 11    | 23  |
| Univ. of Minnesota, Twin Cities      | 6                    | 1     | 17  | 6                    | 4     | 67  | 27              | 4     | 15  | 39          | 9     | 23  |
| Rutgers Univ., New Brunswick         | 6                    | 0     | 0   | 4                    | 3     | 75  | 12              | 2     | 17  | 22          | 5     | 23  |
| Univ. of Notre Dame                  | 5                    | 2     | 40  | 7                    | 1     | 14  | 24              | 5     | 21  | 36          | 8     | 22  |
| Univ. of Kansas                      | 4                    | 0     | 0   | 10                   | 3     | 30  | 14              | 3     | 21  | 28          | 6     | 21  |
| Univ. of North Carolina, Chapel Hill | 12                   | 4     | 33  | 5                    | 1     | 20  | 25              | 4     | 16  | 42          | 9     | 21  |
| Univ. of Oregon                      | 4                    | 1     | 25  | 4                    | 1     | 25  | 16              | 3     | 19  | 24          | 5     | 21  |
| Univ. of Florida                     | 3                    | 1     | 33  | 11                   | 3     | 27  | 20              | 3     | 15  | 34          | 7     | 21  |
| Stony Brook Univ.                    | 7                    | 1     | 14  | 7                    | 2     | 29  | 21              | 4     | 19  | 35          | 7     | 20  |
| Univ. of Arizona                     | 6                    | 3     | 50  | 6                    | 2     | 33  | 23              | 2     | 9   | 35          | 7     | 20  |
| Univ. of California, San Diego       | 9                    | 2     | 22  | 12                   | 2     | 17  | 29              | 6     | 21  | 50          | 10    | 20  |
| Univ. of Southern Mississippi        | 5                    | 1     | 20  | 3                    | 0     | 0   | 2               | 1     | 50  | 10          | 2     | 20  |
| Vanderbilt Univ.                     | 4                    | 2     | 50  | 1                    | 1     | 100 | 15              | 1     | 7   | 20          | 4     | 20  |
| California Inst. of Tech.            | 2                    | 0     | 0   | 0                    | 0     | 0   | 36              | 7     | 19  | 38          | 7     | 18  |
| Univ. of Pittsburgh, Pittsburgh      | 8                    | 2     | 25  | 9                    | 3     | 33  | 16              | 1     | 6   | 33          | 6     | 18  |
| Univ. of Washington, Seattle         | 11                   | 2     | 18  | 6                    | 1     | 17  | 22              | 4     | 18  | 39          | 7     | 18  |
| Arizona State Univ.                  | 14                   | 0     | 0   | 7                    | 4     | 57  | 30              | 5     | 17  | 51          | 9     | 18  |
| Georgia Inst. of Tech., Atlanta      | 6                    | 2     | 33  | 8                    | 3     | 38  | 21              | 1     | 5   | 35          | 6     | 17  |
| Indiana Univ., Bloomington           | 5                    | 2     | 40  | 8                    | 1     | 13  | 22              | 3     | 14  | 35          | 6     | 17  |
| Massachusetts Inst. of Tech.         | 7                    | 1     | 14  | 6                    | 2     | 33  | 17              | 2     | 12  | 30          | 5     | 17  |
| Northwestern Univ.                   | 5                    | 2     | 40  | 1                    | 0     | 0   | 23              | 3     | 13  | 29          | 5     | 17  |
| Univ. at Buffalo                     | 7                    | 1     | 14  | 2                    | 0     | 0   | 20              | 4     | 20  | 29          | 5     | 17  |
| Princeton Univ.                      | 6                    | 1     | 17  | 2                    | 2     | 100 | 17              | 1     | 6   | 25          | 4     | 16  |
| Univ. of California, Berkeley        | 9                    | 3     | 33  | 1                    | 1     | 100 | 35              | 3     | 9   | 45          | 7     | 16  |
| Cornell Univ., Ithaca                | 8                    | 2     | 25  | 1                    | 0     | 0   | 17              | 2     | 12  | 26          | 4     | 15  |
| Texas A&M Univ., College Station     | 5                    | 0     | 0   | 4                    | 1     | 25  | 31              | 5     | 16  | 40          | 6     | 15  |
| Univ. of Texas, Austin               | 5                    | 2     | 40  | 2                    | 1     | 50  | 19              | 1     | 5   | 26          | 4     | 15  |
| Emory Univ.                          | 4                    | 2     | 50  | 4                    | 1     | 25  | 14              | 0     | 0   | 22          | 3     | 14  |
| Pennsylvania State Univ., Univ. Park | 7                    | 2     | 29  | 9                    | 0     | 0   | 21              | 3     | 14  | 37          | 5     | 14  |
| Univ. of Wisconsin, Madison          | 2                    | 0     | 0   | 5                    | 1     | 20  | 28              | 4     | 14  | 35          | 5     | 14  |
| Florida State Univ., Tallahassee     | 6                    | 1     | 17  | 7                    | 0     | 0   | 19              | 3     | 16  | 32          | 4     | 13  |
| Johns Hopkins Univ.                  | 5                    | 2     | 40  | 3                    | 1     | 33  | 15              | 0     | 0   | 23          | 3     | 13  |
| Yale Univ.                           | 6                    | 1     | 17  | 0                    | 0     | 0   | 19              | 2     | 11  | 25          | 3     | 12  |
| Univ. of Chicago                     | 8                    | 0     | 0   | 0                    | 0     | 0   | 22              | 3     | 14  | 30          | 3     | 10  |
| Rice Univ.                           | 0                    | 0     | 0   | 6                    | 1     | 17  | 16              | 1     | 6   | 22          | 2     | 9   |
| Univ. of Southern California         | 7                    | 1     | 14  | 8                    | 0     | 0   | 22              | 2     | 9   | 37          | 3     | 8   |
| TOTAL                                | 296                  | 79    | 27% | 234                  | 71    | 30% | 1,004           | 150   | 15% | 1,534       | 300   | 20% |

Source: Open Chemistry Collaborative in Diversity Equity (OXIDE) survey 2016–17.  
Note: Figures are for tenured and tenure-track women chemistry faculty at 46 of the 50 schools identified as having spent the most on chemistry research in fiscal 2014 by the National Science Foundation. When a school has multiple campuses, faculty numbers are for the campus listed. Declined to participate: Univ. of Akron; Univ. of California, San Francisco; Univ. of Colorado, Boulder; Stanford Univ.

At the same time, Burrows does see positive change in terms of increasing the number of female professors. “I was the first tenured woman in this department 24 years ago,” she says. “Now we have 10 women faculty, 7 of whom have tenure. Ten out of 32 is a decent number.”

## Related: Women crack the academic glass ceiling

Burrows says it’s important to make sure faculty members feel valued. “Our department’s pretty good about nominating people for awards, making sure that everyone has career potential, that they’re moving through the ranks in a reasonable way and getting the resources they need.” This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. To learn more, view the following link: [Privacy Policy](#). Creating an environment that makes more women want to be part of the faculty will benefit everyone, says Dontarie Stallings, OXIDE research and program manager. “If we’re bringing these people to do great research, are we putting them in the best position to do great research or are we



Lucy Sanchez got a job in industry after earning her PhD.

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allowing the minutiae of everything else dictate their experience? The departments that are making a substantial change to their environment are the departments that are going to have long-term viability and success,” he says.

**Related: Chemistry Graduate School Enrollment Remains Flat**

OXIDE aims to help departments identify approaches to increasing diversity and inclusion. Every 2 years, OXIDE organizes a National Diversity Equity Workshop, where chairs of chemistry departments around the US come together to discuss strategies to reduce barriers to diversity and inclusion—such as implicit bias—and increase the representation of women and underrepresented minority faculty. OXIDE began **collecting annual data** on women in 2009 and on underrepresented minorities in 2011. C&EN alternates the years it reports the gender and underrepresented minority survey data.

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To make the academic work environment more family friendly, sociologist Cech suggests that chemistry departments look at how they’re scheduling events. “Meetings at 6:00 p.m. are really difficult for parents, and they’re quite exclusionary for that reason,” she says. In addition, when departments hold picnics or other gatherings for faculty, Cech suggests opening such events to family members. “That makes family caregiving more visible and less of something that people feel like they have to keep hidden.”

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At the end of the day, it's important to continue encouraging and enabling those women who want to go into academia, Northeastern's Ondrechen says. "All faculty everywhere can do something by spotting students who might be good candidates in the future and asking, 'Have you thought about a PhD? Have you thought about an academic career? Have you thought about applying for a research fellowship?' Take students aside regardless of race or gender and encourage them."

And if someone chooses a different career path, that's OK, too. "If anyone shows interest in becoming a professor, I certainly encourage them," Burrows says. "But I also think people should think hard about what their lifestyle is and what appeals to them. They see what I do and the number of times I'm here all weekend writing a proposal. And if they don't want to do that, I'm not going to tell them that they should."

**CORRECTION**

This story was updated on May 13, 2019, to fix the coloring in the chart showing percentage of women chemistry professors over time.

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## Diversity at colleges? Not at the front of the classroom

By Jonathan Lai / Staff Writer, [jlai@phillynews.com](mailto:jlai@phillynews.com)

# The Philadelphia Inquirer

Colleges have enrolled increasingly diverse student bodies, reflecting shifts in the nation's demographics and efforts to make higher education more accessible to all. But change has been slow at the faculty level, and increasingly diverse students are being taught by largely white professors.

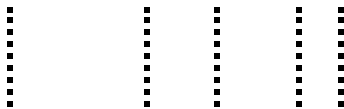
White      Black      Hispanic      Asian      Other

**In Pennsylvania, about three-quarters of students are white.**

Undergraduate enrollement by ethnicity in PA

**Drag the dotted handles on the bar below to guess the breakdown of Pennsylvania's college faculty.**

**Hint: if a section will not grow or shrink, try changing the size of one next to it.**



83%      4%3%      9%      1%

College faculty by ethnicity in PA      **I'm done**

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## Now try New Jersey

White

Black

Hispanic

Asian

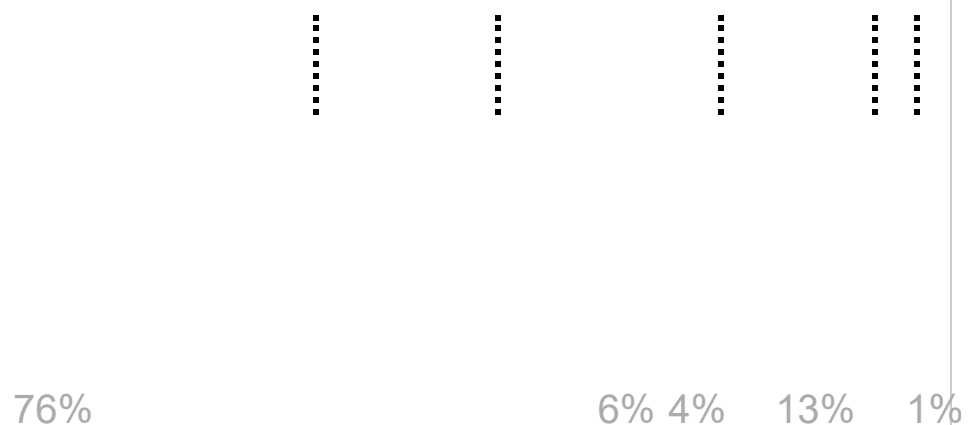
Other

## Fifty-seven percent of students in New Jersey are white.

### Undergraduate enrollement by ethnicity in New Jersey

**Drag the dotted handles on the bar below to guess the breakdown of New Jersey's college faculty.**

**Hint: if a section will not grow or shrink, try changing the size of one next to it.**



## College faculty by ethnicity in NJ

**I'm done**

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**Scroll down to continue to story**

College enrollment is growing more diverse, but once on campus, minority students often have to look hard to find professors who look like them.

Nationally, about 79 percent of full-time college professors are white, teaching an undergraduate population that is about 62 percent white..

The disparity can cause students to ask themselves: "Can I succeed here? Because by inference, if there's nobody there who looks like you, the possibility is that that's because you won't succeed. You don't belong," said Phoebe A. Haddon, the chancellor of Rutgers-Camden and the first black woman in that role.

At four-year colleges in Pennsylvania and New Jersey, about 70 percent of undergraduates with known races and ethnicities were white in the 2013-14 school year, the last year for which comprehensive data are available from the federal Department of Education; 81 percent of professors were white.

Compared with the prior decade, faculty did become more diverse, but not at a pace that kept up with changing student enrollment. The gap has actually grown.

When the people at the front of the classroom are as diverse as those in the seats, students of color see role models, and white students participate in the kind of multicultural world they will enter after graduation, officials said.

"What you want as a student is to be exposed to the broadest range not just of knowledge, but of ideas and perspectives so that you can equip yourself to be a watchful, thoughtful member of society," said JoAnne Epps, the provost of Temple University. "That comes from a diverse range of faculty."

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"Even an institution that was dedicated to the goal isn't going to be able to replace 20 or even 10 percent of its faculty," Epps said. "And they're not all going to be diverse - nor should they - so to make meaningful change takes time."

## Student and Faculty Diversity at Local Colleges

About 27 percent of undergraduates at four-year colleges in Pennsylvania and New Jersey are members of minority or ethnic groups, compared with only 17 percent of faculty, according to federal government figures. The table below shows the racial and ethnic composition of undergraduates and full-time faculty at selected local colleges in the 2013-14 school year, the latest year for which comprehensive data were available.

*\* Other includes Hawaiian, American Indian, and more than one race*

|                            | STUDENT<br>FACULTY | STUDENT<br>FACULTY | STUDENT<br>FACULTY | STUDENT<br>FACULTY | STUDENT<br>FACULTY |
|----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Pennsylvania colleges      | White              | Black              | Hispanic           | Asian              | Other*             |
| Drexel University          | 56% 73%            | 7% 4%              | 6% 2%              | 12% 12%            | 3% 1%              |
| Haverford College          | 66% 79%            | 6% 6%              | 8% 4%              | 7% 11%             | 7% 0%              |
| La Salle University        | 55% 88%            | 19% 3%             | 10% 3%             | 5% 4%              | 5% 1%              |
| Penn State-Main Campus     | 72% 73%            | 4% 4%              | 5% 3%              | 5% 10%             | 2% 1%              |
| University of Pennsylvania | 46% 76%            | 7% 3%              | 9% 3%              | 18% 13%            | 4% 1%              |
| Saint Joseph's University  | 79% 80%            | 7% 3%              | 5% 3%              | 3% 6%              | 2% 1%              |
| Swarthmore College         | 43% 76%            | 6% 5%              | 14% 5%             | 15% 7%             | 8% 0%              |
| Temple University          | 60% 61%            | 13% 5%             | 5% 3%              | 10% 9%             | 3% 1%              |
| Villanova University       | 75% 85%            | 5% 3%              | 7% 3%              | 7% 7%              | 2% 1%              |
| New Jersey colleges        | White              | Black              | Hispanic           | Asian              | Other*             |
| College of New Jersey      | 66% 76%            | 5% 6%              | 11% 4%             | 9% 12%             | 1% 0%              |
| Princeton University       | 47% 74%            | 8% 3%              | 8% 3%              | 20% 9%             | 4% 1%              |
| Rowan University           | 72% 71%            | 8% 6%              | 9% 3%              | 4% 13%             | 3% 2%              |
| Rutgers-Camden             | 56% 58%            | 17% 4%             | 11% 2%             | 9% 10%             | 4% 1%              |
| Rutgers-New Brunswick      | 45% 62%            | 8% 4%              | 12% 2%             | 25% 14%            | 4% 1%              |
| Stockton University        | 74% 73%            | 6% 8%              | 10% 5%             | 5% 10%             | 3% 1%              |

**Note:** Not shown are percentages for nonresident aliens or groups for which race and ethnicity were unknown, which, together, accounted for 11 percent of undergraduates and 7 percent of full-time faculty.

SOURCE: U.S. Department of Education

Staff Graphic

Progress comes in fits and starts, one hire at a time. One result is a cross-generational cycle that is difficult to break: Few students of color become professors, meaning the next generation of students continues to lack the role models, mentors, and visible professors of color.

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professors who looked like him.

"Identifying myself as Hispanic and seeing a professor who has a doctorate and is Hispanic, it encouraged me to follow in his footsteps," said Vergara, who is now pursuing a master's degree in al psychology at NJCU.

Similarly, Ike Ejikeme, 22, of Jersey City, said he had thought about pursuing a doctorate in the past but had largely focused on law school. Then he transferred to Stockton University for its homeland-security master's program.

"I met so many prominent and well-spoken African American professors who have doctorate degrees, and to me that inspired me in my own journey," Ejikeme said.

Professors of color say they love knowing they have changed students' lives. But interviews with nearly two dozen professors, administrators, and faculty made clear that the responsibility is weighty: Mentoring and visibility take a tremendous amount of time and energy.

Christopher Fisher, a history professor at the College of New Jersey, has served on 16 search committees in his 17 years, taught dozens of classes, appeared in countless college photos, and spoken at numerous Black History Month events.

"You're constantly on the go. You become a spectacle, whether you want to or not," Fisher said.

The first years, when he also was in the African American studies department, were particularly hard, Fisher said.

"They didn't really have anyone to guide me, so I had to figure it out on my own while I was leading the department," he said.

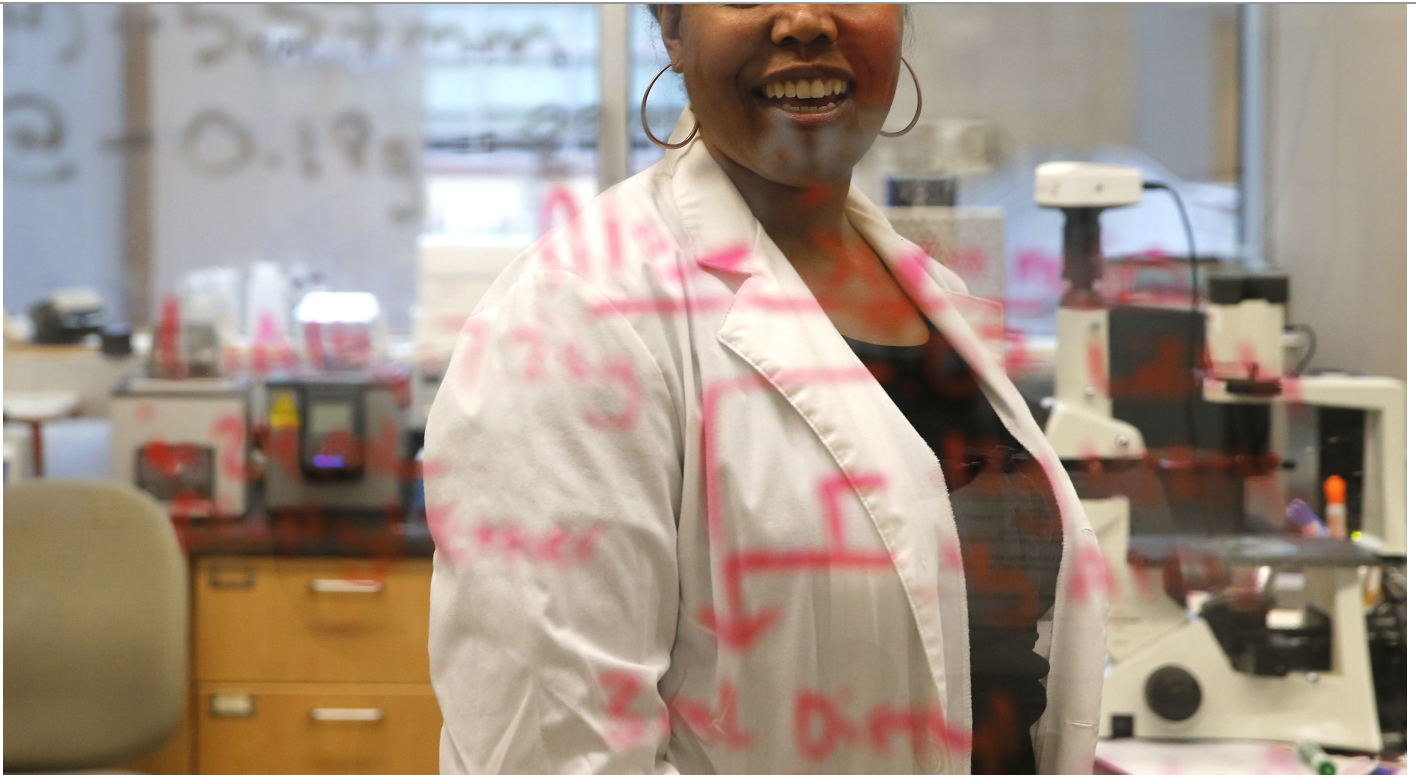
All tenure-track professors feel pressure to say yes when asked to serve outside the classroom, said Tabbetha Dobbins, a Rowan University physics professor.

"Pre-tenure, you do feel pretty vulnerable saying no, and someone may get upset about it, and that person may have a direct bearing on your tenure decision," she said.

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YONG KIM / Staff Photographer

"Pre-tenure, you do feel pretty vulnerable saying no, and someone may get upset about it, and that person may have a direct bearing on your tenure decision," says Tabbetha Dobbins, a Rowan University physics professor.

Professors of color get tapped over and over again as schools aim to diversify committees when hiring new faculty, revising curricula, and examining campus policies.

Of TCNJ's 355 full-time faculty last school year, for example, 20 were black and 16 were Hispanic or Latino. Rowan had 552 full-time faculty last year; 33 were black and 20 were Hispanic.

"You end up sacrificing research because it's not the thing that someone's breathing down your neck about on a daily basis," Dobbins said. "It can be a real frustrating experience."

Professors expressed complicated feelings about having to represent their racial or ethnic groups. Several said they feel the weight of obligation but also welcome the opportunity to bring missing voices to the table.

"I've had some of my colleagues tell me, 'You're doing too much, you have to slow down, you're going to get burned out,' " said Donnetrice C. Allison, a professor of communication and Africana studies at Stockton University. "But in a lot of ways I feel obligated. Because I'm like, if I don't do it, who's going to do it?"

Allison said the work actually increased once she had tenure.

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*MICHAEL BRYANT / Staff Photographer*

Erinn D. Tucker, a tourism and hospitality professor at Temple, says working on issues of diversity and inclusion is part of who she is.

"It's never viewed as a burden because, for me, it's my authentic story, so I can talk very clearly about the subject matter," she said.

Haddon, the Rutgers-Camden head, advises young faculty to focus on their scholarship and learn to say no, so that in the long run, they can earn tenure and "have the impact you should be having."

To even out the distribution of responsibility, faculty - regardless of age, race, or ethnicity - should help one another, said Braulio Muñoz, a sociology professor who has been at Swarthmore for 39 years.

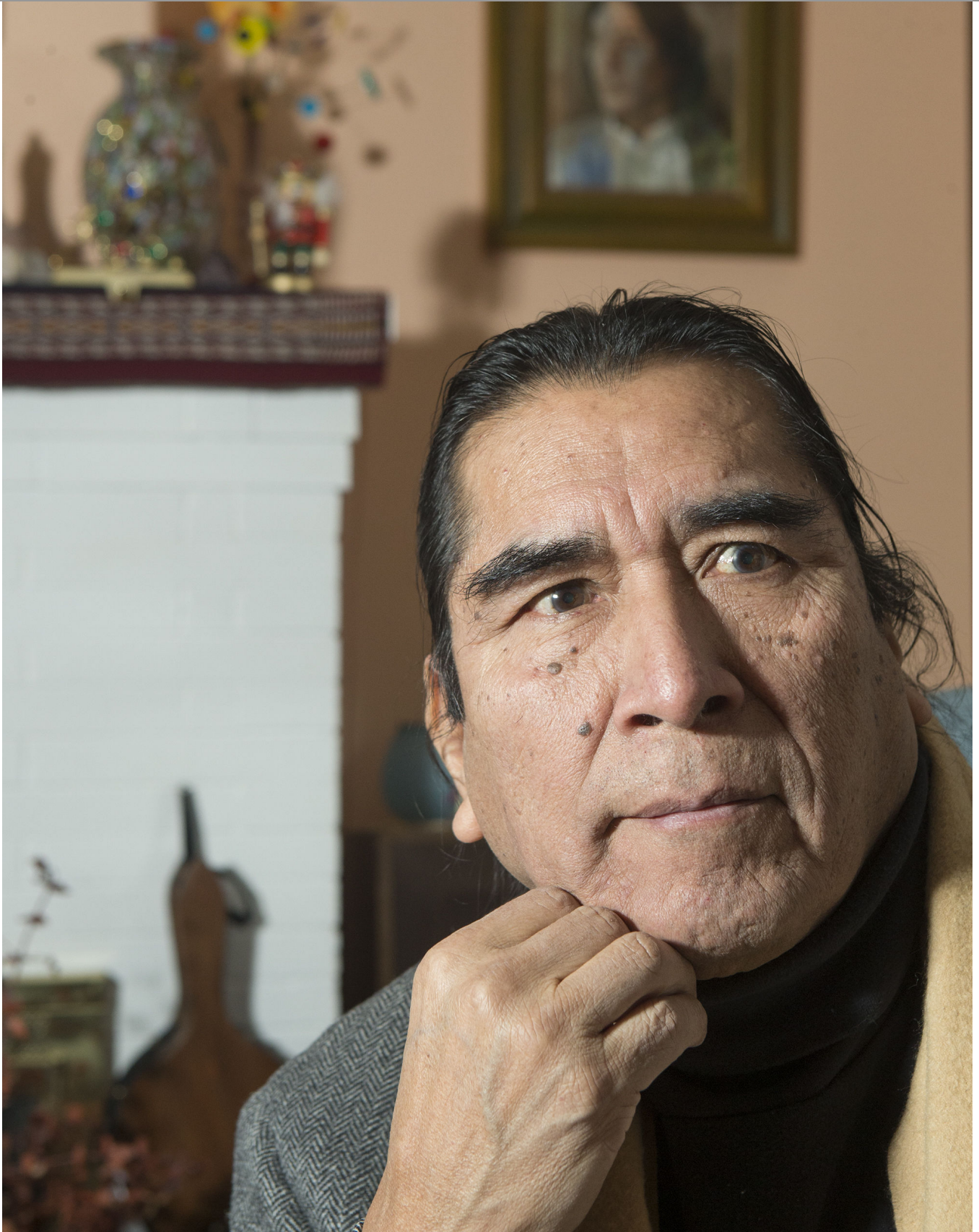
And professors of color can look out for one another, he said.

"Senior faculty oftentimes have to be on more committees in order to prevent younger faculty from getting sucked up," he said.

But, Muñoz said, the only real solution is to hire more faculty of color.

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if it hasn't been as quick as they'd like.

Haddon noted that as she rose from law professor to dean to chancellor, she saw fewer and fewer people like her. Even in some meetings today, she's the only black woman in the room. Still, she said, "I feel a lot better today than I did when I started."

So, professors and administrators said, they'll continue to push for diversity and inclusion - continue to make their voices heard, to be role models for students, to look out for their young colleagues.

"The best way to protect junior faculty of color," Muñoz said, "is to have a lot of them already in place."

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# The five things no one will tell you about why colleges don't hire more faculty of color

*It's time for higher ed to change its ways*

by MARYBETH GASMAN

September 20, 2016

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*"The reason we don't have more faculty of color among college faculty is that we don't want them. We simply don't want them."*

While giving a talk about Minority Serving Institutions at a recent [higher education forum](#), I was asked a question pertaining to the lack of faculty of color at many majority institutions, especially more elite institutions.

My response was frank: "The reason we don't have more faculty of color among college faculty is that we don't want them. We simply don't want them." Those in the audience were surprised by my candor and gave me a round of applause for the honesty.

Given the short amount of time I had on the stage, I couldn't explain the evidence behind my statement. I will do so here. I have been a faculty member since 2000, working at several research universities. In addition, I give talks, conduct research and workshops and do consulting related to diversifying the faculty across the nation. I have learned a lot about faculty recruitment over 16 years and as a result of visiting many colleges and universities.

**Related:** [Colleges' promises to diversify face one challenge: finding black faculty](#)

First, the word 'quality' is used to dismiss people of color who are otherwise competitive for faculty positions. Even those people on search committees that appear to be dedicated to access and equity will point to 'quality' or lack of 'quality' as a reason for not hiring a person of color.

**“The reason we don’t have more faculty of color among college faculty is that we don’t want them. We simply don’t want them.”**

Typically, ‘quality’ means that the person didn’t go to an elite institution for their Ph.D. or wasn’t mentored by a prominent person in the field. What people forget is that attending the elite institutions and being mentored by prominent people is linked to social capital and systemic racism ensures that people of color have less of it.

Second, the most common excuse I hear is ‘there aren’t enough people of color in the faculty pipeline.’ It is accurate that there are fewer people of color in some disciplines such as engineering or physics. However, there are great numbers of Ph.D.’s of color in the humanities and education and we still don’t have great diversity on these faculties. When I hear someone say people of color aren’t in the pipeline, I respond with ‘Why don’t you create the pipeline?’ ‘Why don’t you grow your own?’ Since faculty members are resistant to hiring their own graduates, why not team up with several other institutions that are ‘deemed to be of high quality’ and bring in more Ph.D.s of color from those institutions? If you are in a field with few people of color in the pipeline, why are you working so hard to ‘weed’ them out of undergraduate and Ph.D. programs? Why not encourage, mentor, and support more people of color in your field?

**Related: [The new North-South divide: public higher education](#)**

Third, I have learned that faculty will bend rules, knock down walls, and build bridges to hire those they really want (often white colleagues) but when it comes to hiring faculty of color, they have to ‘play by the rules’ and get angry when any exceptions are made. Let me tell you a secret – exceptions are made for white people constantly in the academy; exceptions are the rule in academe.

Fourth, faculty search committees are part of the problem. They are not trained in recruitment, are rarely diverse in makeup, and are often more interested in hiring people just like them rather than expanding the diversity of their department. They reach out to those they know for recommendations and rely on ads in national publications. And, even when they do receive a diverse group of applicants, often those applicants ‘aren’t the right fit’ for the institution. What is the ‘right fit’? Someone just like you?

Fifth, if majority colleges and universities are truly serious about increasing faculty diversity, why don’t they visit Minority Serving Institutions – institutions with great student and faculty diversity – and ask them how they recruit a diverse faculty. This isn’t hard. The answers are right in front of us. We need the will.

**Related: [What happens when a college recruits black students others consider too risky?](#)**

For those reading this essay, you might be wondering why faculty diversity is important. Your wondering is yet another reason why we don't have a more diverse faculty. Having a diverse faculty – in terms of race, ethnicity, gender, sexuality, religion – adds greatly to the experiences of students in the classroom. It challenges them – given that they are likely not to have had diversity in their K-12 classroom teachers – to think differently about who produces knowledge. It also challenges them to move away from a 'white-centered' approach to one that is inclusive of many different voices and perspectives.

Having a diverse faculty strengthens the faculty and the institution as there is more richness in the curriculum and in conversations taking place on committees and in faculty meetings. A diverse faculty also holds the university accountable in ways that uplift people of color and center issues that are important to the large and growing communities of color across the nation.

Although I have always thought it vital that our faculty be representative of the nation's diversity, we are getting to a point in higher education where increasing faculty diversity is an absolute necessity and crucial to the future of our nation. In 2014, for the first time, the nation's K-12 student population was majority minority. These students are on their way into colleges and universities and we are not prepared for them. Our current faculty lacks expertise in working with students of color and our resistance to diversifying the faculty means that we are not going to be ready any time soon.

I'll close by asking you to think deeply about your role in recruiting and hiring faculty. How often do you use the word 'quality' when talking about increased diversity? Why do you use it? How often do you point to the lack of people of color in the faculty pipeline while doing nothing about the problem?

How many books, articles, or training sessions have you attended on how to recruit faculty of color?

How many times have you reached out to departments with great diversity in your field and asked them how they attract and retain a diverse faculty?

How often do you resist when someone asks you to bend the rules for faculty of color hires but think it's absolutely necessary when considering a white candidate (you know, so you don't lose such a wonderful candidate)?

Rather than getting angry at me for pointing out a problem that most of us are aware of, why don't you change your ways and do something to diversify your department or institution's faculty? I bet you don't, but I sure hope you do.

*Marybeth Gasman is a professor of higher education in the graduate school of education at the University of Pennsylvania, where she directs the Penn Center for Minority Serving Institutions and holds secondary appointments in History, Africana Studies, and the School of Social Policy and Practice.*