

ing style. We do not need to restrict ourselves and put on a professorial demeanor. In fact, that's exactly what we shouldn't do. We shouldn't teach the way Ceci taught that fall and the way he had been teaching for the last twenty years. Let your personality out. Let your enthusiasm out. You obviously went into math because you love it (you certainly didn't do it for the money). Let the students see your love of mathematics.

This is true if you lecture, if you flip your class, if you use active learning or inquiry-based learning. I will always believe that there is no one correct method for teaching mathematics. New ways will come and go, some good, some not so good. I urge you to ignore the people who tell you otherwise. It all depends on who you are and who the students are. Most important is to figure out what works for you.

I remember seeing a lecture by a professor who had won a variety of teaching awards. As I always am, I was curious to see what it was he did that made him so successful in the classroom. He gave a relatively standard lecture, but definitely well organized and clear. Okay, that's fine, but it's not going to win you prizes. There was only one thing he did differently that really stood out. During the entire lecture, he was grinning from ear-to-ear. It was clear for all to see how much he enjoyed the mathematics. He was in his element and everyone in the room could see and feel that. Of course, this doesn't mean that you should lecture with a grin plastered across your face. If it is not naturally you, students can tell, and you end up looking like a raving lunatic.

But we can each find our own ways to get across our continual amazement at the power of mathematics. And by imparting it to our students, we can create the next generation of mathematicians.

References

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Colin Adams

Credits

Author photo is courtesy of Colin Adams.

Thoughts on Helping Students to Feel Included²

In this note I'll say a little bit about how a campus initiative at my institution, Mount Holyoke College, helped me understand issues that make students feel unwelcome in the mathematical community and what I changed as a result.

In the spring of 2017 the college canceled classes for a daylong conference dedicated to working together as a community to listen, brainstorm, and discuss diversity on campus. My colleagues KC Haydon (Psychology), Kate Ballentine (Environmental Studies), and Gary Gillis (Biology and Associate Dean of the Faculty) organized a session to discuss the experience of people of color in STEM courses on campus. Students and faculty broke out in small groups and talked and listened for a sustained amount of time. Responses to several prompts were returned to the organizers on Post-its, and a full group discussion followed.

I learned a lot by listening to the students. For example, it is important to our department that we provide lots of resources for students to get help. We have an evening help system where TAs assigned to specific classes hold nightly sessions where students are encouraged to work together. This is a free resource that was available to all students, but I hadn't realized that it was making some students feel even more isolated and alone. What I heard was that some students went with well-established working groups and other students came by themselves. The large groups tended to attract more TA help than isolated students. Even worse, walking into a room alone and seeing lots of students who already have working relationships was only reinforcing student doubts about whether they truly belonged in the class.

As a consequence of this I made two changes, one at the department level, and one in my own courses. At the department level, we made sure that our TAs are aware of this dynamic and how harmful it can be. We also implemented on-demand individual tutoring sessions for students. The TAs who are offering individual tutoring sessions work with the course instructor to determine times that make sense. Then the student TA sets up appointment slots on a Google calendar that the instructor shares with the class. Students can sign up for these slots, no questions asked. This allows students to get help when they need it without going through the instructor, which may feel intimidating or stigmatizing.

In my own courses I've become much more transparent with students about the pedagogical choices that I am making. For example, I used to do group work partly so that students would meet one another. Now I tell them explicitly that this is one of the reasons I have them work

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in groups. Instead of telling the evening help TAs to invite students who seem isolated to work with others, I now tell my students that if they go to evening help they should be thinking about including students who come in alone to work in their groups and that TAs will remind them to do this.

From the first day I am explicit about how I want everyone to feel included and that we all have to work together to make that happen. Just as with anything else we want students to learn, this bears repeating often. One way that I drive this home in the first few classes is by drawing them into my attempts to learn names. I spend the five minutes before class greeting the students who come early, adding new students to my repertoire as they arrive. Then I make a game of asking the students to try to name all of the people in their row, or the people sitting next to them, or all of the students in another row in the first minute or two of class. I also do group work in the very first class, and make sure to exhort the students to introduce themselves. I have found that they engage with one another more if they work standing up at the boards rather than at tables, and I ask them to rotate who serves as the group scribe. In later weeks, as I stroll around to check in on different groups I give lighthearted “pop quizzes” where I ask them to name everyone in their group to reemphasize that this is still a priority.

Though canceling classes for a full day is not on the table for most of us, a department event that allows faculty to listen to students and better understand the student experience followed by a commitment to make changes could go a long way. We can learn so much by listening to students, and this is something that we can do inexpensively if we set aside some time and make an inviting space. Of course there are some changes, like diversifying the faculty, that will take significant institutional resources and will. However, there are things that we can do to make our classes more inclusive that are more on the order of small tweaks that any of us can implement that can have immediate impact. The conversations around inclusive teaching on my campus have really changed me, and I think they are well worth having.



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Author photo is by Jordan Tirrell.

Teaching at a Community College³

It is a bit strange to think that this is my sixth year teaching at a community college. I am not sure how I feel about that. In some ways, I still feel as if I’ve just started. Each semester is a different experience, even if I’ve taught the same courses many times. In other ways, I feel very experienced. I have notes and lecture schedules prepped for a majority of the math courses offered at my college. One thing that I am sure about, though, is that I am a completely different professor now than I was my first year.

When I was in graduate school, teaching was not as much of a priority for me. I was in a research-oriented environment. My main focuses (and that of my professors and peers) were working on unsolved math problems and publishing and sharing the results. This was, of course, expected, as I was obtaining my mathematics PhD at a university.

My department did require graduate students to take a teaching seminar before we became teaching assistants and instructors, which was helpful for me. However, my teaching experience at the university was extremely different from my current experience at a community college. Many of my students at the university had honed their study skills, were confident in their prerequisite knowledge, and only had to focus on their education. In contrast, students at a community college may not have developed their study skills and mathematical foundations. They also sometimes work full-time jobs (or several part-time jobs) and regularly deal with personal issues that prevent them from being able to focus solely on their education.

Toward the end of graduate school, I realized that I didn’t see myself in a research-focused career. So, I decided to apply to jobs in both industry and academia (mostly at liberal arts colleges that were more focused on teaching). I ended up with job offers in both industry and academia. Since I was always curious if I could survive in industry, I chose industry. However, after just a year, I realized that my true calling was to be in the classroom. I wanted to be focused on teaching, so I applied to community college teaching positions. Six years later, I am still glad that I made the switch.

I recently sat on my first hiring panel, and I realized that I was very lucky to be offered a position the first time that I went through the hiring process. From my experience, I’ve learned that even the same math department can be looking for different qualities in candidates depending on the year and the people on a particular hiring panel.

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