

Juliette Bruce's Teaching Statement

As a graduate student at the University of Wisconsin - Madison I served as a teaching assistant and course coordinator for Calculus I for multiple semesters, the instructor of record for math for early education majors, and the instructor of record for a course providing students from generally under-represented groups additional support during their first college math course. Additionally, for a number of semesters I held a non-traditional teaching assistantship for my role as the organizer of the Madison Math Circle outreach program. My passion for promoting an interest in and excitement for math – especially for people from generally underrepresented groups – led to take on teaching and outreach roles through the *Girls Math Night Out* and the *Wisconsin Directed Reading Program*.

As an instructor I view my role is to be an active guide rather than a passive knowledge presenter. I encourage my students to explore, engage with, and question the course material for themselves. This is not to say I set my students adrift with no guidance, but instead that I try to structure as much of the course around guided group work that gives students opportunities to develop and discuss their understanding and confusions with their fellow students. In addition to encouraging students to take an active role in learning, this format also forces students to learn to vocalize their thought processes and ideas, which further aides the process of learning and understanding.

While I find this active learning approach effective in helping students, it does present challenges to both myself as the instructor and to the students. One of the largest challenges I have found and worked to overcome in my own teaching is managing mistakes. In many ways, the most significant moments during the learning process are not necessarily the moments of success, but instead are the moments of failure. In particular, I have found that the time students learn the most is when they realize something they are doing is incorrect. It is at this moment that students have the ability to recognize errors and gaps in their understanding of a subject and can begin trying to correct them. It is also the moment that as an instructor I can begin to realize what my students are finding difficult and nudge the conversation in such a way as to overcome these hurdles.

Making mistakes is hard, and most students, like most people, would prefer not to make mistakes. With this in mind I think it is crucial to promote an inclusive environment where all students feel comfortable and safe participating and engaging. It is only in such an environment are students willing to let their guard down and be open about what they are confused by and where they are making mistakes.

Creating such an environment can be challenging, however, building upon a discussion I have found that by being honest and creating clear community standards such an environment can be fostered.