

Jason Boynton
Department of Mathematical Sciences
North Dakota State University

Teaching Statement

As a mathematics educator, I have diverse and extensive experience, including lower-division college courses (college algebra, pre-calculus, trigonometry and calculus for non-science majors) and high school courses. Over the last 15 years, I have served many roles—instructor, lecturer, grader, and tutor—as I taught diverse student populations. I have worked with those who were financially, socially, and intellectually elite and those who were challenged with monetary, personal, and educational obstacles. These experiences have engendered in me an enthusiasm for teaching that is equal to my passion for mathematics. My aim is to build on this experience, communicating my expertise via effective and dynamic teaching methods to new student populations.

I chose to study mathematics because it not only challenged but also enthralled me. To me, mathematics is beautiful; it is free of opinion and bias and, if one is willing to agree to a handful of axioms, it is the truth. Further, the compact notation it uses to express ideas creates a beautiful “language.” This language, however, can be intimidating and cryptic to students, which is why being an effective educator is vital.

My passion for my subject informs my teaching style. I am an expressive instructor and a dynamic lecturer. It is my job to bring abstractions alive in the minds and imaginations of my students. I teach with enthusiasm using dramatic gestures and vocal inflections—and a sense of humor, when appropriate—to bring the subject to life and to keep my students engaged so that they are active learners.

Students respond to me as an educator because I can relate to them—to both those who struggle with their studies and those who excel in them. I was not a natural academic; in fact, I counted some failure before I catalogued success. For me, becoming a successful academic was a process. Because I took myself through the process, I am able to help my students. I share my own rough academic beginnings with students and help them through their own difficulties along the way. In this way, I serve as a role model—someone to whom things did not come easily but who mastered the process through perseverance.

I identify where students are having trouble in their own educational processes and address the skills that are elusive to them. Even exceptional students have difficulty making the transition from computational to theoretical mathematics. And here, I help them by modeling the reasoning necessary to make that transition from the computational to the theoretical. For instance, when I was assigned as to teach an undergraduate/graduate abstract algebra course, I observed that students needed guidance in writing a mathematical proof. I modeled for them in sample exercises how to get from the “givens” to the “conclusion.” Then, they applied my approach to the assigned exercises, while I offered guidance when their logic stumbled.

As an instructor, I have empathy for those students who will never be mathematicians. Many students struggle through their mathematical prerequisites

simply in survival mode; they resent the subject because it is an obstacle that stands between them and graduation. With these students, I first endeavor to relieve their anxiety, which inhibits their learning, by adopting the role of a coach and a motivational speaker, rather than one of a judge. The moral support I provide alleviates the anxiety so that they are able to become, first competent and then confident.

The rewards I take from what I do are evident in the amount of time I invest in student education. I make myself available to students, finding exercises that provide the repetitions necessary for them to master a mathematical technique. I am inspired by both the beauty of mathematics and the reward of sharing that beauty— in both its complex challenges and simple truths—with my students.