

Marium Yousuf | Teaching Philosophy

My teaching philosophy is deeply rooted in promoting a positive mindset about learning experience. I hold a great fascination with the work of Carol Dweck, who introduced the categories of fixed and growth mindsets. I never considered myself to be a *good* student. Most of my memories in any classroom involve me being distracted in one way or the other – I was convinced that I grab just enough inside of a classroom to get my mind rolling and learn independently. However, viewing the learning world with the lens of a fixed mindset often led me to quick discouragement and self-doubt on receiving a lower grade or not understanding class material right away. It was not until my sophomore year in college that I started to recognize the importance of possessing a growth mindset and the positive attitude it nurtures towards learning. There were two major turning points for me during higher education that sparked an interest in teaching for me: learning about growth mindset and realizing that traditional classroom lectures are only one type of way to teach a course.

My primary goal as an instructor is to cultivate a classroom environment where students embrace challenges as opportunities for growth, realize that struggling in a course does not reflect inherent limitations, and that learning is more about persistence, resilience, and progress than any innate ability. I design my lectures according to what we have seen before in class and what students are already expected to know about the chapter. I emphasize the learning objectives and provide a context to how we will use the known material and build upon it for the new chapter. I go for the “think first,” mentality. I first provide what we need to know about the chapter as class notes and show an introductory example. Before discussing the main examples, I ask students to attempt the problem on their own and circulate the room to gain an idea where students are lacking. Usually, I get similar questions, which gives me a good picture of what I need to emphasize, and which step of the solutions needs more attention. This way, before I give out the answers, my students have already used their thinking gears and can make mental leaps about the material.

My interest in teaching turned into a passion when I took the introductory and advanced courses in evidence-based STEM teaching. These courses were my first exposure, and no less than an eye-opener, to practices included in an active learning environment and how they differ from the traditional lecture-based classroom settings. The reminders and effects of a growth mindset incorporated into the discussions of active learning really convinced me of the importance of developing it in students. To promote curiosity about the material, I also aim to have the same high expectations for each of my students and ensure that my course content reflects diversity and fosters academic sense of belongingness.

As a mathematician, I am also interested in using research methods to investigate and improve student learning in math classes, where it is common for students to come with varying comfort levels with mathematics. In Spring 2025, I conducted a teaching-as-research project as part of a course through the Center for Integration of Research, Teaching, and Learning (CIRTL) to see if incorporating test-taking strategies improved confidence and ability in a 100-level College Algebra course. I found out that students showed improved confidence and performance after the intervention, which provided them a mental to-do list of how to tackle such assessments, taking away any hesitation or confusion on how to go about problems in the exam. In my future teaching, I plan to practice more of exam-focused teaching approach, while maintaining the integrity of confident student-learning.

My passion for teaching stems from my passion for learning. I consider curiosity a great tool and I firmly believe that with the right attitude I can bring positive changes to student learning. My father gave up on his dreams of graduate education to join his family business and my mother still regretfully talks about her not being educated beyond middle school. However, observing my father make regular trips to our local library and finishing one book after the other, and witnessing my mother’s enthusiasm when she levels up in her English-as-Second-Language courses are great reminders as to why I am where I am and why my ambitions to learn and teach are life-long.