

Wesley R. Perkins – Teaching Statement

My time as a graduate teaching assistant (GTA) at the University of Kansas (KU) has been the most rewarding, yet challenging, experience of my life. It has deepened my ability to empathize with other people in general and my students in particular. I have learned a lot from being an instructor of lower-level mathematics, while simultaneously being a student of upper- and research-level mathematics, and this experience has given me the opportunity to reflect on what successful teaching and mentoring look like at all levels of education. In what follows, I will use anecdotal evidence to illustrate how my career thus far has shaped me and my teaching philosophy.

GTAs are in the somewhat unique position of being a student and an instructor at the same time. This unique position allowed me to observe and participate in the collegiate education system from behind a desk and from the front of a classroom. Through my experience in this double role, I seek to establish a rapport with students and to relieve their stress where I can. Among other things, I talk to students about how to have a healthy work-life balance. Through everyday interactions, I strive to show my students that I care about them and want them to succeed. I want them to feel seen and heard, and I seek to accomplish this by learning their names, validating their questions in the classroom, occasionally talking about life outside of class, and bringing the material down to earth, rather than always talking in the abstract. Overall, I have found that empathetic conversations with students foster a learning environment where students feel safe to learn and struggle, succeed and fail, participate in class, and “get their hands dirty” with the material.

As an educator, my career as a GTA has given me the opportunity to instruct and engage with a diverse group of students in a wide range of settings. This variety of students and settings has grown me as an instructor and has given me perspective on what successful teaching looks like. In the following paragraphs, I will describe some of my core teaching philosophies and how they have been shaped by my time leading lab/recitation sections, teaching “enhanced” sections of Business Calculus I, and coordinating and managing other GTAs for Precalculus.

One of the fundamental lessons I learned from my time as a lab/recitation leader is that learning requires more than lectures. To put it as my old course coordinator did, students need a “guide on the side,” rather than a “sage on a stage,” to help them take ownership of their learning. Indeed, I have found that mathematics students generally benefit from supervised group work where the instructor guides them as they practice the material. Such guided practice gives students the opportunity to make the connections between concepts for themselves, thereby developing their own intuition of the course material.

From my experience as a student, I believe that the principle of “learning requires more than lectures” also applies to higher-level courses. For example, I learned how to teach myself (key to success in research-level mathematics) when my instructors gave me a high bar to reach and used the “big ideas” of a difficult concept to point me in the right direction. I grew in independence as a student when my instructors incentivized self-discovery by setting smaller attainable goals without direction and by giving realistic praise coupled with constructive feedback, as opposed to criticism.

I have been fortunate to twice independently teach an enhanced section of Business Calculus I, wherein I created my own lecture material, interactive group work, and quizzes – the homework and exams were standardized. The enhanced section of Business Calculus I is geared towards a diverse group of academically at-risk students and meets an additional 100 minutes each week (compared

to the regular section). These students typically possess a weaker mathematical background, but a stronger work ethic, than the average student in the regular section. As such, the course is not “remedial” in the sense of covering prerequisite material the other section does not cover; instead, the extra time may be used to incorporate interactive group work activities, work through more examples, and cover the material at a slower pace.

When I taught this course in the fall semester of 2018, it was the first time that I created my own lecture materials and lecture schedule. I did not have much time to build the course from scratch, so I reached out to the GTAs who had taught the course before. They provided me with their old lecture materials, which I used as a template for my own notes and schedule. This helped me manage my time well when teaching a course for the first time. This experience gave me insight into how beneficial it can be to engage with previous instructors when building a course, which is a habit that I plan to maintain in my future career as an educator. Throughout the course, I employed a mixed methodology of “sage on the stage” and “guide on the side,” wherein I lectured for 1-2 days and then had students practice the lessons in group work activities designed to give them a safe place to fail, ask questions, and learn. I am proud to say that my students did remarkably well despite the fact that they were academically at-risk students and were predicted to fail the course in a regular section. In fact, all but one of my students received at least a C in the course, and the sole exception withdrew with a W.

I taught the enhanced section of Business Calculus I again in the fall semester of 2019, which means I was able to take time to improve my approach to the course. In particular, I strove to motivate the material and its purpose earlier in the course in an attempt to help students relate new material back to previous motivations. For example, when I introduced function composition in the second week of class, I emphasized the concept of decomposing a function (i.e. writing a given function h as the composition of two functions f and g). I emphasized this concept because I knew students would struggle with the chain rule if they could not recognize the “outer” and “inner” pieces of a function. By planting the seeds for the chain rule early, I observed significant improvement in my students’ ability to effectively utilize the chain rule (compared to my students from the fall semester of 2018). The idea of motivating both the purpose and utility of material to students throughout a given course has since become a centerpiece of my teaching philosophy.

During the fall semester of 2020, I had the unique opportunity to be a course coordinator for Precalculus. As course coordinator, I sought to ensure that 250 students in 9 different sections, each of which were taught by different GTAs or lecturers, received similar educational experiences. This was accomplished, in part, by creating and maintaining the course content, i.e. lecture notes and videos, written and online homework, quizzes, and common exams. Additionally, I served as both manager and mentor for the 8 GTAs and 1 lecturer who instructed the students in Precalculus.

Moreover, I was the coordinator for Precalculus in the midst of the global pandemic caused by COVID-19. As such, I endeavored to design my course to be adaptable and flexible so that I could easily adjust the course as circumstances surrounding the pandemic evolved. I also wanted to build my class in a way that would accommodate a wide variety of student and instructor needs. To help me accomplish these goals, I took a course (in the summer of 2020) from the University of Kansas Center for Teaching Excellence (KU-CTE) that taught me how to design and teach flexible and online courses that are equitable, inclusive, and provide opportunities for engagement and connection.

Through the KU-CTE course that I took and through the hands-on experience of designing/running Precalculus and managing GTAs/lecturers, I have learned many practical lessons that I will utilize in my future career as an educator. Among other things, my experience as a course coordinator has taught me how to run hybrid/online courses in an inclusive way and manage/coordinate other instructors. I grew in my ability to work with department administration in order to design and run a course that is compatible with department policy and overcome unforeseen obstacles and student complaints. Moreover, I came away with a deeper understanding of the pressures that the department administration and faculty members face. I also worked as part of a team of Assistant Teaching Professors, who were course coordinators for the courses in the Calculus sequence, with the ultimate goal of providing a cohesive approach to instructing courses in the Calculus sequence.

Let me briefly illustrate how I ran my course in the fall semester of 2020 and thereby illustrate some of the practical knowledge I have gained. I designed my course to be a “Hybrid Online” course; in other words, the course was designed to be 75-99% online and 1-25% in-person to allow for some in-person interactions while at the same time accommodating students with valid health concerns about meeting in-person during the pandemic. In particular, I set up opportunities for in-person review sessions every two weeks so that students who felt uncomfortable attending an in-person lecture would not miss any new material on those days, while also allowing for adequate monitoring of symptoms following each in-person session. The rest of the course was taught in a synchronous online format to allow real-time interactions with the instructor and fellow students. Each week, I had one of my instructors record and post their lecture videos in order to accommodate for students with unreliable internet connections and/or students who lacked the proper equipment to join live lectures. I introduced weekly Discussion Boards to the course in order to measure student participation and to allow another avenue for students to engage with their instructor and each other. I endeavored to clearly communicate the purpose of each assignment so that students had clear learning objectives as they progressed through the course. In conjunction with the other course coordinators of the Calculus sequence, I developed a method of proctoring quizzes and exams via video calls, i.e. via Zoom. While it was not perfect, it allowed us to give proctored assessments in order to evaluate student learning.

I also encouraged my GTAs and lecturers to be more accommodating and sympathetic since many students (and instructors) are struggling during the pandemic. I sought to extend sympathy and encouragement to my instructors and thereby model what I asked of them. I did my best to connect with students and make them feel seen and heard during a time when isolation can, frankly, be soul-crushing. Lastly, I worked to equip my students with every tool that I could so that they could succeed in my course and beyond.

Altogether, I aspire to establish a pattern of clear and empathetic conversation with my students in an attempt to push them to take ownership of their own learning and to create a safe atmosphere. I seek to plant seeds for the material early in the course so students can apply old material to new concepts, or vice versa, and I strive to regularly utilize a “guide on the side” approach to help students develop their own intuition. I plan to build my courses on the foundations of those who have taught before me (when applicable), and I have learned how to design my classes to be flexible and inclusive. I am passionate about teaching and investing in students, and my experiences have only deepened that passion. While I still have much to learn, I believe that my experience as an instructor will allow me to contribute to the teaching mission at your institution, and I look forward to seeing how my future teaching experiences will challenge me and enrich my skills as an educator.