Statement on Teaching and Mentorship

My main goal in teaching is to create a scientific, engaging, and comfortable atmosphere in which students are presented with relevant and up-to-date information and expected to take an active role in learning. This setting encourages students to think critically and conceptually and to integrate new knowledge into existing perspectives in order to promote broader ways of thinking. Each time I teach, I refine my own ideas about how to engage different audiences in the class material in a way that combines covering the essential material and encouraging the class to play an active role. I take teaching and mentoring seriously as a means to excite students about cognition, perception, neuroscience, and overall, the study of behavior. I see my role as a teacher as having two positive outcomes. First, it provides students with new knowledge and the skills to obtain knowledge inside and outside of psychology. Second, it provides a means for my own growth of ideas to pursue in courses and research in the future.

Undergraduate Teaching

While I have taught a variety of courses at the University of Utah, most of my undergraduate teaching has been in a large lecture format setting for the course Sensation and Perception. I love teaching this class. I have learned that even in a class of about 100 students, it is very possible to have a significant amount of interaction among the students and with me. I begin by asking questions. Since the lecture in this course generally involve topics that are mostly unfamiliar to the students but also relate to their everyday experiences, my questions about new topics often start with an opening, “Does anyone know why/how...?” I give many demonstrations and try to read the expressions on the students’ faces to see if the idea is getting across to them. I also test the students differently than most large-section classes. I ask short-answer questions that require synthesis of material rather than memorization. I ask students to draw pictures, give examples, or interpret information given. The tests are challenging, but at the same time, I prepare them with review questions and focused areas to study. I have more recently added in “research days” where I highlight research from my own lab in class and then have the students do relevant activities leading up to submission of short papers on their experiences. My hope is that the students finish the course with a greater knowledge of sensory systems and cognitive processing than they started with, but more importantly, I aim to broaden their scope of topics that are “psychology” and for them to be excited about this level of analysis of the functioning of organisms.

Our department now offers an increasing number of undergraduate courses online, particularly with a hybrid format of providing videos of faculty lectures to a separate section of online students. Essentially, students get the benefit of the lecture but the flexibility of watching it when they want to. While this format has advantages and is appealing for many students, there are also many new challenges to face as a teacher to engage the students effectively. Students need to feel connected to each other and to me. Most recently, I worked with an Instructional Designer at the Teaching and Learning Technologies Center to develop a stand-alone online version of Sensation and Perception. This made me see the intense amount of work needed to create an effective online course, but I’m very happy with the result and currently teaching a section with 97 students enrolled this semester (Spring 2018). I am continually learning more about the advances in the interactive capabilities of online course formats, and it is exciting to me to try to develop creative approaches to keeping students as engaged online as they would be in person.
Graduate Teaching

Teaching graduate classes inherently involves smaller class sizes and teaching at a higher conceptual level than undergraduate teaching. I have had the opportunity to teach core graduate courses including Cognitive Neuropsychology and Advanced Human Cognition, CNS Research Methods, as well as several seminars in my areas of interest of Spatial Cognition and Embodied Cognition. Each individual course provides both unique challenges and rewards, but in all of them, I aim to maintain active learning and critical thinking. My courses regularly include weekly “thought-papers” to promote discussion, and research proposals to help the process of merging theoretical ideas with experimental methods. In all graduate courses, I think it is imperative to write. My goal is to improve students’ writing through practice, but also for them to use writing to help to think out logical arguments and effectively communicate ideas.

I believe that presenting new research in class is important at all levels of teaching. For example, in teaching Advanced Cognition, my goal was to provide the students with a basic understanding of the concepts as well as to give them an idea of the controversies that exist. I think this method encourages independent thinking as well as the ability to take a large amount of information and form a hypothesis and an argument. Several years ago, I developed a course on CNS Research Methods, with input from area colleagues. The goal of this course is to have students critically analyze the numerous different research methods in cognition and cognitive neuroscience and to really think about and challenge the assumptions that they make in their own research approaches. I have also taught our first-year graduate teaching practicum while I was the Director of Graduate Studies. This course has encouraged me take my own experiences and views on teaching and make them explicit in order to teach others to teach. I realized that just as in a course in a domain-specific area such as cognition or perception, I continue to learn more about content, philosophy, and approaches to teaching by teaching about it.

Mentorship

I greatly value my mentoring relationships with undergraduate, graduate students, and post-docs. My goals in undergraduate student supervision are to provide a basis to the theoretical background of the research projects in my lab, to provide training in experimental methods, and to encourage my students to think, write, and challenge ideas. Many of these students who have pursued independent research projects in my lab have now pursued graduate study in a related research area. With graduate students and post-docs, I believe that mentoring involves finding a balance among guidance, structure, and the encouragement of independence in creativity in research. As in teaching, I emphasize the importance of writing to think. Encouraging and improving writing skills also serves the practical purpose of getting students to write and submit manuscripts for publication. I have supervised eight PhD students who have gone on to post-doctoral, faculty, and industry positions related to their research expertise. Three of these students were computer science graduate students who worked in our interdisciplinary research group, co-advised by my colleague, Bill Thompson. Currently, I am supervising four graduate students at the Masters and PhD levels, all in Psychology, but all are part of the research group that Jeanine Stefanucci, Bill Thompson (Computer Science), Elizabeth Cashdan (Anthropology), and I run collaboratively. I believe strongly in teaching the students the value of interdisciplinary collaboration. The students actively collaborate with each other both within and across disciplines. This leads to generation of new ideas and new projects that would likely not have occurred independently. It also leads to more productivity, opens new opportunities for grant funding, and broadens the scope of students’ knowledge.