

Steven Weisberg – Teaching Statement

As a scientist, my most valuable quality is my curiosity, which has led me to be a driven, dedicated, and knowledgeable researcher. As a teacher and a mentor, my goal is to inspire a new generation to ask and answer important questions about the world around them. While I do not expect every student I teach to become a scientist, I believe that it's important for everyone to acquire knowledge of the principles that drive scientific discovery.

As an undergraduate student, I was inspired by my professor and mentor, Dr. Jeanine Stefanucci, to ask the scientific question that would shape my research for the next decade: "How do humans perceive their environments?" Her engaging teaching style, which consisted most memorably of using visual illusions to introduce topics of perceptual psychology and philosophy, inspired me to question, literally, what I saw. This experience shaped my desire to instill in others the curiosity that drives my research today.

Since beginning my postgraduate studies, I have made educating others an indelible part of my career, seeking out opportunities to teach an undergraduate course in cognitive psychology, guest-lecture in other higher-ed classes, guest-speak to the broader public, write blog posts for lay audiences, and mentor undergraduate students. In each of these pursuits, I strive to inspire my audience to question, in the hopes of igniting *their* curiosity.

Teaching experience:

While in graduate school, I taught a Cognitive Psychology course to a group of fifteen undergraduate students. The smaller class size allowed me to engage my students more deeply than larger lecture-style courses could allow. I organized rounds of debates on topics relevant to cognition, assigning students to the 'pro' or 'con' position of statements like: "Memory is like a computer" and "Human cognition is unique." Using evidence from class discussions and exploration of literature, students mounted and defended informed arguments. In addition to engaging with course content in a more thought-provoking manner, students learned to critically evaluate scientific literature and to communicate what they learned. Perhaps most importantly, students liked the class! In my course evaluations, students commented that the debates were engaging, enjoyable, and exciting.

In teaching contexts with larger class sizes or more technical content, I will still aim to present content in a manner that prompts students to synthesize information and think critically, rather than focus on broad overviews. For example, in a cognitive neuroscience class, I will present the topic of "vision" at multiple levels of analysis, from the retina through Gestalt theory, while explaining along the way how neuroscience techniques and behavioral theory more generally lead to the creation of cognitive models and relate to computational theories. Or, in a statistics class, I will require each student to identify one scientific article of interest, and explain to their peers how statistics were used to provide evidence for a given theory. In that way, I will encourage students to learn statistics as a tool for use in the conduct of science and inference. By emphasizing rational and critical thinking, I will provide students opportunities to develop higher-level thinking skills for real-life application of knowledge.

Steven Weisberg – Teaching Statement

Disseminating science and mentorship:

In addition to teaching at the undergraduate level, I also view public dissemination of science and technical skills as not only an important way to give back to the community, but an opportunity to hone the way I teach. For example, I returned to my high school alma-mater as a guest lecturer in my former Advanced Placement Psychology class to inform high school students of the many possibilities for future applications of their knowledge by presenting my own research on virtual navigation. On another occasion, I was invited to lecture on spatial navigation at a retirement center. I focused on how brain regions that deteriorate during normal aging might lead to navigation-related impairments, and how to adapt. More recently, I was chosen to be Digital Associate Editor of the Psychonomics Society website, which is dedicated to promoting and explaining scientific studies to the public. I view this opportunity as a way to hone my ability to explain complex information, and to make scientific research digestible for a non-scientific audience.

Finally, I have mentored numerous undergraduate and post-bac students in a research context. My goal as a mentor is to involve my mentees in the research process as much as possible, so they can gain practical scientific skills, attain ownership of the research process, and learn to develop the research questions that drive *their* curiosity. Among my recent mentees was a post-bac student, Daniel Badgio, who earned authorship on two publications. Daniel's background in philosophy helped underpin our theory for the cross-modal nature of vibrotactile stimulation in one of those studies.

In conclusion, I view teaching opportunities as part of a larger effort to share my love for psychological science with a new generation. Ever since discovering the questions that inspire me, I've sought to empower students to formulate their own scientific questions, and hope to ignite their curiosity to pursue the answers.