Attending my first seminar class as an international student highlighted how an environment can be non-inclusive when there are no explicit expectations or clear guidelines. In the first two class sessions, I had no idea what was expected of me: how to participate, when to speak up, and what was insightful or meaningful enough to share. I was also constantly afraid of making a mistake and contributing incorrect content. It took me a few classes to understand the unspoken norms and etiquette for participating in seminar discussions. Now, as an instructor, to prevent such situations for my students, I follow three principles in my teaching: **developing students' scientific literacy, creating inclusive and supportive environments for students with explicit expectations, and using evidence-based approaches from learning sciences to foster self-reliance and independence in students**. This is born out of extensive pedagogical training that I have pursued while at Columbia University. I am committed to continuous growth in my practice as that is a key way to serve all students equitably.

Facilitating student's scientific literacy

In this age of easy access to misinformation, scientific literacy is essential for students to understand the world and to **critically evaluate and validate any information they are presented with**. In my teaching, I prioritize students' development of critical thinking skills by introducing them to the scientific research process and how to weigh the evidence for or against a hypothesis thus, teaching them to **spot false claims or biased information**. In Spring 2023, I taught an innovative research methods course titled "How To's of Research". This course provided a practical introduction to the research process for students and prioritizes students' development of critical thinking skills. Students completed readings and watched introductory videos before class and came to class prepared to work on their skills related to the topic. For example, in Week 5 of the course, we discussed various methods that are used in psychology and neuroscience research such as neuroimaging, survey design, and longitudinal methods. In one of the two classes that week, students read a paper and dissected a figure from it in small group[1]. I asked students to discuss the findings and write them in scientific and non-scientific language. I also asked students to discuss the interpretation and implication of these findings. This prompt provided students with an opportunity to communicate scientific research with an accurate, but concise statement of the findings. Importantly though, like any other skill, consistent practice is required to develop and hone one's ability to think critically. Thus, I implement similar prompts and opportunities for critical thinking throughout this course and others that I teach. The success of my efforts to enhance students' scientific literacy is evidenced by the increase in their self-reported skills from pre-course to post-course surveys.

Creating inclusive classroom environments

Guided by my initial challenges as an international student in understanding seminar norms or even American cultural references, I now prioritize creating an inclusive, accessible, and supportive learning environment by making all expectations explicit (Center for Teaching and Learning, 2017). This is key to students' progress and growth; **it allows students to push their boundaries, explore their interests, and learn from their mistakes**. For instance, in my current seminar course - 'Cognition: Lab to Life!' - that I developed to teach as an **instructor of record, I explicitly state the expectations around participation** (Ambrose et al., 2010; Center for Teaching and Learning, 2017). In my syllabus, I provide explicit guidelines by outlining seven different styles of participation, including asking insightful questions, offering thoughtful critiques of the research, or drawing parallels or contrasts between different readings. Additionally, I provide a rubric for participation grades that explicitly details the expectations for different styles of participation. Early in the semester, students complete a self-reflection using the rubric[1], which I then provide feedback on. In fact, in every class I teach, I make expectations for participation explicit. In the class on "How to read a paper" in my How-To's of Research course, students complete an in-class challenge where they dissect a research paper in small groups before I lead the class in a larger discussion. At the beginning of this class, I made it clear that students are required to engage in small group discussions. However, there is no requirement for any student to speak up in the class-wide portion of the discussion. Each group is encouraged to choose a volunteer who would be comfortable summarizing the group's thoughts for the larger discussion. Students always breathe a sigh of relief hearing this and knowing what counts as participation. Setting explicit expectations for students helps foster an

[1] You can find a sample of these course materials on my website: https://manasijkumar.github.io/sample_materials/

inclusive environment supporting all students including those who may be unfamiliar with the norms in the classroom such as international students and first-generation college students.

Fostering students' independence

Inclusive classrooms offer another benefit: they empower students to take ownership of their learning, thereby increasing their motivation and engagement with their education. To motivate my students and help them learn better, I integrate **evidenced-based approaches from my own areas of research on learning, attention, and memory**. When faced with a challenge or problem, I encourage my students (and mentees) to **brainstorm and generate their own solutions instead of giving them the solution outright** (Metcalfe & Kornell 2007). Similarly, when a mentee prepares for a poster or a presentation, I ask them to create a low-stakes outline or draft for it. These techniques benefit trainees in multiple ways: They encourage them to build independence, communicate their ideas, and thus, cultivate confidence in their abilities. Finally, I encourage students to **learn from their mistakes instead of viewing them as failures, thereby taking ownership of their learning** (Metcalfe & Kornell 2007). To encourage this, my teaching approach emphasizes continuous improvement. By dividing complex assignments into smaller, scaffolded tasks, I ensure that students receive timely feedback, allowing them to learn from their mistakes and improve progressively. This iterative process is especially valuable for students from disadvantaged or diverse backgrounds, providing everyone with an equal footing to achieve academic success. For example, in my Fall 2021 research methods course, I had students propose a study on their topic of choice for their final projects. This allowed students to explore their interests and demonstrate their abilities. The assessment structure consisted of a series of scaffolded papers that progressively build on each other: a literature review, the methods section, and a draft of a project proposal before they submit a final project proposal. I provided feedback within a week on each of the sub-components. To ensure that every student incorporated my feedback at each point, I began each class by reviewing the common mistakes from the previous assignment, suggested ways to improve them, and emphasized the importance of incorporating all previous feedback. In the final paper, every student incorporated all my previous feedback, demonstrating that my emphasis on learning from mistakes was successful.

Commitment to continuous growth

I look back on my academic journey as an international student and recognize the unique ways in which my teaching practice has grown and evolved influenced by my own experiences. I understand that my experiences are just one among many others. With this understanding, I have **actively pursued pedagogical training and development**. At Columbia University, I completed the advanced track of the Teaching Development Program by the Center for Teaching and Learning. My commitment to continuous growth is also evident from my **proactive approach to student feedback: I regularly solicit feedback** using anonymous mid-course and end-of-course surveys[2], in addition to the University-led evaluations, to ensure that my teaching practice matches my students' needs and aspirations.

Potential Courses to Teach

My research and my teaching background have prepared me well to teach as an Assistant Professor. I am prepared to teach introductory courses in psychology and neuroscience, lab courses such as research methods, and intermediate courses in cognitive neuroscience (such as those on memory, attention, learning, or human neuroimaging). Additionally, I can teach advanced or upper-level courses such as seminars on the psychology/neuroscience of attention, memory, and aging and a seminar on applied cognition. I aim to shape students into well-rounded scientifically literate adults who can think critically and independently, thus preparing them for any challenges they encounter in the future.

[2] Linked web address points to: https://manasijkumar.github.io/effective_teaching/

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