

Commitment to Diversity

As a woman in science from rural Appalachia, I recognize the importance of diversity and inclusion in the classroom, in the field, and in all professional networks. I have personally experienced obstacles that women and underrepresented minorities face when navigating college and their early careers. I have learned from these experiences and am committed to achieving equality and enhancing diversity in my classroom and beyond so that my students' can grow without being stifled by conscious and unconscious biases.

Students learn best when they feel comfortable to explore. As a sense of exclusion and anxiety quell curiosity and exploration (Spielberger, 1966), my responsibility and pleasure as a teacher is to create a constructive learning environment where students of all backgrounds and perspectives feel included and heard. I accomplish this goal by granting students agency throughout my course (Basu and Barton, 2010), from course design to evaluation.

Approach

My approach to inclusivity is evidence-based, strategic, and proven successful. By implementing best teaching practices when I teach, I maximize student engagement and agency while also allowing for more extensive instructor feedback and constructive peer discussions.

I begin every course I teach by sharing my own story: my journey, my goals, and my expectations. After introducing myself and discussing the course learning goals, I ask students to share one thing they excel at and one thing they struggle with related to course content. My goal with this activity is to create a group sense of strength and vulnerability so that we can experience growth and progress – as well as hurdles – as an empathetic group. Students have reported that they appreciate this community-building and that it encourages them to work together, share their perspectives in group discussions, and ask for help when needed.

I also create course content and evaluation materials in a way that strategically gives students ownership over their learning environment. I often ask students to create their own test questions. By scaffolding this process so that students work from familiar questions (*who/what/when/where*) to unfamiliar exploration- and inquiry-based questions (*why*), students stoke their own curiosity and are empowered to frame their questions from their own perspective, rather than from others presented to them (Justice et al., 2006). The culmination of all questions becomes the students' study guide and my pool for evaluation materials. I am always impressed with the breadth of student perspectives and interests that are shared through this activity and have found it to respectfully provide space for the diversity of students culturally, socially, and cognitively.

My students also have agency in the evaluation process through peer review. First, I teach students how to effectively provide peer reviews by using language that depersonalizes another's work and personalizes their own experience of the work. Through this process, students learn that scientific content is rarely objective and that the best products are created by incorporating and addressing multiple perspectives. This collaborative-learning style of instruction (Bruffee, 1984) encourages students to feel comfortable, heard, and open to

diversity in their own academic work as well as in casual interactions and conversations. In my research statement, I further describe my commitment to constructively aligning communication skills with scientific content (Biggs and Tang, 2011) and evaluating the impact on student career preparedness.

Mentoring and Networking

I recognize that it is important for students to see and connect with scientists that look like them and share their own lived experiences (Packard, 2015), and I actively develop teaching strategies to help students make these valuable connections. With this goal, I strategically choose examples of research and writing that are created by scientists with diverse backgrounds. I also invite guest speakers from communities that are extremely knowledgeable and proactive, though often not represented in scientific literature. For example, when I facilitated an NSF IGERT Program on Ocean Change seminar series, I hosted a local professor who, as a member of the Samish Indian Nation, shared his work on the nexus of people, marine ecology, and Indigenous marine management.

In addition to representing diverse perspectives within my classroom, I thoughtfully introduce my students to mentors beyond the classroom. When I served as the predoctoral instructor for an undergraduate-level science-writing course, I taught students active listening skills before asking them to interview a local marine scientist of their choice and write a researcher profile. To foster conversations that were open and lively, I contacted all the scientists in advance and explained my learning objectives: for the students to see science as a journey and scientists as dynamic people. After these interviews, students were much more enthusiastic about their chosen scientific topic and reported that they felt more included in the scientific community and confident in their career goals.

Outside of formal instruction, outreach is a rewarding and effective way to welcome diverse audiences into science. During my graduate studies, I participated in many outreach events aimed at connecting scientists with K-12 students locally and worldwide. From 2016 to 2018, I served as a guest middle-school teacher in Washington's MESA program to aid in their initiative to improve diversity and retention of traditionally underrepresented students in STEM fields. I have also met with thousands of students from across the world, from Utah to Egypt, via Skype A Scientist, a program that facilitates online conversations between scientists and students. By interacting with students in their own space and valuing their identities, I help make science more familiar and earth science more approachable as a future major (Packard, 2015).

Future Development

As an assistant professor, I will maintain my commitment to diversity and inclusive pedagogy. I will successfully mentor undergraduate students with diverse backgrounds by fostering a constructive and welcoming learning environment. Within both introductory- and upper-level classes, my students will learn through inquiry-based activities that celebrate their diverse perspectives and agency. Furthermore, I look forward to fostering relationships with local scientists and community leaders and bringing their diverse voices into my classes and seminars.

References

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