

## Equity and Diversity Statement

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Brian M. Donovan

I believe that an understanding of equity and diversity requires people to be aware of their social biases towards outgroups and how those biases interact with social privilege to impact the life prospects of non-dominant groups. However, I also value a definition of diversity rooted in intellectual disagreement. Because science progresses through argumentation, ideas need to be debated to expand our knowledge of the world. Of course, it can be difficult to produce a respectful and well-informed debate about social issues, such as the causes of racial or gender inequality in American education, when people are unaware of how their own identity and their assumptions about groups affect their reactions to different solutions to educational inequities. Therefore, I believe that scholars need to be aware of factors that diminish their capacity for reasoned debate with people who see things differently from them. By understanding why people believe what they do and by maintaining an awareness of how privilege affects perspectives on issues of equity and diversity, I think it is possible to advance conversations and actions that will increase the participation of ethnically, linguistically, and gender diverse groups in the system of higher education.

The importance I place on equity and diversity in education have been profoundly shaped by my mother's experiences. My mom was born in a refugee camp in post-war Europe. Like many other refugees, her family came to this country after experiencing persecution during a war, in this case World War II (WWII). My grandmother was kidnapped and then enslaved by Nazis and my grandfather was a POW of the Nazis. When the war was over my mother's family was fortunate enough to be sponsored to move to America, where they resettled on a farm in upstate New York after being quarantined at Ellis Island. Their arrival in America, however, did not put an end to the ethnic persecution they experienced during the war. In addition to learning English in school, my mother faced regular discrimination as a Polish refugee. For example, she was unrightfully accused of stealing a doll by her teacher, and some parents forbade their children to play with her because she was a "dirty refugee". My mother was often ridiculed with jokes about how "dumb the polish are".

My mother's experiences helped me to understand that I was born into privilege because of the sacrifices made by my ancestors. For example, my mother raised her four siblings while my grandparents each worked multiple jobs, worked before and after school on the family farm, and helped to teach my grandparents English. My father was the first in his family to attend college. His father was orphaned at age nine and his mother, who was a French-speaking French-Canadian, grew up poor on a potato farm in Northern Maine. Because I grew up with these stories, I feel an obligation to create a less prejudiced and more equitable society. That obligation drives my motivation to create a more diverse and equitable education system through my research, teaching and service.

As a researcher, I have a strong scholarly track record on issues of equity and diversity in biology education. I have published three empirical manuscripts that explore how racial biases are unintentionally affected by biology education. I have published one theoretical paper that explains what teachers need to know about race in order to reduce racial inequality and another that explores how to design the biology curriculum to accomplish that same goal. Additionally, I have begun a line of federally-funded research that explores how to teach about biological diversity to reduce belief in biological ideas that perpetuate social inequalities between races. That work is currently funded by a 1.3 million-dollar NSF grant and has already resulted in a paper published in *Science Education*. Recently, I have also extended my research into the realm of gender inequity in the sciences, demonstrating through a field experiment recently published in *Science Education* that the belief that men and women differ in science ability because of genetics is affected by the way that the biology curriculum discusses the genetics of sex differences. Issues of equity and diversity in education are not tangentially addressed in my research, rather my research is defined by these ideas.

As a white male educator who has taught in racially diverse urban schools committed to advancing social justice, I am keenly aware of how my social privilege shapes my teaching. Most science teachers are middle class white people like me. And, like me, they tend to set up cultures in

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their classrooms that reflect the norms and attitudes of white middle-class society. Like a fish who is unaware of the water it is in, white teachers tend not to educate students explicitly about the cultural norms of their classroom when they are unaware of them, which in turn, can disadvantage students from non-dominant backgrounds. Consequently, as a teacher educator, I have taught and modeled how to recognize social privilege and account for it through more equitable instruction. A simple example of this in action is that I solicit as many comments from women or students of color during a classroom discussion as I do from men or white students. I also teach about creating racial and gender diverse groups when asking students to engage in group work. And, I require teachers to assign rotating roles to each of those group members, such as note-taker, talker, listener, and reader, in order to create more equitable classroom participation. Finally, I assign educational readings on issues of diversity, inclusivity, and equity, such as work by Lisa Delpit and Gloria Ladson-Billings.

As for K-12 and undergraduate teaching, I have contributed to equity and inclusivity in education many ways. As a middle school science teacher, I designed and taught curricula that introduced students to the history of scientific racism and other curricula that taught how to develop solutions for environmental justice problems. Before attending Stanford and during my time there, I worked in programs seeking to increase students of color in STEM fields and STEM teaching, such as the Gateways to Math and Science program. I also worked as a mentor teacher in the Breakthrough Collaborative, which seeks to increase academic opportunities for underserved students. More recently, I co-advised an undergraduate research assistant as he pursued an honor's thesis that explored how students attributed their understanding of institutional racism to their history education. Currently, I am also a committee member of the equity and social justice initiative at BSCS Science Learning. This initiative seeks to give all learners equitable access to high quality science education opportunities informed by diverse perspective that empower them to understand and confront social and environmental injustices in their personal, professional, and civic lives.