

Diversity Statement

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I am a first-generation native South Korean who grew up all over the world (including Swaziland, South Korea, and the Philippines), but by and large grew up in poverty in the United States. These environments exposed me to diverse cultures (including severe socio-economic disparities), and I learned to adapt to many types of foreign etiquette at an early age. While I have lived in the US since adolescence, this country is incredibly unique and I have continuously adjusted over the past several decades to fit into its culture. This experience, combined with my close friendships with people of diverse backgrounds, has helped me understand the difficulty of attaining higher education in the US while. We must actively help students who struggle in this way for the good of the nation's economy and security [1].

While growing up, I made many friends with people with vastly different socio-economic and cultural backgrounds. Upon reflection, it is especially striking that none of my friends from poor families earned a college degree, even though they are all incredibly intelligent. Those of us who went to the same well-funded high school took very different paths, and it was not simply an issue of interest. They are brilliant people who would have thrived in college and could have greatly advanced their careers on newfound connections. People who could have advanced to positions with greater sway over greater numbers of people, allowing them to guide policies and make decisions benefiting their community, and eventually, their city, state, and country. The world pushed them away from their full potential, and this realization is painful. Indeed, my anecdotal experience aligns with known demographic differences [1] due to a lack of student engagement [2, 3].

I have taken steps to fight against this unfairness for future generations. From the moment I started teaching at the University of Pittsburgh, my attempts at fostering diversity, equity, and inclusion have been implicit but powerful. My teaching style takes elements from expeditionary learning, inquiry-based learning, and differentiated instruction. The active component of my teaching is important because it has been shown to improve student performance in underrepresented groups in STEM [4], while differentiated instruction allows me to tailor my teaching to the individual.

My teaching style has always been driven by this principle of viewing students as individuals and not just as a classroom. My teaching efforts are always **independent of a student's race, gender, or socio-economic background**. I hope to see a world where every student has access to teachers who genuinely want their students learn and succeed, based on the tenets of **diversity, equity, and inclusion**. To this end I have taught as a guest lecturer in science for underrepresented Bangladeshi children at Moder Patshala and the Free Library of Pennsylvania (at U Penn). At Brandeis, I volunteered in science outreach to give neuroscience lectures at Waltham High School. Because the series was canceled due to COVID-19, I have volunteered again as a science lecturer at Waltham High School's lunchtime virtual seminar series.

Finally, I plan to construct a diversity program where students from underprivileged communities are given the opportunity to experience the life of a professor, postdoc, or graduate student. The goal would be to remove any doubts that a career in higher education is beyond reach, and show them their potential for a scientific career.

References

- [1] Jason Jones, Aaron Williams, Shanta Whitaker, Stephanie Yingling, Karen Inkelas, and John Gates. Call to action: Data, diversity, and stem education. *Change: The Magazine of Higher Learning*, 50(2):40–47, 2018.

- [2] Edward C Kokkelenberg and Esha Sinha. Who succeeds in stem studies? an analysis of binghamton university undergraduate students. *Economics of Education Review*, 29(6):935–946, 2010.
- [3] Michael C Savaria and Kristina A Monteiro. A critical discourse analysis of engineering course syllabi and recommendations for increasing engagement among women in stem. *Journal of STEM Education: Innovations and Research*, 18(1), 2017.
- [4] Elli J Theobald, Mariah J Hill, Elisa Tran, Sweta Agrawal, E Nicole Arroyo, Shawn Behling, Nyasha Chambwe, Dianne Laboy Cintrón, Jacob D Cooper, Gideon Dunster, et al. Active learning narrows achievement gaps for underrepresented students in undergraduate science, technology, engineering, and math. *Proceedings of the National Academy of Sciences*, 117(12):6476–6483, 2020.