

## EDI Statement – V.N. Vimal Rao

நான் யார்? [naan jaar] In Tamil, this question famously asked by the Saint Sri Ramana Maharishi simply asks, “Who am I?”. Together with the answer from the Yajur Veda, अहम् ब्रह्मास्मि [aham brahmaasmi], “I am Brahman”, this question fuels my drive to try to see myself in everything and everyone, and share my knowledge to help empower my fellow humans.

These values are perhaps most distinctly manifested in my classroom. In order to see myself in everyone, I must be able to ‘see’ everyone. Thus, an important part of my teaching is focused on teaching students to consider who they are not able to ‘see’. To achieve this, I teach them a critical habit of mind towards inclusivity. For example, every semester, the teaching team for EPSY 5261 Introductory Statistical Methods at the University of Minnesota uses a graph on perceptions of food healthiness from the New York Times’s What’s Going On in This Graph ([October 9, 2017](#)). The scatterplot includes many common foods such as pizza, peanut butter, and granola. It wasn’t until my fourth time teaching with the graph that I realized, prompted by a colleague, that my favorite foods weren’t represented. Where are sambar, gulab jamun, and dosai on the graph? What about eba, mole, or khao swe? Someone looking at the graph wouldn’t be able to ‘see’ me. I want my students to ask “what’s not here?”, or more generally “who’s not here?”, and to use the question to consider issues of power and equity, and to fuel new exposure to the diversity of human culture. This experience led to me creating a series of 5 minute activities to develop students’ habit of mind to ask “what’s not here?” based on the cognitive apprenticeship framework. At the beginning of each class, we examined visualizations together, asking “who’s not here?”, and talking about diversity and inclusivity. By the end of the semester, students were able to recognize gaps in representation, and seek out information in order to create a more inclusive picture. I am currently working with Nina Bailey (UNC Charlotte), who has developed a Critical Statistical Literacy Habits of Mind (CSLHM) framework to plan a research study in which we will evaluate the design and implementation of these activities utilizing design-based research methods. But I am particularly proud of when one group of my students came to me and with smiles on their faces said, “We’re not on that graph either”. They shared their favorite foods with each other and thought about where these items would be on the graph. At that moment, I knew that I had helped them ‘see’ each other.

I deeply value statistics not for its ability to generate ‘truth’ but for its ability to empower individuals, groups, and society at large. To demonstrate the way data can empower individuals and groups, I design activities to promote and center on social justice initiatives, especially to show students the role that statistics can play in social action. For example, I have designed an

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activity to (1) connect statistical ‘randomness’ to socially ‘fair’ selections, (2) model historical statistical analyses used to identify (historical and ongoing) discrimination such as jury selection processes and wage discrimination, (3) highlight the social action taken on the bases of such analyses such as the passage of the Voting Rights Act and the passage of the Equal Pay Act, and (4) have students apply this knowledge and procedure to the analysis of a current issue of their choice. In the coming years, I will build on these activities, and formally study students’ interactions with these activities through a social cognitive theory framework, focusing not only on cognitive outcomes but also the socio-emotional outcomes. My goal is to continue integrating social justice standards and initiatives into statistics courses to show students how the collection and analysis of data can serve to help make a change in the world, and to provide students with the skills to do so and the confidence that such efforts can make a difference.

My experience talking about the diversity of humanity and disparities individuals and groups face have led me to create resources for teachers interested in doing so, as many teachers might feel uncomfortable having such conversations in the classroom. For example, I am working to create activities that focus on non-cisgender individuals, as well as activities that focus on sociocultural issues for residents of India. Additionally, in the 2022 Electronic Conference on Teaching Statistics, I hosted a session on the environmental factors teachers must consider when attempting to incorporate social justice initiatives into their classrooms (see <https://raovnv.github.io/SJinStats/> for more). The attendance and response was so overwhelming that my co-presenters and I are currently preparing a grant proposal to continue creating resources to support teachers interested in incorporating justice initiatives into their classrooms, and to conduct professional development activities to support and empower teachers in the extracurricular aspects of such initiatives.

These efforts exemplify the way my values inform my scholarship, as they permeate my teaching, research, and service. I try to see others ‘as me’, and share my knowledge and skills in statistics to empower them through my teaching, scholarship, service, or simply being kind.