Both of my parents are teachers. Two of my grandparents were teachers. So when I entered the world of pedagogy for the first time, it felt like I was entering the family trade… *your mother and her mother before her …* As I navigated my first experiences in the classroom, I called my mom to ask for advice. She offered me this:

"Students don't learn what teachers teach."

This statement, which on its face seems contradictory, rang very true. It has deeply embedded itself in my teaching philosophy. As a statistics instructor, it became increasingly obvious that my job is not to *tell* students about statistics, it is to *create an environment conducive to learning* statistics. **Teachers are environment curators.**

A global pandemic forced school online in 2020, while simultaneously shining a light on the fundamental flaws of traditional pedagogical practices at UC Berkeley. Why do we assume that we can teach batches of 200 students in a lecture hall? Why is passively listening to lecture considered the primary method for content-delivery? Why is it acceptable to teach a course like upper division statistics without a clear understanding of desired learning outcomes?

When the environment of the classroom was replaced by Zoom, and campus replaced by the dining room table, I could see in my students' eyes a longing for community. One obvious downside of the online classroom was the friction it introduced in creating learning communities. My goal was to **create a sense of community in the classroom.** Vygotsky's Mind In Society (1978) gave me a clear pedagogical interpretation for why this is important.

Vygotsky outlines what he names the "Zone of Proximal Development." This is the space of latent and inchoate skills, not yet mastered. In this zone, students cannot perform tasks on their own, but are able to do so with the *assistance of others*. Engaging tasks in the zone of proximal development, first with assistance and then graduating from assistance, is how students can master tasks.

After surveying the class mid-semester[1], I found that overwhelmingly students that were struggling with the material were trying to take the course alone, without a study group. They never had a chance to engage the zone of proximal development because they were never given the assistance they needed with tasks just outside their current levels of mastery. In response, I instituted a few modifications to the course:

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[1] As an aside, this survey itself helps establish the classroom community by giving students a sense of ownership over the direction of the course. After all, this is their community too.

1) Created a "conceptual" office hour. For students that had fallen behind in the course, the dominance of homework in office hour space was hindering their progress. The conceptual office hour served as an opportunity for students to catch up, and, more importantly, for students that were struggling with similar concepts to see and hear one another.
2) Created a gather.town "lounge", and hosted GSI-assisted "homework parties" there. Zoom spaces are often focused on instructors, and do not facilitate the spontaneous group formation necessary for students to interact with one another. Gather.town is a virtual meeting platform where users control a virtual avatar, who, when coming into contact with other avatars, sees their videos. The creation of this space meant that even after instructors left the homework party, students stayed to help one another. The pieces missing from Zoom office hours are a reminder that Professors and GSIs *cannot* teach 200 individuals. I felt it was our responsibility to facilitate the formation of small groups that could teach one another.
3) Put students directly in contact with one another. I was able to cultivate more personal relationships with a few of my students, which meant I knew which study groups existed, were robust, and had space for more members. I facilitated meetings between students who were too shy to ask for help, and other students that were happy to include them.

Another pedagogical goal of mine can be interpreted through D. W. Winnicott's work, Playing and Reality (1971). In it, he describes that children, through play, are able to experience their full "being" and "true self." Playfulness is accessible only when the child feels safe: well-fed and cared-for by a "good enough" parent.

This is very succinctly described in Tara Westover's wonderful memoir, Educated (2018). While studying at BYU, she runs out of money. Financial and emotional stress reached a boiling point; hunger and anxiety took their toll on her ability to focus and she began to fail her courses. As she describes it, it becomes clear to her that "*curiosity is a privilege.*" It is a privilege afforded to those that feel safe enough (in a broad sense) to engage intellectual pursuits. Phrased differently: curiosity sits near the top of Maslow's hierarchy.

My goal as a teacher is to **create an environment where students can make mistakes**, **and play with the material**. Mathematics and statistics is a language for communicating thought, and students need to practice communicating in that

language[2]. They must speak. And to speak, they must feel safe enough to do so. While I could not single-handedly address all of Maslow's hierarchy[3], I worked towards this goal in a few ways:

1) I made mistakes regularly, and rewarded students for correcting them. The first step towards students not being afraid of making mistakes is to see their mentors err gracefully. I try to remove my ego from my teaching. Teaching with the goal of "environment curation" helps liberate me from the responsibility of always being "correct." It also gives students the opportunity to correct me, which is potentially an incredibly valuable learning experience.
2) I created weekly quizzes that tested mastery of basic conceptual material. This helped create a feeling of safety around my students' feelings of self-worth. The course (and the university as a whole) challenged them in manifold ways, but the quizzes were opportunities for them to check in with material that was well within their grasp.
3) I brought students' personal interests into the classroom. When one of my students revealed that she was interested in pursuing computational biology, I took the opportunity while we were learning linear regression to get her to experience a taste of the connection between the fundamental theorems we were learning and those underlying GWAS. Not just explaining the link, but getting her involved in the discovery and uncovering of that link.

There are many questions that remain unanswered about what pedagogical practices are most effective, and how much effect a single instructor can have. However, I do believe that teaching from a place of compassion, and embodying my role as an environment curator, will drive me to be a better educator.

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[2] It doesn't take having both of your parents be linguists to know that a lecture-based language course will not teach anyone how to speak English.

[3] Arguably, access to the food pantry or technological equity is more impactful than anything I do in my classroom.