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Exploring How We Teach: Lived Experiences, Lessons, and Research about Graduate Instructors by Graduate Instructors

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Exploring how we teach: Lived experiences, lessons, and research about graduate instructors by graduate instructors

EXPLORING HOW WE TEACH: LIVED EXPERIENCES, LESSONS, AND RESEARCH ABOUT GRADUATE INSTRUCTORS BY GRADUATE INSTRUCTORS

Lived experiences, lessons, and research about graduate instructors by graduate instructors

AUDREY TOCCO; AVANEESH NARLA; ELIZABETH GIARDINA; ERIN HUGHES; FAQRYZA AB LATIF; HEATH J. WOOTEN; J. NICK FISK; JENNIE BAKER; JONATHAN SIMMONS; KRISTYN LUE; MELISSA LEAYM-FERNANDEZ; NATALIE LOW; RYAN CHEEK; SAMANTHA PRADO; SANDRA SILVA-ENOS; SHANNON KELLEY; STACY BLUTH; TANEISHA VILMA; THERESA HICE-FROMILLE; ALEXANDRA LEE; APRIL ATHNOS; TIANYI KOU-HERREMA; SETH HUNT; ELLEN SEARLE; EMILE OSHIMA; OLIVIA WILKINS; NATHALIE MARINHO; MATTHEW LANGLEY; HIMA RAWAL; AND HARRISON PARKER

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Logan

Exploring how we teach: Lived experiences, lessons, and research about graduate instructors by graduate instructors by Audrey Tocco; Avaneesh Narla; Elizabeth Giardina; Erin Hughes; Faqryza Ab Latif; Heath J. Wooten; J. Nick Fisk; Jennie Baker; Jonathan Simmons; Kristyn Lue; Melissa Leaym-Fernandez; Natalie Low; Ryan Cheek; Samantha Prado; Sandra Silva-Enos; Shannon Kelley; Stacy Bluth; Taneisha Vilma; Theresa Hice-Fromille; Alexandra Lee; April Athnos; Tianyi Kou-Herrema; Seth Hunt; Ellen Searle; Emile Oshima; Olivia Wilkins; Nathalie Marinho; Matthew Langley; Hima Rawal; and Harrison Parker is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License, except where otherwise noted.

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LAND ACKNOWLEDGEMENT

As a land-grant institution, Utah State University campuses and centers reside and operate on the original territories of the eight tribes of Utah, who have been living, working, and residing on this land from time immemorial. These tribes are the Confederated Tribes of the Goshute Indians, Navajo Nation, Ute Indian Tribe, Northwest Band of Shoshone, Paiute Indian Tribe of Utah, San Juan Southern Paiute, Skull Valley Band of Goshute, and the White Mesa Band of the Ute Mountain Ute. We recognize Elders past and present as as peoples who have cared for, and continue to care for, the land. In offering this acknowledgement, we affirm indigenous self-governance history, experiences, and resiliency of the Native people who are still here today.

INTRODUCTION: STRENGTHENING GRADUATE STUDENT TEACHING THROUGH COMMUNITY-BASED KNOWLEDGE SHARING

SAM CLEM

This book combines the knowledge of 30 graduate student instructors sharing about how they teach and how they've learned how to teach.

One sentence in and I've already got some explaining to do.

Let's start by clarifying what I mean by graduate student instructors (GSIs). Different institutions, different fields, and different programs use a wide array of titles for the graduate students who teach all or part of a course. Some assist full-time faculty, tasked with running labs or grading tests, and are called Graduate Teaching Assistants. Some are instructors of record—planning, teaching, and grading all aspects of a course—and are also called Graduate Teaching Assistants (what's with that, anyway?). In my department, we're referred to as Graduate Instructors. For this book, I wanted to include the experiences of graduate students across disciplines and departments, encompassing the varying degrees of autonomy and titles that we hold. To do that, we use the term Graduate Student Instructor (GSI) throughout the book to indicate any graduate student who has some responsibility in the teaching or instruction of college-level students.

Now, why create a knowledge-sharing resource? Well, the first (and, for me, the most obvious) reason is because GSIs know a lot about being and teaching and learning as GSIs. Together, we know so much. Full stop.

But that's not to say that we always *feel* like we know a lot. Too often, graduate students enter their first day of teaching underprepared for the tasks they are asked to complete, particularly in STEM fields (see, e.g., Kurdziel, J. A. et al, 2003; Sandi-Urena, S. & Gatlin, T. A., 2012; Zotos, E. K., Moon, A. C., & Schultz, G. V., 2020). While the scholarship of teaching and learning (SoTL) can help instructors prepare themselves with theories and strategies for teaching, many SoTL resources academically marginalize non-tenure track instructors

(Simmons et al., 2021), including lecturers, adjuncts, and GSIs. Compared to tenure track faculty and even teaching-focused faculty, GSIs occupy a different position in the power systems that govern university workings. As such, our unique experiences of teaching and learning deserve additional attention. For this collection, we sought the knowledge of those who best know the contours and contexts of teaching as a graduate student: GSIs.

The purpose of this book is to share some of the many, many things that GSIs already know and have learned and continue to learn about college teaching. The collection seeks to validate and amplify the specific experiences and voices of GSIs. My hope is that this book serves as an opportunity for GSIs from different identities, institutions, and circumstances to recognize a piece of themselves, of their experiences, to connect with and to build on. There's strong evidence that the way we learn best is by connecting new information to prior knowledge, by connecting that which we already know with that which we've yet to learn. Having a book about graduate instruction by graduate instructors is one way of facilitating those connections.

Targeting the specific experiences of GSIs in relation to college teaching, the authors of these chapters present the lessons they've learned as GSIs in their first years of instruction and how that learning happened. There is a focus on narrative and storytelling, belied by a belief that lived experience is a valid and important way of knowing. While the GSIs' narratives play an important role, all of the authors also tie their stories into current literature on teaching and learning. Readers can expect to find not only relatable experiences but also concrete and practical takeaways that they can implement into their pedagogies immediately.

When I put out the call for this book, I didn't know what form it would take. I knew we needed more research about GSIs by GSIs, and, surely, I had ideas about what I would want from such a book, but I couldn't know how well my ideas aligned with those from other GSIs at other institutions, in different fields, and with different backgrounds and identities. So, I put out the CFP and waited for GSIs around the world to tell me about what topics they most wanted to discuss, to share, to interrogate. That's what this collection is—a community-led discussion about what teaching means for GSIs and how it's done.

WHAT'S IN THIS BOOK?

To facilitate skimming, and to help readers find what information will be most useful for them, each chapter begins with 2-4 key takeaways, in which the authors summarize the main points of their chapters. As GSIs, we don't always have the autonomy, resources, time, or energy to teach the way we'd like to teach. Not all takeaways will be possible or practical for every GSI or every situation.

Sometimes, GSIs will need to adapt or reconfigure, or simply bypass the suggestions presented. And that's OK.

To start the collection, we have Melissa Leaym-Fernandez, who writes a love letter to her younger self with the advice and strength we all need to overcome some of the most difficult moments of life, graduate school, and teaching. This chapter invites us to open ourselves to reflection and to consider what we already know and what we have to teach ourselves. It also reminds us of how teaching and living are vulnerable experiences. Hopefully, this chapter in combination with the others will help us develop practices of personal and professional healing.

While most of the chapters describe some aspects of identity, the next chapters in the book focus specifically on that topic. In chapter 2, Simmons, Silve-Enos, and Kelley recount a number of 'landmines' they've hit as GSIs, moments when they were suddenly and unexpectedly thrown into uncertainty and self-doubt. These landmines often bring with them a sense of 'identity whiplash,' where a GSI is pulled back and forth between different aspects of their identities. The authors describe how they've coped with identity whiplash and invite readers to do the same. Next, Ab Latif (chapter 3) describes her experience of being a GSI with an underrepresented identity and how her experience has taught her about building diversity in the classroom. She encourages us to humanize our classroom spaces and structure our pedagogies around collective (rather than individual) achievement. Prado (chapter 4) adds to this theme of identity by telling the story of how her desire to augment representation of minoritized groups within academia led her back to the community college where she got her GED, but this time in the role of adjunct instructor. Prado's chapter reminds us that GSIs hold a vast number of professional titles, jobs, and names.

The next chapter, though specific to the experience of math graduate teaching assistants, has application to all GSIs. Lue (chapter 5) uses critical race theory as a lens into her experience as a GSI and calls on us to further question and challenge the structures of oppression within our teaching and learning practices. Importantly, she recognizes how GSIs are agents in academic socialization, and, as such, we play a role both as students and teachers in the racialized hierarchies of knowledge. Hice-Fromille (chapter 6) then presents us with one approach for explicitly addressing and redressing the kinds of privilege and oppression described by Lue. Hice-Fromille implements a Black girl studies approach to teaching as a GSI, in which the identity and lived experience of Black girls gets centered in our pedagogical decisions. These two chapters reiterate that teaching and learning is always, already racialized.

While the previous group of authors focus on their own diverse identities, the next set shifts the focus more greatly towards our students' identities. Hughes

(chapter 7) stresses the importance of validating our students' diverse identities and how that validation can impact the students' learning and sense of empowerment. She presents original research from a teaching-as-research project she conducted in her classroom, giving readers a great example of how our classrooms can serve both as spaces of teaching and of research. Diversity, equity, and inclusion (DEI) initiatives have recently received a lot attention for their potential to validate and include underrepresented students. Vilma and Low (chapter 8) apply DEI approaches to the specific context of graduate student instruction, giving concrete strategies for promoting DEI within the sometimes challenging and limiting circumstances in which GSIs teach. While Vilma and Low focus on DEI more broadly, Baker and Wooten (chapter 9) follow up by weaving their lived experience with disability together with current literature on accessibility to suggest ways in which GSIs can develop more accessible pedagogies to better support our students and ourselves.

While GSIs can and do have all kinds of identities, we also share the common experience of being both students and teachers. At times, this dual identity can bring challenges, but the next set of chapters emphasizes that our teacher/student split can also be an asset. Giardina (chapter 10) tells us about a potentially embarrassing moment in her teaching that turned into a valuable lesson about the power of vulnerability. Through radical vulnerability, GSIs can connect with the exploration of learning and create solidarity with our students as a community of learners. Narla (chapter 11) reiterates the importance of vulnerability in teaching, specifically the vulnerability of failure. By modelling failure and structuring our courses and assignments to allow for and even encourage failure, GSIs can challenge transactional understandings of education.

As the vast body of scholarship of teaching and learning indicates, there is a lot of research on how to teach, what to teach, even when and where to teach. For GSIs, there can be a lot of information to take in. Given our unique position in the power dynamics of the academy, some of that information, particularly that written by tenure track faculty for tenure track faculty, may not apply well to the contexts of our teaching. Fisk (chapter 12) maintains the importance of evidence-based teaching but hedges that both evidence and knowledge are terms that we should first interrogate. He argues for an expansive interpretation of 'evidence,' that is nuanced and inclusive. By reframing our understanding of evidence, we can better prepare ourselves to accept that there are multiple ways of knowing—epistemological pluralism. One of those ways of knowing is by experiencing and reflecting. Tocco (chapter 13) makes a case for the many benefits of pedagogical metacognition, of reflecting on and thinking about our teaching, which she claims is particularly important for first year GSIs.

To end the collection, we have three chapters that deal with finding support

within our communities and ourselves. Bluth (chapter 14), who found her graduate education both isolating and irrelevant to her non-tenure-track plans, turned to community-engaged learning (CEL) to find fulfillment. She describes how she overcame common obstacles in graduate education to implement community-engaged teaching and add meaning to her graduate school experience. Next, Athnos, Kou-Herrema, Langley, Oshima, Parker, Rawal, Wilkins, Lee, Hunt, Searle and Marinho (chapter 15) combine the knowledge and experience of two communities of practice specifically for GSIs. By describing the programs and processes of developing GSI communities of practice, they encourage readers to connect with other GSIs and create communities to help navigate and celebrate the ups and downs graduate student teaching. Finally, Cheek (chapter 16) ends the collection by reminding us to breathe. After recounting his own experiences with graduate teaching anxiety, he shares three lessons he has learned about coping with teaching anxiety.

While we were unable to cover every topic, I believe that the content of this book covers some of the most important aspects of teaching as a graduate student. I hope that this collection can help animate other GSIs to research and write about what they've lived and learned in relation to college teaching. There is still so much we can learn from each other.

NOTE ABOUT EDITING

Much of my research is on academic editing and how we can make editing processes more inclusive. Editing this book was the perfect opportunity to apply the inclusive editing paradigm I'd already theorized but never put to practice. One of the main points of the inclusive editing paradigm is to reject the strict enforcement of American Standard English (ASE) in academic texts, providing the space for and validation of other forms of English. For this book, all of the authors had the choice of editing their language to the conventions of American Standard English or not. Some authors have chosen not to conform to those standards, a decision that I heartily support. If when reading, you recognize deviations from American Standard English (often considered 'errors'), please recognize and respect these grammatical decisions as conscious choices on the part of the authors to express themselves in the way that felt most appropriate for the rhetorical situation.

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CHAPTER 1.

A LOVE LETTER TO MY LITTLE GIRL

MELISSA LEAYM-FERNANDEZ

KEY TAKEAWAYS

- Love is a real power. It can be shown by family members who want you to succeed in healthy ways, instructors who are passionate for their work, and the care you give yourself—care for yourself during your graduate experiences.
- Creativity helps the brain to be healthy and strong. Enact creativity in your life by artistic expressions, art making, or—for the super intimidated—journaling your thoughts/ideas/feelings to strengthen your brain.
- Gratitude is a gift to be shared. Send a handwritten note to two folks who have shared their love and who care for you personally or who have shared a passion/professional love of their work with you to inspire your own research and education. In those notes, express how their care has impacted your life.
- Emotional content can be debilitating. Many people have inexplicable feelings or emotional content made raw during graduate learning experiences. Finding healthy ways to vent the emotions such as through working out, a wicked game of spoons, or uplifting social experiences is a factor of support as you work to complete your degree; don't ignore this support.

My dearest and most beloved, October 2021

As I sit and write to you, I must admit, I have mixed emotions. I recall the days you explored the world, catching tadpoles in the overflow of the small lake near your home, climbing trees, drawing, and reading with such deep enthusiasm for life (Note to self:[1] read Christopher Uhl to understand the value of learning

1. *Note to self*: comments are placed throughout the paper inviting the reader to read resources dealing with various life experience, realities, and truths that may be unknown to them. The suggested readings all present opportunities to

as if life matters). You carried a joy of living that vibrantly touched everyone. Constantly inquisitive, you would slip away from supervising family members to hide and watch people, earning the nickname "Slippery" from your maternal grandmother, Veronica. You lived in poverty but were so unaware as I could see and feel the love that filled your life. Your mother was single, having only a high school education but carrying an awareness of how women were/are treated in life (Note to self: bell hooks explains how women and non-White, heterosexual, homogenous folks are treated by patriarchy[2]). Your father left her—as you have grey eyes and your mother hazel and your father brown, he believed you were not his child. You were born out of wedlock to a sexually promiscuous man who did not have familial permission to wed as a native Sri Lankan, and he used this weak excuse to spurn your mother, leaving her to raise you alone (Note to self: read Ming Fang He). Even though you only knew five things about him as a child, you flourished, bouncing about absorbing information and constantly being creative despite the heartache and pain you endured.

Throughout my letter to you, as I reminisce and encourage, I am going to suggest some texts that you may want to read, and these are seen as *Notes to self*. Some readings may not be accessible until you are quite a bit older, or when you are ready to embrace change, and others will change your life forever and you will need to read now. I encourage you to always look at the good in others and look at people with asset-based thinking, recognizing we all have problems and weaknesses, but we all have strengths and beauty within and to offer.

As a mix race female child living in poverty with a single parent, you unfortunately were to learn too early your body's lack of value and the accentuation of feeling in-between at a very young age (Note to self: read *Caste* by Isabella Wilkerson). You were sexually abused multiple times by a babysitter (Note to self: Roxane Gay's *Hunger* may help one process such experiences), not even understanding what he was doing to your little body. Later, you experienced a violent sexual assault by the "neighborhood pal," the white hegemonic, privileged man who ended your childhood, acting as if he had a right to abuse your body (Note to self: Read Roxane Gay's *Dispatches from Rape Culture*). Your life was thrust into immediate chaos, devastation, and severe pain at age eleven (Note to self: Bettina Love's *We Want to do More Than Survive* will help you be a better graduate instructor too as you work to understand and enact educational freedoms). You would later find many who you thought were friends turn against you with their entire families. You would be at the mercy of teachers and principals who would ignore your needs and facilitate revictimization for years (Note to Self: Karen Keifer-Boyd's *Including Difference* can share how educators ignore children as they learn, which may lead to diverse learners in higher educational settings). You would feel the rejection of your own brother who called you a *liar* and a *bitch* for disrupting the friendship he had with the assailant's son (Note to self: Gina Siciliano illustrates that this patriarchal behavior is not new and is expected and accepted socially by boys and

gain further knowledge in graduate teaching experiences facilitating stronger understandings towards students and learning challenges.

2. Patriarchy is global, systemic enactments that sexually oppress and gender discriminate—feminisms work to "end sexism, sexist exploitations, and oppression" (hooks, 2015, p. xii) in all the locations.

men and those who support them). You would learn anger, loneliness, sorrow, pain, fear, distrust, and, as a human being, the lie of your own worthlessness.

I recall your struggle with academics and revictimization after the assault. You went from a bouncing, academically successful student with A's and B's to a student that could barely function in the classroom. The dysfunctionality was of course compounded by uninterested teachers and administrators and that awful sixth grade teacher from hell who used to throw chalk, textbooks, and tissue boxes at you. I recall the day you told me how she threw chalk at you, hitting your cheek, causing a stinging pain, blaming you for your lack of self-monitoring at age 12 (Note to self: Eli Clare's work brings deeper understanding regarding stolen and reclaimed bodies while discussing disability and queerness). I recall the beautiful spring day it rained in the early morning, a year or so after the assault, and earthworms covered the path to the bus. The perpetrator's children were your peers and so filled with anger and hate against you and your undeniable truths. They threw earthworms at you, covering your body and hair with over 36 earthworms. You later picked them all off, gently, one by one, returning them to the ground, understanding they were faultless in the enactments of hate and had their own value, place, and purpose in life (Note to self: Fields & Basso enrich ones thinking on space and place). You learned that your words were hollow to many but not to your mother or grandmother, who grabbed your words, hearing the truth. You started learning to shift, re-learning how to function in various settings and finding new places to survive and later thrive (Note to self: Read Wanda Knight's *Entangle Social Realities* to better grasp *shifting*). Your mother and maternal grandmother would become your strongest advocates and one day you would learn you were never alone (Note to self: Lizzie Skurnick's *Pretty Bitches* exemplifies the power of a word and their potentially negative uses in your life).

Though I must admit at the time of the assault you learned about spiritual things, too. The spiritual knowledge seems to counterbalance your pain in some ways. Though young, you still embraced the lie regarding your lack of value for many years. As you started to learn about eternal truths and individual values human beings hold, you began to understand your purpose on the earth. I also recall you clinging to music. Music was a haven of support and safety[3]. You found music with uplifting, cheery, and fun lyrics—not music fanatically religious or even in a single genre but music to which you could sing, dance, and emotionally soar. You appreciate sounds from all over the world. Music built your spirit and soul, giving you comfort during many lonely days of your life, producing new ways to learn and appreciate life and living. You avoided numbing music as you were already numb in many ways. I recall you gravitating towards music that told a story, music that inspired dance and motion, and/or music that calmed your fears and gave messages of courage and hope.

You developed your own creativity (Note to self: Sharon Louden illustrates various ways creative folks

3. My absolute favorites in no particular order: Tears for Fears (everything!), BTS' *Wings* and *Map of The Soul* (and really everything!), *Classic Yo-Yo Ma*, Queen's *Greatest Hits I & II*, Adele's *19, 21*, and *25*, Beyonce's *Lemonade,* The B-52's *The B-52's & Cosmic Thing,* Black Violin's *Classically Trained,* The Cure's *Greatest Hits*, Robert Johnson's *The Gold Collection*, *Saturday's Warrior* soundtrack, Foster the People's *Torches*, Death Cab for Cutie's *Narrow Canyon*, The Hu's *The Gereg*, Marvel's *Shang-Chi* both soundtracks, *Handel: Water Music*, Joji's *Nectar*, *It's Ok to be Not OK* soundtrack, Lizzo's *Cuz I Love You*, G-dragon's *Coup D'Etat* and Big Bang's *Made*, Muse's *The Resistance*, Boy's *offonoff*, The Piano Guys' *The Piano Guys*, Rain's *It's Raining*, RM's *Mono*, Shakira's *Oral Fixation*, Steve Aoki's *Neon Future III*, *Khoobsurat* soundtrack, Susan Boyles' *I Dreamed a Dream*, Taylor Swift's *1989* and *Reputation*, Trombone Shorty's *Backatown*,*The Bride of Habaek* soundtrack, *Memories of the Alahambra* soundtrack, *Blacklist* soundtrack, *Despicable II* soundtrack, and *Ladies & Gentlemen: The best of George Michael*, and Nelly Futado's *Loose*. Let good music sustain you.

make and live bringing self-edifications alive), finding solace in making at such a young age. Drawing, watercolor painting, doing trendy 70's prefab ceramics, macramé, decoupage, sewing, decorating your room, candle making, and woodworking would all become your creative outlets and strengths. You could see the power of making as a child, and I am so glad you clung to your talents and passion for making. You may not have had the words to explain outcomes of being creative, but you instinctively knew there was/is power in making.

Yet unbeknownst to you at the time, you were actively engaged in your own healing—building new synapsis in your brain, engaging your body kinesthetically, and developing enactments of self-care that would lead to your deeper understanding of true self-love and self-valuation (Note to self: Vero Cazot's gorgeously illustrated graphic novel is a must read!). Your small undirected acts of creativity helped your brain to gain health too. You did not know, nor would you for decades, that when you were sexually assaulted, the brutal act changed your brain along with the rest of your life. These changes in your brain would impact not only your learning but your physical health and that of your children (Note to self: Samira Soleimanpour brings attention to brain changes that are lifelong, and graduate teachers need to understand how). I remember you suffering with undiagnosed hypothyroidism for over ten years and being ignored by doctors as you lost chunks of hair and tried to function in a perpetual state of exhaustion. Who would know that this illness was a result of adverse childhood experiences (ACEs) resulting in hypothalamic–pituitary–adrenal attenuation? You would learn the ACEs you survived would impact not only your daily health but your later pregnancies. Having six pregnancies and three children, you will live outcomes of trauma for years, not even aware of the insidious lifelong impacts to your body. You may even have a child that faces health challenges as the result of what happened to your little girl body so many years ago (Note to self: Jing Sun et al. explains further how intergenerational trauma can impact ones' development).

I thought your mother was such an incredible woman for just loving you. Even when you ran away from home to escape revictimizations in your community and at school over and over, your mother just loved you and tried her best to help you, even in her own helplessness. You just went deeper into art making. It was a blanket of comfort for you, wasn't it?

I recall your painting skills in high school. Do you remember the album cover a senior asked you to paint of the *Scorpions* so he could turn it in for a grade? And the advanced painting class you were in as a freshman? I am so glad that painting became your solace. All through high school you were making art but not socially connected to anyone—always guarded and guarding. With all the high school cliques you remained aloof. Not part of the jocks, the princesses, the cheerleaders, the theater, the band, the stoners, or the math folks—you just bounced in and out of these groups—talking and watching. You started to realize how fiscally poor your family was and were at the butt of jokes and harassments, not able to wear trendy clothes or buy the latest gadgets. Living in modest housing, you saw and noted what others had and what you did not. Your mother taught you knowledge is power. Though you graduated high school with a 1.97 GPA you were determined learn. If only to spite that abusive, evil sixth grade teacher who told you not to bother with college as you would "only be taking the seat from someone who deserves to be there," the opportunity to go to college fell into your life.

As a first-generation college attendee, you started at the local community college, figuring out how to fill out applications, financial aid forms, selecting courses, and surviving all alone. You failed some classes, learned to study, and found your place in the art department. You learned American Sign

Language and worked in that community college to have "foreign" languages changed to "second" languages. You started to find your voice as an advocate. You served as the Asian American Student Organization president, even when most members did not recognize your Asian-ness because, as a tan, grey-eyed Indo-American girl, you did not fit their stereotype of straight black hair, single lidded, deep-set brown eyes, and pale skin. In their ignorance, they too ignored the over 48 countries *in* Asia. As an undergraduate now at the university, you painted your first oil painting—a peanut M&M's wrapper in deep toned mustard yellows and started to learn how to thrive.

Yet you still did not understand your true power. Still believing the lie that you were of little-to-no worth, you married a childhood sweetheart. Finding the relationship to be abusive, demeaning, and not the way you wished to spend your life, you realized your experiences as a human did/does not need to be full of pain. You divorced. Waking up one day, clearly knowing your worth—worth your weight in gold. I saw you transition earlier from victim to survivor and now again as survivor to thriver. You graduated with a Bachelor of Fine Art in painting. You then returned to get a second Bachelor of Science in art education. Taking care of yourself, learning to learn, and learning to work, you returned to get a master's in art education.

Not opposed to the institution of marriage but understanding that equity—real equity—is the core element in any equitable, love-filled, healthy relationship, you made a list of uncompromising qualities for your protentional partner and turned the process over to your Heavenly Parents. If you were meant to marry, you would meet a wonderful person and if not, you would continue living your best life. You met him a few years later at a New Year's Eve party over a wicked game of Spoons[4]. You told him you were not interested in dating but if he wanted to come over while you cleaned the house in sweats and no make-up, he was more than welcome to hangout. You married in May.

I recall your work as an educator in the K-12 and college settings. You met learners of all ages and varieties. At one time you worked with the leprosy-effected in India. I bet you never thought your creativity would take you so far from home, did you? And who knew that leprosy impacts over 11 million lives in India today? Do you recall the photo you took of the little street boy following his father and picking his nose? You learned that children are children and parents are parents, no matter their place, no matter their age. Sometimes ones' nose itches and only a finger can solve the issue. Sometimes parents, regardless of their circumstances, just want a better life for their children.

I recall you settling in to married life with the man that would turn out to be your biggest cheerleader, advocate, and defender while also being your best friend, lover, and confident. You would have three children and develop sustaining happiness because you have chosen happiness and self-worth over the alternatives. Despite the job you had teaching in a violent urban school district that was 14 million dollars in debt and phenomenally dysfunctional, you chose to work to make a difference. You could see how your own creativity helped yourself and you wanted to bring the arts to other kids who were hurting (Note to self: read Bettina Love again because the hurt doesn't dissipate upon adulthood, and you may have students that are still hurting and need the wisdom of Love's work). You learned how to write grants to get quality art supplies, teaching your students they were worth having German hand-pressed watercolor paper and pens that actually worked. Such lesson were/are so powerful to

4. Everyone should play spoons! Give 40 minutes a month to play with your best friends to laugh, argue, win, and lose together. For directions see https://bicyclecards.com/how-to-play/spoons/

you and to your students as reminders of human value and potential. You tossed out all that you knew about art education curriculum encompassing the dead, white, western male and developed new curriculums with feminisms and asset-based thinking at the core, giving student many choices. You learned and taught with your students a new canon with Elizabeth Keckley (sewing), Jean-Michael Basquiat (painting and graffiti), Harriet Powers and Faith Ringgold (storytelling and sewing), Alma Thomas (being a later-in-life blooming painter is just fine), Elizabeth Catlitt (printmaking), Edmonia Lewis and Augusta Savage (sculpture), Morrie Turner, (cartoons), James van Der Zee (photography), Dox Thrash, (drawing), Kehinde Wiley (painting), Deborah Willis (mix media), Romare Beardon (painting), Jacob Lawrence (painting), Lorna Simpson (mix media), Dave, the Potter (ceramics as a slave), and Thomas Day (furniture maker).

You taught students to take ownership of their own learning and you found once again joys of living that vibrantly touched everyone you knew as you designed a space where they created their own projects in tandem with your guidance, capturing the spark of learning and community service while starting to value themselves more. I recall your students faced real world challenges being homeless or parentless, in and out of incarceration, dealing with behavioral, social, and academic challenges but you saw yourself in them. Students who went without subject certified teachers and packed into classes capped at 41 students, compounding the (re)victimization many felt in school. No room to work on art, let alone breath, you did your best, some days just managing behaviors and personalities. Even the year you and students were pepper-sprayed in the school three times, and you just wanted to walk away, you persevered. I recall you sharing with anyone thinking they were having a bad day at work, "you are not having a bad day at work unless you have been maced [pepper sprayed]" to teach a definition of a real 'bad day' much more clearly.

I remember when teaching in such an environment started to take an emotional and physical toll on your body and your partner suggested you get your PhD so you could teach at the university level. I recall your search to find a doctoral program with an art education focus in your state and the disappointment you had when no strong programs could be found. Your partner suggested you make your search circle a bit bigger, and you were led to the number one program in the country. You applied and was accepted. You made the move to live on campus without your family as your partner knew that you had never been able to have the undergraduate experience living at home as commuter student. I am amazed at his ongoing supportive not only as you get your doctoral degree but in life. The choice to live on campus and to enter your program was one discussed over and over, and finally made by all the family members, not just one. Your first year was a bit brutal as I recall, you were alone, friendless and in a strange new space. The comforts of home and studio were long gone. But you found that your lived experiences had power and wisdom and you learned to write! (Note to self: Graff & Birkenstein is a great aide to improve one's research writing and thus self-expression as a doctoral student).

These are the lessons I perceive you are learning as reinforcement toward old and new knowledges as you complete your doctoral degree. I am so glad that you know all people—young, old, trans, straight, gay, skinny, fat, kind, mean, bossy, instructive, princesses, down to earth folks, qualitative thinkers, and quantitative thinkers, those with light brown, dark brown or golden skin—*all of them* have *value and worth*. You and I may have days that we still do not clearly understand their worth, (I mean, who really likes hate-filled mean or bossy people, right?) but their worthiness remains,

nonetheless. Our job is to find and learn about our/their differences and our/their worth without hate, judgement, or scorn as we work to destroy patriarchal binaries of "us and them." Our job is to seek understanding of people around the globe—understanding that maybe perceived as alien, painful, or difficult to comprehend (Note to self: Leta Hong Fincher's *Betraying Big Brother* is a must read!). But one's consciousness raising must be done in kind, gentle, and respectful methods or one needs to leave people the hell alone! Always do your own consciousness raising, never ask the token brown or black girl/boy/non-binary person in your classes—*but honestly learn for yourself on your own time*. If you don't understand then you need to "use the Google" or call the local librarian and learn for yourself from 3-5 peer reviewed sources on any given topic that interest you. I know you have actively engaged with learning over the years, but many folks do not, and they expect everything to be hand-fed to their academic mouths and minds like bad little baby birds crying for food about race, class, and gender issues.

I am so glad that you no longer live in fear. This is a potent, healthy choice and I love this about you! Setting limitations for the work you do, the research you engage with, and your social time is healthy. If you are paid a stipend to work 20 hours, document each moment and work the 20 hours, not one moment more! You are not slave-like laborists, though as a grad student you may feel this way, underfed, exhausted, underpaid, and work-never-ending. But remember, you are not. The challenges of completing a doctoral degree are unlike anything you have ever experienced, and you must leave fear at the door…or in a box far away and forget about it. Remember, "*Fear is the mind killer*" (Note to self: Frank Herbert's work remains a reminder and escapist body of work that is classic, deep, and extraordinary) let your fear pass through you, as Paul Atreides cites in *Dune*. You were chosen to be in your program because you have demonstrated you hold what is needed to complete your degree. Own the experiences you are having but leave fear out of the equation. Imposter syndrome is a real thing! Learn about it so you have data-based fuel to fight your fear (Note to self: read Shanna Slank's work when you feel like you don't deserve the academic opportunities you have). You may have days that you wonder, "what the hell am I doing here!? What have I done to myself?!" and I think this is very normal and there is a reason there is less than 2% of the world's population that hold doctoral degrees. Doctoral programs have a severely high learning curve, right? Like straight up! But you have what you need to be successful, so leave fear at the door and move forward in self-trust and faith, believing in the unseen truths all around you.

I find that you are making time for fun and love. Not a drug-saturated-drunken-sexed-up-weekend(s) of blurred memories but fun and love that allows you to have deep, diaphragmic laughter. A laughter that soothes the soul and recharges friendships is healthy. If you are not, can I again suggest 40-minitue game of Spoons with at least 7 pals you know? It's a great brain break and who knows? You may find research solutions, find elusive answers and/or find a better mental place to accomplish your work. I know you like to run, bike, do yoga, walk, and weightlift—all are simple activities that recharge the brain, releasing endorphins and encouraging brain wellness. Talk to those you love and laugh together. Make and take time and to have micro-sustaining moments of love in your life. If that means just talking on the phone to hear his voice, to cry, to listen, to share, to love—do it! Talk to you lover every day. But remember, love is not sex, though sex is fine, great, and well, in the right time and place, bear in mind (and I know you will!) sex is the icing of life, not the cake. Deepen or sustain those relationships that require the development of true love. Love has more places and roles beyond that of the romantic and sexual, though both are fun. Find these roles, embrace these roles. I know you won't

have a lot to time to develop these roles as you work on this degree, but moments count in our lives, use them.

I love that you are making time to be creative daily (Note to self: you will develop a website, www.elephantworkstudio.com and page, *elephantpainter5*, on Instagram) through art making or writing, you create constantly. Some may not believe in the power of creativity. Feeling that any creative genes held at birth were beat out of them as children. But simple acts of creativity strengthen the brain, calms the soul, and acts as a simple diversion. Even if you are only doodling in a blank page book, keep making your own marks and color them in later. It's amazing you are able paint, draw, sew, and wood burn in that tiny space on campus. I love that you share your talents, giving away painted rocks or the small canvases you make. Giving of yourself is your secret superpower. Just as when you cry, tears are your superpower too.

I like that you have emotional outlets, crying or laughing as needed. Holding in emotional content is stupid. Big boys should cry and be strong like women! Why is there a stereotype that demeans, shames, and sees as weak those that cry? I have never seen more male actors cry than when watching South Korean television. Watching a great emotionally charged show like the South Korean series, 초콜릿, written by Lee Kyung-hee, and opening to emotional vulnerability in the safety of our living rooms to have a good cry can build empathy and be cathartic. Encouraging not only yourself and your students to develop healthy emotional expression is not only critical to our lives as graduate students but our lifelong empowerments. Sometimes when I share my life experiences I cry. I used to apologize but now know I live in an unruly body (Note to self: read Roxane Gay again!) and my body cries when it wants to, a uncontrollable bodily response to the trauma experienced, why the hell should I apologize? What stops us from releasing the stress through tears? Why is it we fear the liberation of emotion? Oh, do you recall that series of sculptures you made as an undergraduate? You collected a variety of chipped fine china and secondhand tableware and learned to shatter them, hammering them over and over till you had the shapes you wanted. Then you reassembled them into those sharp, dangerous, intricately constructed forms. Those pieces were so violent and interesting—I recall the deep cut on your finger and the scar afterwards from placing a final piece in the teapot and how excited you were to have finished the series. I think this was such a cathartic process for you. Find ways to continue release pent up emotions to keep healthy.

I love that you are a late bloomer in life. You always said you wanted to be like Alma Thomas who had her first solo exhibition at The Whitney Museum of American Art at age 81[5]. I hope you can find fame for your art before you turn 80 if you still seek that type of success. You could complete your doctoral degree in your 50s and look like you are in your 40s while acting like you are in your 30s—whatever that means to you. I love that you live with such vibrance and hope. I love the passion you hold for your life and your research passion shines through and positively impacts the lives of others. I think it's great when your students thank you for making a class interesting, teaching a new skill that has real world applications, and/or share their appreciation of your excitement to teach. Age really is just a number. Let it sit in that far away box with fear.

5. My idol, Thomas, underrecognized African American woman artist was the first graduate of Howard University's art department in 1924 and the first Black woman to have a solo show at the Whitney Museum of Art in 1972 and a middle school art teacher for over 35 years, writes "through color, I have sought to concentrate on beauty and happiness, rather than on man's inhumanity to man (*and I would add girls, boys, women and every other gender*)" (Gregory, 2020, parenthesis added). I love her connections between nature and her colors on her canvas. I will be like her when I grow up.

Remember, you are worth your weight in gold. You have all you need to finish your degree, but always keep in mind the value of people, kick fear out of your life, constantly raise your own consciousness, set your limits for wellness, be creative in some methods daily, and find and use healthy emotional outlets with regularity. Find joy, making the choice to be happy, and be passionate about your work and research. If you feel you are not a teacher, maybe you are not…yet. But you must grasp this truth, learning how to teach is important and skills can be developed. I, of course, know you are a great teacher as bell hooks is your idol and you know and practice feminist pedagogies resisting patriarchy in your classrooms—making all welcome, appreciating all forms of diversity.

You only have a short time left to complete your degree, work hard, play hard, and do your best to learn how to be the best instructor possible because before you know it you will be in the next season of your life and other priorities may encroach your life.

All my love,

M

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CHAPTER 2.

CLASSROOMS AND MINEFIELDS

JONATHAN SIMMONS; SANDRA SILVA-ENOS; AND SHANNON KELLEY

KEY TAKEAWAYS

- Graduate school is a time of personal and professional challenges and changes. Engaging in personal reflection about your identity and your goals can help you make sense of these changes.
- Set and enforce your own personal and professional boundaries to protect all the parts of your identity; learn to recognize your own triggers and prioritize your own self-care.
- Create a set of lifelines—people and resources you can be vulnerable with and can turn to for both personal and professional challenges. You will need different lifelines to help with different problems such as identity whiplash or the many landmines you may hit. Recognize that each lifeline person will offer you a different set of responses.

Jon: *Opening the door to room 4A, I take a look around at the classroom in which I'll be teaching, and I feel like I'm in a 1970s time-warp. The room has wood paneling, an actual chalkboard, and one large conference-style table with 20 chairs around it. The room can't be more than 10 feet wide, and in the back corner is a haphazardly stacked pile of chairs that looks like it could fall over at any moment. Most of my students are already there, talking to each other or checking their email, but I notice several of them glancing at me. They seem to know I'm the instructor and are attempting to guess what type of teacher I'll be. As I take a seat somewhere at the middle of the table, I'm struck by a sudden pang of uncertainty. How can I make learning engaging and exciting in a space that looks like the boardroom from Mad Men? Am I smart enough to teach this class? Did I write a good syllabus? What if they hate me?*

These questions may seem familiar to many other graduate student instructors (GSIs) as they have plagued graduate students across the years. Teaching is often

viewed as a central element of preparing graduate students for future careers (Burmila, 2010). Yet, graduate students often receive no formal preparation and training to teach, leaving them alone to navigate this challenging role. Historically, graduate teaching was rooted in an apprenticeship model, with a graduate instructor working under one faculty member (Tulane & Beckert, 2011). In this model, the faculty member serves as a true mentor, learning the strengths and experiences of the graduate student and helping the student leverage those strengths and experiences in the classroom, adding new tasks as the graduate student is ready. However, as Sandi-Urena and Gatlin (2013) note, GSIs are often neglected as true partners in instruction, and their professional development is often overlooked. The experience of being a GSI can look very different. Some GSIs are paired with a senior instructor and assist in grading and clerical duties. Others lead laboratory or discussion sections for larger lecture classes. As enrollment numbers swelled and universities needed to offer more courses and sections, many GSIs have taken on the additional roles of holding office hours, writing examination questions, and taking full responsibility for courses (Tulane & Beckert, 2011). This trend has been exacerbated since the Great Recession in 2008 as states reduced funding for higher education by an average of 16% per student (Mitchell et al., 2017) and tenure track positions fell across the nation to just 45.1% of faculty (The Future of Tenure, 2021). Often, the courses GSIs teach are lower-level introductory courses or general education requirements (Ayres & Winterberg, 2020; BrckaLorenz et al., 2020). However, some graduate students find themselves asked to teach more advanced courses, which bring new responsibilities and challenges. Ultimately, serving as a GSI is often less about a graduate student's professional development and more about meeting the needs of the university.

Teaching as a graduate student is complicated and no two GSIs will have the exact same experience. Some are nervous to be in front of a classroom while others consider it an honor and are excited to teach; however, as the excitement wears off, the reality of the job sets in and can leave the GSIs experiencing significant anxiety. As current students, GSIs may be better situated to relate to undergraduate students and become partners in learning, which may increase students' performance (Ayres & Winterberg, 2020). But their status as a student also makes it challenging for them to be seen as legitimate authority in the classroom. While for some undergraduate students there may be no recognition of a difference between a full professor and a GSI, for others, a full professor carries automatic respect and assumption of knowledge simply by their title; a graduate student, though, must earn the respect of the students who may view them as a "trainee" (Burmila, 2010). Some students expect lenient treatment or that a GSI will allow them to get away with not doing the work or expect passing grades (Burmila, 2010; Ayres & Winterberg, 2020). Graduate students

themselves are also susceptible to these doubts as many do not view themselves as “real teachers” (Winstone & Moore, 2017).

Because being a GSI looks different for each person and at each institution, there is often not clear guidance, support, and training, leading GSIs to feel like they are navigating minefields and are particularly susceptible to stepping on what we have come to call “landmines”—unexpected strong negative emotions, particularly uncertainty, self-doubt, and feelings of imposter syndrome that affect graduate students as they navigate their many different roles and responsibilities. Here we offer examples of landmines of a personal nature, landmines during the act of teaching, and landmines that happen behind the scenes, all examples that come from our own experiences as GSIs. Part of what makes these landmines and their effects so problematic is that they affect each element of a GSI’s identity. First, we will briefly discuss graduate student identity and introduce our notion of “identity whiplash” before sharing examples of landmines and how they led us to experience identity whiplash.

Some graduate students held professional careers before beginning graduate study and are able to tap into their wealth of personal professional experience and help students make stronger connections between the classroom and the real world (Labaree, 2003). We (Jon, Sandra, and Shannon) find ourselves in this position, able to draw on our previous professional experiences as we make sense of teaching as graduate students. All three of us first trained as K-12 educators—Jon as an elementary teacher and Sandra and Shannon as middle and high school teachers in K-12 education before beginning our doctoral studies. With backgrounds in education, our experience may be different than those GSIs who have not received any training on how to teach. However, as we began teaching as graduate students, we quickly realized that teaching K-12 students and pre-service/in-service teachers was not the same, and the transferability of skills, knowledge and confidence levels were not as smooth as we had hoped; we ran into many of the same landmines that all GSIs experience. Understanding the nature of these landmines, their causes, and their impacts is crucial for graduate students and will be the focus of this chapter. When GSIs encounter landmines, they can feel insecure and upset; often, the complexity of these experiences results in GSIs not being able to fully articulate why they feel this way. Meanwell and Kleiner (2014) refer to this as the emotional work of teaching and highlight that GSIs may feel an emotional “rush” after good teaching days, but bad teaching days have a large emotional toll on graduate students and require significant recovery time.

In our experience as graduate instructors, we have found that teaching is further complicated by the multiple identities we hold as graduate students. Winstone and Moore (2017) suggest that graduate education exists in an ambiguous

transitory space between "previously held and aspirational identities," where graduate students live in uncertainty, confusion, and frustration as they try to discover their new professional identity (p. 496). We view identity as "how a person understands his or her [or their] relationship to the world, how that relationship is constructed across time and space, and how the person understands possibilities for the future" (Norton, 2000, p.5). Understanding identity is particularly challenging in the liminal space of graduate study. This is a fluid space where all our different identities mingle together and blur. Our past, present, and future learning trajectories collide and are complicated by our competing memberships and commitments in multiple communities of practice (Smith, 2006). In addition, many GSIs enter graduate school in their later 20s and early 30s with substantial responsibilities and commitments to their families and communities outside of the academy (Ayres & Winterberg, 2020; Burmila, 2010). The struggle to balance academics and personal life responsibilities is often of particular challenge to women, students of color, queer students, and non-traditional students (Brus, 2006). This may be in part because undergraduate students are more likely to turn to these GSIs to help them make sense of higher education, leaving these GSIs with a greater emotional and mentoring workload. Further, underrepresented graduate students are more likely to experience microaggressions in and out of the classroom and face additional challenges related to authority and privilege.

Additionally, GSIs are socialized into academic systems in which they may feel pressure to emphasize their research, resulting in teaching feeling like a burden (Burmila, 2010). Faculty expectations, including implicit assumptions that graduate students can make themselves available at any time for any project, further complicate the multiple identities of graduate students (Brus, 2006; Haynes et al., 2012; Martinez et al., 2013). These simultaneous roles of student, teacher, researcher, employee, family member and more can leave graduate students feeling like they have no coherent sense of identity or that they must constantly change their identity (Winstone & Moore, 2017). We have come to call this "identity whiplash" in our conversations about these challenges. Much of what is written surrounding identity frames graduate students as pulled in multiple directions by the tensions of their competing identities. While we agree, we have also come to think that the particular situation of graduate students lends itself to also experiencing identity whiplash. Rather than feeling each identity simultaneously, in identity whiplash, graduate students are rapidly shifting from one identity to the next—thinking as a teacher in one moment, a student in another moment, a researcher in the next moment, a spouse or partner in the next, and a mentor in the moment after that. The rapid shifting of these identities leaves graduate students feeling unable to ground themselves.

The complications that can be caused by identity whiplash leave graduate instructors particularly vulnerable to landmines in the classroom. This chapter is our attempt to make sense of these landmines, our multiple identities, and how they influence our teaching and our developing professional identity. The work of David Labaree was especially influential in how we made sense of our experience as graduate teachers. He examines some of the challenges and complexities involved with transitioning from a practicing teacher to educational researcher. In this transition, Labaree outlines a potential "cultural clash" between the separate worldviews held by both positions (2003, p. 15). He concludes that "the gap is not as wide as it seems, that the differences are more a matter of emphasis in professional practice than of total opposition" and that explicit acknowledgement of the cultural divide between teachers and researchers is essential in helping people make sense of that divide (2003, p. 21). When we considered the potential "cultural clash" faced by GSIs, we identified two primary areas for that clash that are likely to leave GSIs hitting landmines and experiencing identity whiplash: between specialist and novice, and between personal and professional. The potentially conflicting worldviews of the personal and the professional and between specialist and novice highlight the tensions GSIs feel amid their multiple identities. The relationship between identity whiplash and landmines is cyclical. At times a GSI will hit a landmine and then experience identity whiplash. At other times, GSIs will experience identity whiplash and then hit a landmine. In the next section of this chapter, we offer stories from our own experiences that show how we experienced landmines and identity whiplash. By naming and sharing these tensions, we hope to make explicit the multiple identities we have struggled with, the minefields we have navigated, and how we have coped with identity whiplash and ultimately come to realize that the gap between our multiple identities may not be as wide as it initially seems.

THE SPECIALIST AND THE NOVICE

For most GSIs, shifting between knowledgeable specialist and novice is the most common transition they must navigate. As students themselves, they may feel like novices in their own coursework and when they meet with advisors and professors they are positioned as novices. Yet when they enter the classroom, they are positioned as an expert. However, the novice feelings that they experience in other situations follow them, resulting in an identity whiplash. Here we share stories from our own teaching experiences that have exemplified this clash and the tension between being both a specialist and novice in hopes that our personal reflection may help other GSIs make sense of their experiences.

Sandra: *I was sitting in my supervising professor's office while he skimmed through my student's final paper and the text from the website where my student had directly copied the second half of the paper. Noticing the blatant plagiarism, my supervisor looked at me and tossed me a huge landmine. He told me that as the instructor of record, I had a decision to make. I could give the student a zero for the final assignment, causing him to fail*

the course or I could report it to the university in violation of the Academic Honesty Policy. The student was an athlete, and my choice would impact his athletic scholarship. As a GI who wasn't much older than my students, I felt immediately overwhelmed. Who was I to make that call? How is this going to impact the student's future? Why was I only given options when hoping for guidance? What happens if I make a decision and then regret it? Did I fail as a teacher for letting my student even fall into this situation?

It is not unusual for GSIs to find themselves in predicaments where they must consider all the different possible consequences of a decision they make. GSIs are often unfamiliar with how decisions have been made in the past or unaware of the full range of consequences. Additionally, their status as students themselves, their age, and the age of their students complicates their ability to make these decisions. This can leave the GSI feeling paralyzed and unsure of the right course of action. All GSIs, novice and experienced, need a trusted mentor to go to who can help them understand the systems and structures, power dynamics, and relationships between colleagues, departments, and the institution as a whole. Often this mentor is their academic advisor, but they can also be a professor or other faculty member who the GSI develops a relationship with. This person should help the GSI understand the sometimes hidden "rules" of working at an institution and help GSIs make sense of these systems. We recommend that before they begin teaching, GSIs have a conversation with this mentor to ask questions about working within the institutional systems. These conversations may be especially important if the GSI is teaching a course that has a clinic placement or laboratory session. Some questions to get you started with this conversation include:

1. What are the academic policies that guide my work as a GSI? (Academic integrity, religious holidays, supporting students with accommodations, etc.)
2. How have you used the university's learning management system or other resources in impactful ways, and do we have members in the department who are "experts" in those systems to go to for guidance if needed?
3. If I find myself in a situation where a student is failing my class, what do I do?

Through this example we wish to highlight the difficulty of decision making that GSIs must engage in. While some situations may only involve one classroom, here the decision of how to respond to plagiarism required input from multiple departments. Although as a GSI, you are developing expertise in your field, you may still feel like a novice in some situations, unsure of what decision to make. Having a more experienced mentor to guide you in instances like this, someone who you can ask clarifying questions and who can help uncover the complex relationships between colleagues and departments can help reveal the norms and practices at the departmental and institutional level and help you make sense of those complexities.

Shannon: *In week three of the first course in which I served as a teaching assistant, the professor received an emergency phone call and stepped out early in the lecture, leaving me to cover the remaining content. Although*

we were discussing reading assessment, a topic I was intimately familiar with as a classroom teacher, I could not yet speak with any authority on the full range of different assessments the students might encounter in their future settings. Feeling like a fraud, my face grew red, and my palms sweated. I silently hoped the students wouldn't see through my lack of knowledge as I flipped through the slides as though each was a landmine. I rushed through the material, barely adding any explanation or taking questions, even though I knew that this was not effective teaching. And when the professor finally returned to clarify what I had hastily instructed, I sat heavy in my chair and breathed a sigh of relief.

This brief but embarrassing experience highlights a major challenge that many GSIs face: the difference between mastering content and teaching content. In a multiyear study of teacher knowledge, Shulman (1986) determined that teachers relied on both subject matter knowledge (i.e., mastery of content) and pedagogical content knowledge (i.e., understandings of what makes content challenging or easy to learn and the best representations or explanations to teach it). New GSIs often have the subject matter knowledge necessary to teach a course but lack the pedagogical content knowledge to deliver that material in effective and engaging ways. When GSIs struggle to convert their subject matter knowledge into pedagogical content knowledge, their self-efficacy as an instructor is tested, which can lead them to doubt their capacities as an instructor (Tschannen-Moran et al., 1998). While there is no guaranteed way to avoid the difficult feelings that accompany these experiences, there are certainly actions GSIs can take to navigate the doubts and develop pedagogical content knowledge. These include:

1. As you are planning your instruction, consider reflecting on how you learned the material you are now teaching to students; this will allow you to identify how to scaffold the instruction to build from easier to harder concepts. In addition, lean on your knowledge base and professional experiences to create concrete examples to illustrate complex material. Students benefit from learning new concepts in many different forms, and having concrete examples of how content is used in different settings allows them to develop more robust understandings of the course material. It also provides you a place to be a confident and engaging instructor, which you will not always be initially.
2. Before teaching a new lecture or giving a new assignment, complete the lecture or assignment like you are a student in the course. This will initially be time consuming and challenging but will allow you to identify what is especially hard or easy to learn, how to incorporate examples and clearer definitions into your materials, and what might be engaging and better prepare you to respond to student questions.
3. Take advantage of your campus resources on teaching and learning to learn the foundations of effective pedagogy and learning theory and to gather resources for turning your content knowledge into pedagogical knowledge.

Through this example, we wish to highlight the relationships between your knowledge as a student and the responsibilities of being a teacher. As a GSI you may struggle to transfer your own knowledge

to the classroom setting and to figure out how to best leverage your own professional experiences. A common challenge faced by GSIs is that they know the material as a student, but knowing material as a student and being an effective teacher of that material are not the same thing. This can leave you feeling embarrassed because you believe the lack of pedagogical knowledge is perceived as lack of content knowledge by your students. Practicing the assignments and activities you plan to use as a teacher allows you to recognize potential challenges for students and build your pedagogical content knowledge.

Jon: *My advisor and I had been working on a project related to my dissertation, and we were meeting to discuss what theoretical framework to apply. As he started asking me questions, it became clear that my understanding of the theoretical framework was not as complete as I had thought it was. He brought up great points and asked questions that I couldn't answer. As we wrapped up our meeting, I was swimming in notes and unanswered questions, feeling like I had misinterpreted everything and was not cut out for this kind of work. Feeling discouraged and confused, I headed toward the class that I was scheduled to teach, a junior-level seminar. As I walked in the room, two students stopped me, each with a question that turned out to be a landmine. One asked if they could talk with me after class about a problem they were having in their clinic placement. The other said they didn't understand the reading at all. Here were two students looking to me to provide guidance and clarification about their learning, but how was I supposed to do that when just fifteen minutes ago I was feeling like I was not cut out for academic work and I should quit?*

Part of what makes teaching so challenging is the many other roles that are bound up in being a teacher. Jon's experience foregrounds two of those unique roles. In one role, GSIs serve as curriculum writers. They make decisions about what topics to cover and materials to use. In particular, finding appropriate readings can be a challenge. As a student, GSIs are likely reading foundational texts and contemporary research in their field, yet these readings are often not suited for the courses GSIs teach. Another role that GSIs hold is as mentors for their students. To be an effective mentor, one must consider where their mentee is heading in life and how you as a mentor are positioned to help the mentee meet those goals (Norman & Ganser, 2004). It can be tempting to provide brief, solution-focused techniques, but Norman and Ganser (2004) suggest that mentoring relationships built on humanistic traditions that truly listen to the mentee and build empathy for the mentee's situation are more beneficial. A unique challenge that GSIs encounter is that both the undergraduate student and the GSI are grappling with the same types of questions about their identity and conceptualizing their future. This leaves the GSI likely to feel unsuited to offer guidance and advice. The roles of curriculum writer and mentor would be challenging enough, yet for GSIs, those roles are added on top of their role as teacher and their role as student. These multiple roles and identities each require their own reflection. These reflections might include:

1. Consider a wide range of potential resources as course readings: practitioner publications, newspaper and magazine articles, book chapters, journal articles, etc. Evaluate the range of

voices you are highlighting through your selected readings. Are there perspectives from historically marginalized communities that would benefit your students' learning?

2. As a mentor, listen to your students and their challenges. Students need to feel like they are being heard and supported as they express their thoughts and feelings.
3. Allow yourself to be vulnerable as a teacher and a mentor, which can be a powerful experience for you and for your students. Don't be afraid to share moments of uncertainty or struggle from your own life to help your students realize that growth is possible.

Earlier we discussed our notion of identity whiplash, and this example shows how a GSI can struggle simultaneously with multiple identities. As a graduate student you are asked to be a student, a teacher, a mentor, a family member, and more. Each person has a unique constellation of identities, each with their own expectations. One key challenge of graduate study is that you are asked to be all of these things at the same time, forcing you to rapidly change your most salient identity, which can leave you feeling lost and unsure of who you are. Because your identities are all related, when you feel imposter syndrome or inadequate in one identity is also has consequences for your other identities. Alternatively, when you have a positive interaction that highlights your growth or competency, that can have positive effects on your other identities. Be sure to take time to notice and celebrate those moments.

THE PERSONAL AND THE PROFESSIONAL

Another common shift for GSIs involves balancing the personal and the professional. Today's GSIs are much more than students—they are research and teaching assistants, caretakers, partners, community members, full or part-time employees, children, parents, and friends. Each of these roles demands time and attention, and, in many cases, these roles have competing values, leaving GSIs struggling to prioritize their time, which can impact their quality of life. We offer examples of our struggles with the tension between personal and professional to help other GSIs consider their own context.

Sandra: *I found myself spending hours at my desk. Between grading, working on my own course work, and progressing on my professional writing pieces, I noticed I left less and less time for my family. There were many days where I would see my husband for an hour in the morning as we got ready and an hour before bed. I had taken it to be the norm, and yet still I felt like I was falling behind on grading and writing. I had mentors who reminded me that family time and mental breaks were a necessity, but I also had colleagues and professors sharing about the family time they sacrificed and continue to sacrifice well into their careers. I felt that if I neglected my grading and feedback to students, then I was failing at my job and failing my students; if I neglected my writing, then I was failing as a scholar; and if I neglected my family and own wellbeing, then I was failing myself. Little did I know that I could hit a landmine where I felt I was failing all aspects of my identity. How could I keep on track with grading and model the importance of self-care to my students? How could I make my coursework a priority without dropping the ball on other projects? And most importantly, how do I balance all of this while giving my family the time they deserve?*

GSIs can feel like they are buried under a mountain of stress from unfinished projects, anxiety from upcoming deadlines, and exhaustion from balancing life,

academics, and teaching. We often say, and hear other GSIs say, that there aren't enough hours in a day to be able to keep up with the never-ending to-do list. In these instances, it is essential for GSIs to remember that setting boundaries and sticking to their boundaries is a necessity. Self-care practices like exercise, eating healthy foods, family time, and getting adequate sleep are necessary to give your brain a rest and support our mental health (Bryan & Blackman, 2018). It is essential for GSIs to reflect on their "non-negotiables" and what they need to live a healthy and full life, both as an academic and as a human, and set boundaries to protect the time for these activities. For example, a "non-negotiable" for Jon is yoga 3 times a week, so he builds a schedule around that. Additionally, when planning projects, GSIs need to be honest with themselves about how much time they need to complete a task. An effective approach that has worked for the authors has been to determine how much time certain tasks require, for example, recording how long it takes to read and annotate a research article or recording how long it takes to respond to a student journal prompt. Once we know how long one journal response takes, then we can develop a realistic timeframe for how long it will take to respond to all of the students' journals. Knowing this information, we are able to set more realistic and truthful timeframes. This has also helped us say "no" to projects as we know how much of our time is already committed to other tasks. This has helped us organize and prioritize our projects and our time. Every person's priorities and non-negotiables are different, so while peers and colleagues may have suggestions, GSIs should remember that everyone has different circumstances (Burmila, 2010; Hernandez, 2021). This is especially challenging as the implicit messages of graduate study train us to not notice these boundaries. We often look at other graduate students and professors, see their prolific publication record, and feel as though we need to take on additional work (Bryan & Blackman, 2018). However, if you look for these boundaries in others, you can see them in professors who cancel meetings because of a sick child, block off time in their calendar for a workout class, or limit their email response time to an hour daily.

As GSIs we quickly realize that teaching responsibilities can take up a significant number of hours if we allow them to, leaving us feeling like we have little time to work on other projects that may help our continued professional growth or cater to other parts of our identities. Here are some practical suggestions that come from our experience as K-12 educators that can help GSIs balance their time:

1. Think smarter not harder. Creating efficient resources such as clear rubrics for assignments and starter template response banks (templates that you can add additional personalized comments) for discussion boards, journals, or reflections is an efficient way to provide quick

and clear feedback to students.

2. Pace and time yourself. Set a timer for grading and spread out your grading over multiple days. Limiting yourself to a fixed time or number of assignments in a day will help keep you focused and productive while ensuring that students receive meaningful feedback.
3. It is okay to ask for help and okay to say no. The fear of portraying oneself as a novice, unprepared, or unable to handle the challenges of being a GSI and scholar can easily influence the choice to seek help or turn down a task. However, asking for help and being willing to say no are ways to protect the boundaries that are so essential to help GSIs maintain self-care.

It is important to note that you can't take care of others (including your students) until you take care of yourself. Therefore, GSIs need to ensure that they respect their own boundaries and take moments for themselves to prevent a decrease in their wellness and/or the quality of their work as teachers and scholars (Punia & Kamboj, 2013). In addition to the boundaries GSIs must set to preserve their personal time, they must also consider the boundary between scholar and teacher.

Shannon: *As I developed my dissertation proposal, I spent hours reading and writing literature related to my topic. I found this work captivating, and I couldn't help thinking about how I would teach undergraduate students about the material even if it was slightly outside of the course goals. So, I carved out an hour from one of my lectures to teach them about the nuances of instructional policy implementation. After 20 minutes of mostly confused silence, however, it was clear to me that either I was instructing these concepts poorly or the students weren't nearly as interested in the topic as I was, or some combination of the two. While the material was endlessly fascinating to me, it was only tangentially related to the goals of the course and to my students' degrees. It was in this moment that I realized understanding things for my own research did not mean those same understandings seamlessly translated into good or engaging instruction for my students, most of whom were much newer to the field.*

Each day, your schedule as a GSI might look different—you may be reading and writing a manuscript with colleagues, meeting with students, gathering data for your dissertation, taking advanced courses, or teaching a course to first year students. You can spend your entire day thinking, learning, and teaching about the same topic, but at very different levels of detail and complexity. As you advance in your graduate studies, you work with increasingly abstract ideas as you attempt to "make the familiar strange" (Fillery-Travis & Robinson, 2018, pg. 847). You are often working to develop complex arguments that don't yet make total sense to you, let alone to others. However, we have chosen the topics we research, we understand their value, and we often want to communicate these new understandings to others, including to our students. As you wrestle with increasingly specialized content for your research, it can be hard to separate out the foundational building blocks of knowledge for your field and what you know and understand as a developing content area expert. This poses particular challenges for converting your knowledge to pedagogy and for scaffolding the knowledge to teach it in ways that are engaging and comprehensible to students who are newer to the field (Bliss et al., 1996). Being cognizant of this challenge, however, provides you a vantage point for more purposefully considering what and how you teach content to students.

1. Try to briefly explain the topic or argument to a friend or loved one and gauge their response. When you're finished, ask them to tell you what they just learned. As you listen, pay attention

to what ideas are clear, which seem to be missing, and which they have questions about.

2. Consider the foundational skills and knowledge that a graduate in your field needs to know and leverage those to guide your planning when building lessons based on increasingly complex ideas.
3. Probe your students to gauge what their prior knowledge is on a topic and use that to determine the level at which to start your lessons.

This example highlights how GSIs can struggle with the relationship between dissertation research and teaching. At times these can feel like opposing ideas, because as a graduate student, you are engaging with increasingly more complex and abstract ideas, but as a teacher you are breaking down those ideas to introduce them to students. Incorporating your research into your instruction can be both highly engaging and generative for students, as long as you actively work to identify which of those complex ideas might align with the goals of the course and enhance your students' learning. In addition, by analyzing those ideas alongside people who are less familiar with your content, you can better determine how to break down then build up the multiple pieces of knowledge in a way that makes sense and enhances the classroom experience.

IDENTIFYING AND NAVIGATING LANDMINES IN THE CLASSROOM: FINDING YOUR LIFELINES

Each of these stories shares an instance where the full range of our identities impacted our decisions and actions. In some cases, it was our identity as a student, where we were reminded of our own struggles to balance all of our assignments and felt lost and overwhelmed. In other cases, it was our identity as a scholar, which pushed us to analyze concepts in new ways, often at odds with the needs and desires of our students. Still yet, in other instances, it was the non-academic roles we hold, challenging us to nurture the relationships we value and prioritize our time. Initially, the full range of our identities emerged as a conflict, with an insurmountable "cultural clash" between the differing priorities and worldviews of each aspect of ourselves (Labaree, 2003). However, through additional experience, reflection, and sharing our challenges with other graduate instructors, we have come to understand the clash might not be a clash at all. Rather, as Labaree suggests, it is simply a difference of emphasis, and we could leverage the full range of our identities to be more successful in the classroom.

Considering the full range of your identities when planning and teaching is hard work, and it doesn't happen automatically. Additionally, we acknowledge that this recognition won't prevent you from hitting landmines and struggling with the feelings of imposter syndrome, uncertainty, and self-doubt that make it challenging to enact our role as teacher. Part of what made these landmines so difficult for us was that they caught us completely off guard. As highlighted in the stories shared in this chapter, these landmines came in many different forms—a question from a student, grades, the physical space of the classroom, situations our advisor put us in, the endless to-do list, and many more. Perhaps a GSI's first line of defense for these landmines is recognizing the many types of

landmines that exist. By sharing our experiences and naming our landmines, we hope to offer other GSIs not only things to be aware of, but also some strategies and lifelines that we have used when we hit those landmines. To do this, we have categorized the landmines into three broad types: landmines that happen during the act of teaching, landmines that happen behind the scenes, and landmines of a personal nature.

Landmines that happen during the act of teaching: These can feel the most dangerous because they happen publicly. They leave you in front of the class unsure what to say or do next. In this moment, it is easy to get lost in feelings of helplessness. At times, these landmines occur because you do not know the answer to a question asked by a student. In that case, we believe it is important to admit and acknowledge what you don't know. You don't have to have all the answers all the time. At other times, you have the concrete knowledge to answer the question, but perhaps the topic was not what you had planned to address in class that day. Here, GSIs must leverage their skills of flexibility and adaptability to pivot to new learning. In order to make that pivot, you typically need a few moments to gather your thoughts, so we offer a few ideas to give your students a task while you center your thoughts and decide on the best course of action. In creating this list, we have drawn on our experience in K-12 schools, and we recognize that they may not work for all settings.

1. Preset discussion groups in your class. Then, when you need a moment, have the students get together with their discussion groups and share their thoughts and questions.
2. Reflective writing/journaling. Ask the students to take a few moments to write down their thoughts, find or create an image that resonates with the topic of inquiry, or brainstorm a list of questions they want to explore.

It is easy to assume that both we and our students "check ourselves at the door" and enter the classroom with learning as the only thing on our mind. However, our experiences as K-12 teachers have taught us that students at all levels are unable to do that. Neither they, nor we, cease to feel frustrated simply because the lesson starts. And although with age and experience we become better at bracketing those feelings, they still influence our actions as teachers. As K-12 teachers we learned to "take the temperature of the room" and adjust accordingly. In the K-12 classroom, we closely observed the body language of our students, noticing when they became extra fidgety or when their heads tilted in confusion. These body language cues prompted us to add in a five-minute break or discussion time or to re-explain a concept in a new way.

Landmines that happen behind the scenes: These can be triggered by grading student assignments, planning class periods, and writing your syllabus. While graduate students typically hit these landmines when they are working alone at

their desks, they are no less frustrating and can leave you feeling unqualified to teach and unsure where to begin.

1. Rely on essential questions and enduring understandings. Structure your course so that students try to answer 1-3 big questions and have 1-3 key takeaways that they should know by the end of the lesson.
2. Use rubrics and response banks to help grade assignments.
3. Know who to talk to! All three of us have run into challenges where we weren't sure what to do. Before the semester begins to figure out who you can go to for help and guidance.

As beginning K-12 teachers, the first year was very challenging, but each year became easier as our confidence grew. When we began teaching as GSIs we went through the same process, with the first time teaching a course feeling very overwhelming. But each subsequent time teaching felt easier, and we were more comfortable. Through the first year as K-12 teachers, we leaned heavily on mentors, and we learned to do the same as GSIs. Leaning on this experience and knowledge has been helpful as GSIs, as it helped us recognize that while we may feel frustrated and overwhelmed now, as we continue to teach courses, we will gain confidence and skills. For example, Jon has now taught the same seminar course three times, and each time he has grown in confidence and been able to bring in new ideas and concepts.

Landmines of a personal nature: These may be the most challenging to navigate because they are connected to the human side of your identity. These landmines make you feel like a failure in all areas of your life and may leave you feeling shame about yourself.

1. Know your boundaries. There will always be additional projects and work, so prioritize your time, recognize your boundaries, and say "no" when you need to.
2. Bring parts of your authentic self to the classroom, sharing your successes and your struggles with your students, allowing them to see you as a human.
3. Engage in self-care. Self-care can take many different forms, from seeking physical activities or relaxing activities to seeking quality time with people you care about, to seeking healing. Learn to recognize your own needs and figure out what self-care techniques work best for you.

Additionally, as K-12 teachers, we consciously created opportunities to get to know our students and build a classroom community. Through these experiences we learned how students responded to different approaches. Some respond best to a teacher being kind and nurturing, while others work better with a teacher who is hard and demanding. We must do the same thing when teaching at the college level, responding based on what we perceive our students to need. Building this classroom community has made it easier for us to bring ourselves into the classroom and share who we are with our students. Through tapping into each part of our identity when we plan and deliver our lessons, we are able to build better relationships with our students, adapt to their needs, and be more effective instructors.

Tied up in the challenges of navigating landmines is the nature of graduate education itself, which can be both intellectually and physically isolating, especially under certain circumstances (i.e., an international pandemic). To this end, we have found that developing what we term "lifelines", or consistent support from certain colleagues, mentors, family members, or friends, can drastically enhance the graduate teaching and broader graduate school experience. Central to the idea of lifelines is recognizing that we need different types of support in different situations. When we hit some landmines, we need someone to help us think about pedagogy, but with other landmines, we need someone to eat ice cream with and share our feelings. Naming your feelings and recognizing what you need helps you decide which lifeline to reach out to. We have found that having many different "types" of lifelines can be especially helpful. By "types," we do not mean to suggest you reduce any one person to this category or solely reach out to this person for these needs; rather, we believe that by intentionally considering who to reach out to when, you can develop a robust support network and balance the support among many busy professionals. In particular, you might consider identifying a teaching-related problem solver, a research-related problem solver, someone to vent to, someone to laugh with, and someone to ask advice, among others. It is important that you first identify what the problem is and where in your life it is located (i.e., teaching, research, personal) before deciding who to reach out to. From there, you can determine who in your community has the knowledge and skills to support you in your time of need. In some cases, one person may represent many of these lifelines; in others, people may overlap. The bottom line, however, is that by developing critical lifelines to navigate the inevitable landmines, your teaching, research, and life will benefit.

Teaching is so much more than just sharing information with students. In our experiences as K-12 teachers we had to also serve as counselors, advisors, referees, nurses, disciplinarians, and friends. Too often, GSIs enter the college classroom without adequate preparation for the work of teaching or an understanding that the role of a teacher goes far beyond what is covered on the PowerPoint slides. Here we have identified two of the primary transitions that graduate students must navigate: between specialist and novice, and between personal and professional. These perspectives have different worldviews that may at times be in conflict, but graduate students are uniquely positioned to leverage these multiple worldviews in their teaching. Because of the lack of training and support and the challenging nature of teaching, GSIs often feel frustrated and emotionally and physically exhausted. They wonder how one can be expected to fill all of these roles on top of their responsibilities as students and researchers. All of these questions take place against the backdrop of the liminal space of graduate school and the challenges of graduate students discovering their professional identity. This leaves GSIs particularly ripe to experience identity whiplash, feeling suddenly jerked from one identity to another and unable to ground themselves. Identity whiplash leaves graduate students more susceptible to hitting "landmines" while teaching, which bring about negative feelings, insecurity, and frustration. In this chapter, we have identified and shared three types of landmines from our own teaching experiences, described our challenges with navigating identity whiplash, and

offered some strategies to cope. Through sharing and naming these experiences, we hope to help other graduate instructors recognize potential landmines and begin to develop their community of lifelines. Further, we hope GSIs realize that the full range of their identities is an asset in the classroom and can be leveraged to become more effective teachers.

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CHAPTER 3.

USING A MINORITIZED GRADUATE INSTRUCTOR IDENTITY TO CULTIVATE AN INCLUSIVE AND DIVERSE LEARNING SPACE

FAQRYZA AB LATIF

KEY TAKEAWAYS

- How to humanize the classroom climate and establish an authentic presence that can challenge the conventional Westernized classroom structure.
- How graduate instructors can use their malleable identity to their advantage in cultivating an inclusive community of diverse learners. There are experiences that are unique to graduate instructors, especially for those of us who come from underrepresented cultural backgrounds. These experiences can be utilized to construct a more inclusive and diverse learning environment, which could then encourage students to do the same.

Navigating graduate school is difficult enough on its own, but navigating graduate school when you are a student from an underrepresented group is even more difficult. Language barriers, sociocultural differences, the occasional harassment from random passersby due to my Asian Muslim identity—these are some of the things that I have had to face while juggling my own class assignments, teaching duties, and research projects. Slipping in and out of my student hat, teacher hat, and researcher hat has become more natural with time, but it has not necessarily become easier. Some days are better than others; still, there are days where I struggle with navigating all these different identities. However, it is always good to remind myself that I am in graduate school to

learn, and part of that learning process is learning how to reconcile the different identities and turn them into a strength instead of a burden.

Park and Ramos (2003) described being a graduate teaching assistant (GTA) as similar to being a "donkey in the department" due to our limited autonomy and our heavy workload as a student, instructor, and researcher. While being overworked is a universally shared experience among graduate students and graduate instructors, graduate students of color experience the added stress of being confronted with racism, microaggressions, isolation, lack of sense of belonging, and mental health risks that stem from the aforementioned issues (Brunsma et al., 2017). Additionally, Muslim graduate students face the additional challenge of being discriminated against based on their religious identity and of practicing their religious traditions amidst academic obligations and logistic constraints (Tummala-Narra & Claudius, 2013). For example, class times often conflict with prayer times, exams are occasionally held on religious holidays, and there are no mosques or prayer spaces on campus. I can attest to all these and more.

Even though it is not all rainbows and sunshine, I would not exchange my graduate student and instructor experience for anything else. It is difficult to navigate these issues, but I have come out of it with more compassion and empathy, and with a stronger resolve and determination to continue striving towards my goal of becoming an instructor. It is because I have gone through these hardships that I value student diversity and aim towards fostering an inclusive and safe learning space for my students. My experiences as a member of an underrepresented group in higher education are an invaluable resource in my attempt at reimagining approaches towards teaching, which is consistent with the idea—posited by Collins (2021)—that identity work can be done from the challenges faced by marginalized graduate instructors, which can then subvert the structure of a traditional Westernized classroom. The goal of this chapter is to discuss how this can be done.

Graduate students exist in a liminal space of wavering and transitioning between different states. This period of liminality may be accompanied by feelings of uncertainty or confusion as we oscillate between our roles as the recipient of knowledge and the producer of knowledge (Keefer, 2015). With that in mind, pursuing a graduate degree is as much about identity formation as it is about acquiring and producing knowledge (Green, 2005). Building off this idea, Jazvac-Martek (2009) suggested that graduate students frequently oscillate between their identities as students and academics depending on the context. This work is based on role identity theory, which asserts that individuals simultaneously hold multiple identities and roles, and we switch between these roles while taking into account the expectations engendered by our social positions. Certain interactions or experiences may make one identity more salient than another at a given time. For instance, doctoral students are more likely to feel like academics when they experience intellectual engagements, such as exchanging ideas with faculty members or presenting at conferences, and receive acknowledgement and support for these engagements (Jazvac-Martek, 2009). This suggests that inhabiting a particular role or identity may be an active process. However, some identities are imposed by others upon an individual or passively accepted instead of being actively sought. This might occur in instances where the graduate student compares their level of experience with that of their mentor (Jazvac-Martek, 2009).

Oscillating between a student identity and an instructor identity, then, might be considered as both an active and passive process. When we seek guidance and advice from our mentors, we are actively

inhabiting our student role, but it is also a role that is beyond our control and imposed on us due to the nature of the mentor-mentee relationship and the interaction that transpires within that relationship. Similarly, performing our role as instructors may largely be an active process, but it might also be something that we have to passively accept when we are in the presence of our students. Winstone and Moore (2017) suggested that graduate instructors can actively choose to identify as students or as instructors depending on the context. Regardless of whether it is active or passive, it is critical that graduate instructors work on reconciling the identity of student and teacher rather than letting them be in conflict with each other.

HUMANIZING THE CLASSROOM SPACE AND ESTABLISHING AN AUTHENTIC PRESENCE

With our liminal identity as both student and instructor, we are more open to trying out new practices in class, revising and polishing each instructional method as we figure out what works and what does not based on our own experiences as students and on our students' feedback (Winstone & Moore, 2017). We are also able to engage more deeply and familiarize ourselves with the teaching materials when we field student questions (Park, 2002). Most importantly, we also have the privilege of being able to exercise more empathy towards our students if they face issues that are exclusive to the college student experience. Muzaka (2009) found that undergraduate students perceive graduate instructors to be more relatable and understanding than faculty instructors because of shared experiences regarding high academic workload and deadlines. Additionally, Park (2002) found that undergraduates can identify better with graduate instructors and vice-versa, which allows graduate instructors to teach from an empathetic position that recognizes the difficulties that undergraduates may face when it comes to—for example—understanding course materials and coping with student life. True enough, I have found that I can use these shared experiences as a tool to bridge any gaps between myself and my students, and as a method to humanize the classroom climate and establish instructor presence. While lamenting about the trials and tribulations of being a university student can be a point of commiseration, a more scholarly approach to humanize the classroom and assert instructor presence is through the use of icebreaker and discussion activities. Throughout the semester, I implement icebreaker and discussion activities to get students to engage with me, with each other, and with the day's lesson. For example, before starting a lesson on moral development, I ask students to answer this prompt: 'Think of something nice you did for someone this past week. What was it? What was your motivation in doing so?' I would ask them to contribute to a Padlet, where they can anonymously share their answers. These kinds of activities are meant to carve a space for the students to connect the class content with their own experiences and share them, if they are comfortable doing so. While connecting the icebreaker and discussion topics with the learning objectives is a crucial component to keep in mind, it is equally crucial to consider the activities as a way to humanize the classroom space and make students aware of my "being there."

Based on Paulo Freire's work, Martinez and colleagues (2016) define humanization as a process where individuals become more fully human as social, historical, thinking, communicating, transformative, and creative people who participate in and with the world. Instructors who apply humanizing pedagogies can engage in "mutual humanization" (Freire, 1970, p. 26) through dialogue with their students. These humanizing exercises are rooted in the objective of practicing critical and inclusive pedagogies by engaging the "whole" student – whether emotionally, intellectually, or spiritually – in

the teaching and learning process (Tuitt et al., 2016). Instructor presence, on the other hand, can be defined as the sense of "being there" that students get from the instructor, and the sense that the instructor is closely accompanying the students in their learning (Gemein, 2021). Starting the class by asking students questions about themselves and their experiences while connecting them to the class materials, for example, is one of the ways to incorporate these notions of humanization and presence by building intentional learning relationships that bring student voices into the classroom, ultimately culminating in an inclusive classroom. This strategy is related to intercultural teaching competencies, which refers to "the ability of instructors to interact with students in a way that supports the learning of students who are linguistically, culturally, socially, or in other ways different from the instructor or from each other, across a wide definition of perceived difference and group identity" (Dimitrov et al., 2014, p. 89).

An example of an activity that I have implemented to achieve the goal of humanizing the classroom and establishing instructor presence is an activity related to language development. Since the topic of that lesson is centered around learning language, with specific focus on learning more than one language, I ask students if they are monolinguals or if they can speak more than one language. Then I ask a few of them to share what their language development was like, if they could recall it. I occasionally join in on the activities by sharing some of my own experiences, partially to humor the students who outwardly expressed their interest in my answers, and mostly to model the behavior and to humanize myself. It is also aimed at establishing my presence as an instructor in the classroom, which had become more imperative to do when classes shifted online during the COVID-19 pandemic. This aligns with what Collins (2021) refers to as decentered teaching and resistance, where graduate instructors, particularly those of international status, shift the active role onto the students when generating discussions rather than centering these dialogues around the instructor. In this practice, the graduate instructor becomes a learning partner who—while taking a step back—is still a part of the exchange of dialogue, occupying the role of both teacher and learner (Collins, 2021). This might be easier to implement with our malleable identity; students have tended to report that faculty instructors, who have more concrete teacher identities compared to graduate instructors, appear more distant and formal than graduate instructors (Kendall & Schussler, 2012).

While there is a risk to bringing the whole, authentic self into the classroom for instructors from minority groups who try to subvert the conventions of predominantly White institutions (Williams, 2016), there is also value in working through this process of introspection and taking subsequent action. As a graduate instructor with a malleable, unfixed identity, I already engage in reflective practices centered around my positionality and vulnerabilities. For example, while it is inevitable that I face social challenges stemming from my identity as a foreign woman of color, it is also undeniable that I am in a position of power as an instructor to my students. Henderson (1994) asserts that the presence of a non-White male instructor in the classroom is in itself a disruption to the status quo that can potentially bring about the discussion of preconceived notions of classroom authority. This indicates that with an introspective mindset that acknowledges the existing classroom power dynamics, I am able to resist and challenge the entrenched institutional structure by simply being authentic and present.

FOCUSING ON COMMUNITY VALUES AND DIVERSITY

Resisting the conventional institutional structure through a liminal identity can also be done by

focusing less on individuality and more on collectivism. It goes without saying that independent thinking and independent work are important in facilitating learning; however, too much emphasis on the individual may obscure the impact and significance of group work and collaboration. It may also inadvertently discourage students from asking for help when they need it. Drawing from my own experiences as a student, I admittedly (and a little begrudgingly) find it helpful when I am tasked to do group work. Naturally, preferences vary across different individuals; I personally prefer to work alone and am usually more focused when I am on my own instead of with my peers. That does not mean, however, that I do not see the importance of collaborating with others, of seeking guidance and help from others, and of forming community support.

When you are a foreign Muslim woman of color, establishing these ties becomes more imperative. Although a few studies have found that perceived support from those of similar cultural backgrounds can act as a buffer against the stresses of cultural adjustment (e.g., Asvat & Malcarne, 2008), other studies have found that perceived support from people outside of one's ethnic or cultural background is correlated with lower acculturative stress (Williams & Johnson, 2011). Forming connections with the local Muslim community or with other Asian students has been the cornerstone of my mental health throughout my time in the United States, but forming connections with domestic students of varying backgrounds has been just as valuable. Ultimately, it is about the diverse kinds of people you interact and form connections with. It is about coming to understand that your identities and lived experiences influence almost every aspect of your life, including the ways that you engage with the construction and reproduction of knowledge. For instance, with my identity as a graduate instructor, I approach teaching the way that my supervisors have trained me. For example, ask students questions to probe their understanding and wait out for their responses in silence no matter how long it takes to avoid spoon-feeding them. But, as a graduate instructor who comes from a foreign culture, the way that I approach teaching will be influenced by my background in one form or another. For example, as an instructor whose first language is not English, I approach teaching with the assumption that language barriers might be a hurdle for a lot of students. Obviously, this is not always the case, but it does not prevent me from repeating questions in different ways to ensure that students can understand them instead of waiting out for their responses in complete silence, because I myself have always found it helpful to reformulate questions in different ways to get a deeper comprehension of them.

Under many—if not all—circumstances, diversity is fundamental and beneficial, whether it is about fostering a sense of belonging (e.g., Wu et al., 2011), advancing academic performance (e.g., Konan et al., 2010), or increasing open-mindedness and lowering fear of different others (e.g., Williams & Johnson, 2011). Of course, the diverse make-up of my classroom is beyond my control, but what is within my control is the ways that I can convey my values regarding diversity and interpersonal connections through the use of group work. Diversity, in this context, refers to differences in individual identities—such as personality, learning preferences, and prior knowledge—and social identities—such as age, gender, ethnicity, disability status, and nationality. It also refers to differences in ideas and values (Racial Equity Tools, 2020). With regards to the classroom context, underscoring diversity also means acknowledging and appreciating that there are various ways of knowing and learning, some of which might be "non-normative" or outside of what is considered "conventional" (Moore, 2020).

Before I provide an example of how I focus on group work and collaboration between my students, I must first mention that I explicitly communicate my views on community building and collaboration to my students. This is something I began to do when classes shifted to Zoom during the COVID-19 pandemic. With students fatigued and burnt out, they were less likely to be enthused by the idea of engaging in group work in their breakout rooms. Because of this, I would always make a point of reminding students that—for example—collaboration means delegating tasks, and delegating tasks means less work for one person. I would also remind them that a few of their classmates might not have the level of knowledge or the digital tools necessary to complete the task alone, so it is important that they support each other because we all share the responsibility of ensuring equitable engagement and access in class. These are examples of the ways that I communicate the importance of working collectively instead of individually. They might not have always worked, but making my intentions and rationales clear is a good strategy in inclusive teaching practices, nonetheless. Addy and colleagues (2021) postulated that providing students a rationale behind instructional decisions or classroom policies can give them a clearer understanding of what they need to accomplish in terms of meeting learning goals, and it can give them a better grasp on when and how to make use of the resources provided to them. Furthermore, it can allow students to be better equipped to advocate for themselves. Essentially, giving students a rationale behind one's decisions can "level the playing field" (Addy et al., 2021, p. 65) and create a more equitable learning space, which is especially important for students who do not have the means of understanding or experiencing the unspoken "norms" and "rules" of academic success.

Encouraging peer-to-peer support and learning is also related to the effort of decolonizing the curriculum. Decolonizing the curriculum entails the acknowledgment that knowledge is not owned by anyone; it is a shared resource that is co-created by people of all kinds (Wilson, 2021). It also acknowledges that there are certain behaviors in Western classrooms that are traditionally more valued than others due to the social hierarchies shaped by a colonial history. For example, those who speak up and speak often are marked as being intellectual because they are exhibiting their identity as "self-willed, free-thinking individuals" (Heble, 2002, p. 4). If this is the case, then what about the students who do not speak up? Do they automatically get tagged as uninterested and idle? What if they have plenty of thoughts to share but are bound by unseen circumstances that prevent them from doing so? How can instructors provide opportunities for engagement that do not rely solely on one medium of communication? These are the sorts of questions that arise when I start thinking about dismantling barriers in the learning community and revisioning ways to approach teaching and learning so as to challenge the conventional classroom or institutional structure.

An example of how I focus on group work and collaboration between my students is by assigning them a task in class where they need to review an empirical article and extract the most essential information from each section of the article. Each group would be in charge of a different section. I hold them accountable by having them produce an artifact that they can show when we regroup as a whole class and by having at least one member of each group present their work. For example, I have them create Google slides that contain the information they found. This would allow students to engage with the content either orally (i.e., when they present to the whole class) or through text (i.e., when they create the artifact). Dividing them into groups would also allow the students to discuss their ideas with each other before sharing them with the rest of class. This would enable students who are too shy or anxious to share their ideas in larger groups to still have a chance to engage in

conversations that would allow them to express their thoughts. Additionally, a collaborative activity would allow students to help the group members who might not have suitable devices to work on the artifacts or the group members who might need a longer time to compose their thoughts, such as students with a learning disability that impacts writing speed or students who are non-native English speakers.

Is this practice effective in inculcating an appreciation for collaboration among students? Results from Student Course Surveys (SCS) indicate that it is a mixed bag. Some students like participating in group work; others do not. From one particular semester, a student stated in their SCS that they liked having "small groups to discuss things with" because they were "comfortable sharing ideas with each other," while another stated that breakout rooms "were not very beneficial" because they "learn more as a big group." As I mentioned before, preferences vary across different individuals. We cannot win all our battles, but it is still important to keep in mind that a sense of community—while not spread among all the students—can be fostered through the use of group tasks. As one student put it, being able to discuss ideas in smaller groups "reduces a great deal of the anxiety that is associated" with speaking in larger groups. There is value in collaborating with peers, whether it is pertaining to increasing support for sustained engagement or facilitating equitable access in class (CAST, 2018), and there is value in acknowledging that there are diverse learners within one classroom who differ in not only learning preferences but also lived experiences. By encouraging them to work together, I hope to give them the space to form meaningful connections. I also hope to give them exposure to different perspectives and ways of knowing and of expressing that knowledge.

FINAL REMARKS

It is important to me that students, especially those who come from underserved populations, have a platform to share their unique experiences. If there is one thing I have learned from my own experiences as a minority student is that my voice and my experiences are just as valuable as any other student's, and that being allowed to share them as appropriate in a safe learning environment has been fundamental to my growth as a student and instructor. It is why I strive to offer the same opportunities for my students as well. My attempts to achieve this goal includes applying activities that humanize the classroom climate and establish an authentic presence, and implementing group work that facilitates interpersonal connection between diverse learners. While being a graduate instructor who exists within a liminal state comes with its own set of challenges, it also comes with unique characteristics that allow for meaningful engagement with ourselves, our students, and the entrenched institutional practices.

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CHAPTER 4.

TRANSFERRING KNOWLEDGE AND OPENING PATHWAYS: THE UNCONVENTIONAL DOCTORAL STUDENT-ADJUNCT INSTRUCTOR

SAMANTHA PRADO

KEY TAKEAWAYS

- Doctoral student/adjunct instructor is a unique and important positionality that can provide perspective on the range of graduate student instructor experiences that exist.
- Positionality can be used to break down educational barriers and increase equity in the classroom.
- Transferring knowledge between contexts can be a form of advocating for social justice.
- There are both advantages and challenges to being a doctoral student/adjunct instructor.

INTRODUCTION

I have been an adjunct college instructor for longer than I have been a doctoral student. I am about to wrap up my eighth year teaching sociology at the community college level as an adjunct instructor. At the same time, I am in my third year of a doctoral program in education. Leaving teaching to fully embark on a doctoral program did not seem like a possibility for me for multiple reasons, mostly connected to my positionality (Espino, 2018; Takacs, 2002). In the following paragraphs, I will address plenty of these reasons.

I am a woman of Color who teaches at behavioral and social sciences departments at the community college level. My presence as a woman of Color has been crucial due to the lack of minoritized representation in this higher

education setting, so I, in my effort to increase diversity and underrepresented student access to higher education, feel I must remain lecturing for community college for as long as I can. The lack of diversity in faculty directly impacts representation as our community college student bodies tend to be largely composed of students from minoritized groups. The lack of faculty diversity at the higher education level is a nation-wide issue not exclusive to any of the institutions I have worked for.

POSITIONALITY

Not only am I Chicana, but I am also a second-generation Mexican-American, daughter of immigrants who left their country in their early adulthood so that they could build something for their growing family. Furthermore, my immigrant parents never mastered the English language, nor did they possess a formal higher education. They did not have friendships and social ties in the United States that could facilitate their transition into American culture and upward mobility. My parents did not have a stable legal status either, having arrived in the United States with passports and overstayed their allotted time. Additionally, one of my siblings was born in Mexico, so they also never had a stable legal status in the United States. I was part of a mixed-status family, a situation that did not change until my early 20s when, fortunately, my parents and sister were all able to gain American citizenship.

English was my second language since Spanish was exclusively spoken in my household. When I was in grade school, we moved to Mexico, so I was only educated in Spanish through the Mexican public school system. I came back to the United States at age 10, so I then was able to learn English through my American public education schooling.

I was a first-generation college student, having followed my siblings' example of embarking on the higher education journey through the local community college. Like my brother, I attained my GED certificate and immediately began my community college coursework with the hopes of finding my way into completing a degree. Through a lot of challenges, dedication, and drive, I reached the goal neither of my siblings was able to attain, which was to transfer to a four-year college. Transferring was not only a victory for myself but my entire family and my community. I transferred to a state university that was near my home which also had higher acceptance rates in comparison to the state universities in the region.

The university I transferred to had been recently established. It was located approximately 20 miles away from my home, which was a fairly close driving distance, as remaining in San Diego and home was a priority for my parents. After two years, I graduated with my bachelor's degree. It was unbelievable! None of my friends had done it, and up until this day most still have not. During my second semester at the university, my brother was diagnosed with cancer, and he soon lost the battle with it before I entered my third semester. I graduated without any celebrations and continued to work full-time in clerical positions. After a couple of years of bereavement, I decided to pursue a master's degree since I felt I did not have the platform for fulfilling my vision of creating equitable opportunities in education for others. All these experiences I had faced continued to motivate my intention of obtaining a higher education. I had no clue of how to write a letter of interest for a graduate program, did not know how to adequately request letters of recommendation from faculty, and did not possess any familiarity with the process of graduate school. Fortunately, my significant

other at the time was working at our community college's English tutoring center, and he encouraged me to seek tutor guidance there. Although I was no longer an active student at the time, I decided to use my student ID and request a tutor's aid for what I called an independent study assignment. I met a kind tutor who was an older white female and held a bachelor's degree. I shared with her my intentions of applying to graduate school, and she taught me the necessary skills to complete an effective graduate program application. I got into the master's program and completed my graduate degree in sociology. The tutor passed away before I could thank her.

Then, I had the privilege of teaching at the same continuing education program that enabled me to get my GED certificate and teach at sites that were located in the areas in which I had grown up. I found a way to connect with my community and empower them. I was different from other faculty—I shared with my students my experiences getting a GED, I showed them my actual GED in class, and I encouraged them to pursue higher education or whichever goals they had for themselves. While the struggle was real, I fully understood that it was possible to make our dreams come true. With a master's degree, I was now able to teach sociology at the community college level.

At the community college level, I am one of the consistent brown people teaching. My pedagogy was strongly supported by my department chair and the other tenured sociologists. My pedagogy has been strongly focused on Paulo Freire's teachings, which discourage education as a banking system and rather spark critical thinking values (Freire et al., 2001). I came across Paulo Freire's work briefly in graduate school but especially during faculty professional development workshops. I was also greatly influenced by bell hooks (2013) and her focus on teaching as a gesture of love, keeping in mind intersectional identities and how oppression plays a role in learning. I was also fortunate to have been exposed to bell hooks in my last semester as an undergraduate by a Black male professor whose own student-centered pedagogical strategies motivated my future teaching. I taught critical sociological courses in the same community college where my own higher education journey had begun. Again, I often shared my experience as a former alumnus, first-generation college student, and woman of Color. Throughout my teaching experiences, my positionality had been centered on matters of underrepresented statuses, such as my low socioeconomic status growing up and post-college, my ethnic minority status in a time of much xenophobia, my gender identity which has been negatively impacted as a result of patriarchy, and my multiple invisible and visible disabilities (Allen, 2011; Johnson, 2018; Solórzano & Yosso, 2001). These underrepresented social identities had been key to my experience navigating the community college setting and the classroom environment. My underrepresented social identities are also what sparked my thirst for knowledge and desire to develop a space where students who shared some of these identities could succeed and imagine endless possibilities for themselves. I acknowledge my privileges as well as the oppressions that limited my teaching experiences. I would constantly experience pushback from privileged students who discredited the research or the validity of my lectures and knowledge.

All these aspects of my identity informed my pedagogical strategies and understanding of student experience. Understanding the challenges of the educational journey and the losses that occurred along the way enabled me to be very empathetic to my students. My training as a sociologist and my own experiences of engaging with wonderful caring people and books such as *Reaching for the Stars: The Inspiring Story of a Migrant Worker Turned Astronaut* by Jose Moreno Hernandez and *The Circuit: Stories from the Life of a Migrant Child* by Francisco Jimenez have left great imprints in my soul and

given me further motivation to build community with my students and create an opportunity for healing and deeper understanding life experience.

TRANSFERRING TOOLS AND KNOWLEDGE TO THE COMMUNITY COLLEGE FROM THE FOUR-YEAR UNIVERSITY

Upon being accepted and beginning my doctoral program in education at an R1 institution, I realized there was much more gatekeeping in higher education than I had first realized. Just for starters, Latinxs comprise a minority of all doctoral degrees granted in the U.S (Contreras & Contreras, 2015). My process of navigating higher education and obtaining greater forms of capital (Becker, 1989; Bordieu, 1986; Coleman, 1988; Stanton Salazar, 1997) allowed me to realize that there was so much knowledge that had been restricted to students with greater financial access and privileged backgrounds. Some unspoken rules and expectations marked the institutional barriers that some face and the institutional privileges that others are automatically granted. For example, traditional college students attending four-year universities may experience opportunities leading to competitive internships, networking, status, substantial scholarships, exposure to greater social capital, and ensured degree completion. Most importantly, traditional college students attending these four-year universities can find validation of their ways of knowing, cultural affirmation, self-entitlement, power dynamics in the classroom which favor them, as well as a greater spirit of optimism and confidence. For this reason, I decided to continue encouraging my community students to think critically about unequal social arrangements, question everything and anything, and pursue their goals no matter how big they were. Most important of all, I decided I must continue to provide them with as many tools as I could for this for however long I was permitted to do so.

After taking classes at UC San Diego and UCLA, I learned pedagogical techniques using educational platforms and software such as Mentimeter, Padlet, Google Docs, Slides, Sheets, and Jamboard. I then used these tools to increase my students' engagement in the classroom, especially during the COVID 19 pandemic. I assigned my students readings and the most recent research publications on matters that concerned them or were of their majors' interest. I gave my students website addresses, workshop links, and other information that was relevant and important for their educational growth. I then began to see myself as less of a passive educator and more as an active agent in the struggle for educational equity and access (hooks, 1994; Solorzano, 1989). While I have always acknowledged my complicity with institutional oppression as I am part of the system by perpetuating colonized teaching practices, upholding unequal outcomes by following institutional grading systems, and internalizing hegemonic educational values, I continue to find ways of decolonizing education, developing equity-based teaching practices and grading systems (Alba Cisneros, 2021; Battiste et al., 2002).

I hold autonomy in the classroom as an instructor of record. This leadership position allows me to engage in academic freedom to develop and implement classroom curricula. This freedom also allows me to share the knowledge and experience provided to me by my journey through my GED, community college, and master's degree, as well as my current doctoral student journey. I view myself as a bridge between the community college and the primarily white institution where I am currently pursuing my doctoral degree. I am bringing my knowledge, experience, and resources to my community college students, most of whom are from underrepresented backgrounds and are facing challenges as difficult, and sometimes more difficult, than those I once faced.

It is important for doctoral students and graduates who are Black, Indigenous, and people of color (BIPOC), and those with other underrepresented social identities, to hold spaces of leadership in education. Due to the limited representation of such backgrounds, these identities are vital for equity in the classroom and for increasing access to education (Neville, 2015). If an underrepresented doctoral student serves as an adjunct instructor in the community college setting that serves non-traditional student bodies, stepping away from the predominantly white institution (PWI) or historically white institution where they may be pursuing their degree, they can invest energy, efforts, and resources into groups that have faced historical oppression rather than just keeping that energy siloed at their university. Personally, serving as an adjunct instructor has provided me with formal educator experience. I encourage graduate students from underrepresented backgrounds to obtain adjunct instructor positions as this experience provides multiple benefits: it benefits underrepresented students by infusing doctoral education experience into the community college setting; at the same time, it allows the doctoral student to obtain formal teaching experience, providing them an advantage on the job market.

Some examples of the benefits the underrepresented student groups may receive from being taught by graduate student adjunct instructors are engagement in the most current research findings, recently published articles and books, the most modern theories in the field of study, and the newest forms of technology and programs that may enhance community college non-traditional students' learning experience. In my case, through the courses I have taken at UC San Diego and UCLA and workshops I have attended virtually in numerous parts of the world, I have been able to learn about the latest research findings and theories and I have brought them into my community college classrooms for students to learn about. I have been able to bring into the community college classroom technologies such as Padlet, Mentimeter, Google Docs, Slides, Sheets, and Jamboard. These forms of technology allow for educators to have real-time interactions with students, as well as offer the opportunity to engage in innovative teaching and learning strategies. For example, before the pandemic, in my community college classes, I had students play a virtual game called PlaySpent collectively. This game offers a scenario of a single parent impacted by job loss and poverty. While I assign readings on the sociological imagination (e.g., Mills, 2000), this activity provides a deeper understanding of that concept. While teaching during the pandemic and working towards my doctoral degree, I have been able to lecture my students synchronously via Zoom and have them play PlaySpent on their own and post their reflections through Padlet boards. Another example of a learning activity is teaching about deviance: I share a social worker scenario handout where students have to decide to place a child in a home, ranging from the most acceptable home to the most unacceptable home. Usually in the classroom, I let students complete this activity for a few minutes and then come together and share collective choices. This activity enables us to understand how deviance is socially constructed and viewed differently from case to case. Since switching to virtual classes, I assign this activity by providing the handout to my students and having them go to menti.com where they vote their choices. At the end of the votes, I can see a bar graph that shows their collective choices. I then share my screen during synchronous class discussions for them to understand their social construction of deviance. I am later able to download the class results as a .pdf document and save it into my course learning platform, where the students can access it and reflect at any time. I have received positive feedback from students on these kinds of pedagogical strategies and student-centered teaching style.

CHALLENGES AS A GRADUATE ADJUNCT INSTRUCTOR

While there are many positive outcomes to adjunct teaching, there may be challenges faced by the graduate student as an adjunct instructor, such as demanding requirements to allocate significant time and efforts to professional development activities. For such challenges, it is important to pair these professional development or work-related expectations with their graduate research, such as presenting at conferences and developing workshops. Graduate student instructors must limit their personal energy allocated to these events and multi-task. While there is no one way of dealing with assigning time and emotional labor to department meetings or enduring student evaluations, it may be important to attend or comply only with the mandatory tasks. In the case of student evaluations, which can be vital for ongoing instructional opportunities, it is important to comply with program requirements while at the same time being true to one's pedagogy. Proving the effectiveness of a student learning outcome through an innovative or decolonized instructional method and assessment instruments may be one way of effectively complying with program requirements (hooks, 2013; Yosso & Solórzano, 2007). Office hours may be time-consuming, but they are vital for building community and engagement with students. Additionally, this time can be used for grading and preparing the course, and also reviewing student submissions, and providing feedback in face-to-face dialogue. While there is a high possibility of course cancellation due to low student enrollment or courses being transferred to contract/tenured faculty, it is useful to use software and materials that allow replication so that materials and strategies can be recycled for similar or identical teaching plans.

CONCLUSION

I think about who will support my students and who will teach my classes once I am gone from the community college setting. BIPOCs are disproportionately found in the classrooms (Espino & Zambrana, 2019; Ingersoll et al., 2019). For this reason, I keep my motivation to continue pursuing a doctoral education and writing this piece, so that other BIPOC and people of underrepresented social identities can deeply reflect on their role in educational equity and access. We need to set an example for future generations to follow.

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CHAPTER 5.

NAVIGATING THE MULTIPLE ROLES OF MATHEMATICS GRADUATE TEACHING ASSISTANTS IN PURSUIT OF RACIAL EQUITY, ACCESS, AND JUSTICE

KRISTYN LUE

KEY TAKEAWAYS

- Mathematics Graduate Teaching Assistants (GTAs) play a large role in the socialization of undergraduate students of Color and thus have an impact on their sense of belonging and retention in the STEM fields.
- GTAs occupy a unique role as agents of mathematics socialization, as they are also undergoing their own socialization as doctoral students; in many ways, these roles and this socialization processes constrain GTAs in ways that can be detrimental and marginalizing to students of Color.
- Without being aware of the ways in which systemic racism and white supremacy operate in mathematics spaces, GTAs play a role in upholding racialized hierarchies in STEM by maintaining a culture of exclusivity and elitism in mathematics classrooms.

I'll never forget the specific blend of excitement and anxiety that came about every semester when the schedule of courses for the following semester was released. UC Berkeley, where I was an undergraduate mathematics major, was a large public research institution that enrolled over 25,000 undergraduates per year. As such, the mathematics department was also quite large—large enough that each required course for my major had at least two sections taught by different faculty members. When the schedule for the semester was released, I would inevitably look up the faculty that were teaching the math courses I wanted to take on ratemyprofessor.com and see what students had to say about

them. Sometimes there was a clear difference between the options, with one professor being rated much higher than the others. Other times, the difference in ratings was barely discernible.

My friends and I would then spend the weeks until our registration appointments discussing which section we should take—was it better to take a class with the more highly rated professor, even if the course was first thing in the morning? We would keep an eye on the number of seats left in our desired sections, lamenting the occasional times when the "good" professor's class filled up. We knew that websites like ratemyprofessor.com weren't the most reliable of websites; there would always be biased reviews and the quantity of reviews also varied amongst faculty. But we had also learned that a "good" math professor and a "bad" math professor made all the difference in our experiences, and trying to figure out who was the best option—and then enroll in their class—was a necessary endeavor.

Defining what made a "good" math professor was complicated, and not just relegated to their teaching styles, though that certainly was a big component. While all of the math faculty were brilliant mathematicians, they varied in their ability to communicate complex mathematical ideas to undergraduate students. I found that the best professors were patient with student questions and were able to explain concepts in multiple ways. They also adjusted exam scores based on how students did; when one of my professors, for example, realized that nearly everyone in our class had failed a specific question on our exam, he told us that he was going to remove the question from the grading of the exam, as that pattern indicated that he hadn't taught that concept well enough. We then spent time reviewing it further in class. This specific professor was also extremely accessible to students and made it a point not only to encourage us to come to office hours, but to set up breakfasts and lunches for students so that we could get to know him and other students in the class on a more personal level.

Of course, not all of my math courses were like that one. There were the faculty who would blame us if we all failed an exam, or indicate that the people who didn't do well on exams should not continue in the math major because we didn't have the intelligence or skill to succeed. Many of my math professors were also unable to communicate concepts in different ways. I remember one professor in particular who, when a student asked a question about something he had drawn on the chalkboard, looked at the student in disbelief, then at the chalkboard, then back at the student.

"Just…. Look at it," he said, pointing at the drawing with his chalk.
"I am looking at it," my classmate replied, "but I don't understand it."
"Well just look at it."

We all sat there in stunned silence as the back-and-forth continued once or twice more, but none of us felt brave enough to try and offer our own explanations for the concept or to tell our professor that perhaps he should try a different way of explaining it. Eventually, the student who had asked the question shook his head in frustration, said "okay," and we moved on with the lecture.

I also had to take courses in the statistics department for my concentration, and some of those courses only had one section being taught. I will never forget going to one of my statistics professor's office hours. He seemed congenial and approachable enough in class, so when I found myself struggling with some of the homework questions, I decided to go to office hours to ask for help. While I can no longer recall the exact exchange between us, I do remember that the conversation was not helpful; as he explained steps of the problem, there was a sense of impatience and occasional frustration that I was not immediately grasping and understanding what he was explaining. Eventually, I became too embarrassed and ashamed to admit that I still didn't understand how to solve the problems we were working on, and I assumed that the problem must be with my own comprehension rather than his explanation (it didn't help that he had written the textbook). I buried my head in the textbook, hoping that some glimmering insight would appear to me.

My concentration was then broken by the sound of shouting. My professor was helping another student—an international student from China who spoke English as a second language.

"WHAT DO YOU NOT UNDERSTAND ABOUT THIS. WHAT IS FUNDAMENTALLY WRONG WITH YOUR BRAIN THAT YOU CAN'T UNDERSTAND WHAT I'M SAYING!"

The pleasant, cheery professor from class had transformed into a terrifying, angry red face who was berating a student for not only not understanding what he was trying to explain, but for not speaking English as fluently as he expected her to. The racialized nature of the incident was also not lost on me, and as an Asian(American) woman who—like the student he was berating—also struggled with understanding both the material and his explanations, I resolved to never go back to his office hours again.

I suspect the other student decided the same.

The negative experiences I had in the mathematics department during my time as an undergraduate far outnumbered the positive experiences I had. My undergraduate experience was filled with many stressful nights of studying and struggling to complete homework assignments, with the occasional breakdown that ended in tears and questioning if I would be able to successfully complete the major. I was not alone in these feelings; many of my friends also questioned whether we really "belonged" in our major, and whether we would be able to finish and graduate. The math major at UC Berkeley was notoriously regarded as difficult—as were many of the STEM majors. Even the lower-level math courses, which were required for STEM majors outside of the math major, were referred to as "weeder" courses, and those of us who were able to persist seemed to be part of an exclusive "club" that was deemed impressive and intelligent due to the alleged rigor of the courses we took.

In short, it was clear that there were perceptions of who "belonged" in the STEM fields, and who didn't. Students who "belonged" were the ones who could grasp concepts quickly and easily, who didn't struggle as much with exams or homework problems, and who didn't have to go to office

hours or ask questions in class—in fact, they were the ones who could answer questions posed in class. They were the students who could listen to lectures and read the textbooks and seemed to innately understand exactly what was happening and what we were supposed to be learning. These perceptions were constantly reinforced by our interactions with faculty and in our classroom experiences—especially in, but by no means limited to, the courses taught by the "bad" professors.

As a graduate student who has spent the last several years trying to better understand the phenomenon of "belonging" in the STEM fields, I now understand the roles that student-faculty interaction, race, and racism play in the development of this sense of belonging—or the socialization of undergraduate students in the STEM fields. Over the last few years, I have also come to realize the unique power that graduate teaching assistants (GTAs)—specifically in mathematics—have in facilitating this socialization process; this has become the core inquiry of my dissertation. What follows in the remainder of this chapter is a weaving of my personal experiences and the research on the experiences and socialization of students of Color in the STEM fields to explain how I arrived at this topic, what I have learned thus far, and what mathematics GTAs who are committed to racial justice and equity in the STEM fields and beyond might do to engage in this type of work.

Research on the retention of students in the STEM fields has highlighted the influences of positive student-faculty interaction and classroom experiences on persistence and achievement in the STEM fields (Cole & Espinoza, 2008; Ellington & Frederick, 2010; Palmer, Maramba, & Dancy, 2011; Seymour, Hunter, & Weston, 2020). Research that focuses specifically on the retention and persistence of underrepresented students of Color in the STEM fields has found that the nature of student-faculty interaction is often contingent on students' race (Cole, 2011; Kim & Sax, 2009; Park, Kim, Salazar, & Hayes, 2019). Underrepresented students of Color are more likely to have negative interactions with faculty, facing discrimination, microaggressions, and racial stereotyping (McGee, 2016; Park, Kim, Salazar, & Eagan, 2020; Park et al., 2020). In other words, STEM faculty both explicitly and implicitly signal to underrepresented students of Color that they do not "belong" in or are "worthy" of being in the STEM fields, which often leads to feelings of marginalization, exclusion, and ultimately, attrition (Carlone & Johnson, 2007; McGee, 2016; Park et al., 2020).

The process through which undergraduate students learn whether or not they "belong" in the field is linked to how students understand themselves as aligning or fitting in with the values, norms, and culture of a field (e.g. Dortch & Patel, 2017; Garibay, 2018; Johnson, 2007). In other words, the development of a sense of belonging happens through a socialization process. While this socialization process happens across the STEM fields and at all levels of students' undergraduate careers, a particular focus on mathematics socialization during the first two years of university is critical for scholars concerned with racial access and equity in the STEM fields, given that mathematics courses are prerequisite (or "gateway") courses into many STEM majors (Adiredja & Andrews-Larson, 2017; Leyva, McNeill, Marshall, & Guzmán, 2021).

It is important to note that the socialization process is supported by actors. In mathematics departments, faculty members are key actors who facilitate the socialization of undergraduate students and, as such, can be thought of as a*gents of mathematics socialization* (Martin, 2000). However, in many mathematics departments, graduate teaching assistants (GTAs) make up a large part of the teaching labor force and have high levels of interaction with undergraduate students. Many either serve as the instructor of record or teach the discussion sections for lower-level undergraduate mathematics courses. Arguably, then, GTAs can have just as large of an—if not a larger—impact on their students' sense of belonging as faculty, as GTAs for lower-level mathematics course are serving as agents of mathematics socialization for undergraduate students of Color during a critical time of their undergraduate academic trajectories (i.e., during these gateway courses).

During my first semester as a doctoral student, I was teaching several math support classes for students enrolled in a bridge program at the University of Maryland. This bridge program had begun over the summer and was intended to support incoming freshmen students with acclimating both academically and socially to the university environment. Over the summer, students took disciplinary preparation coursework to prepare them for their academic year courses. During the fall and spring semesters, students enrolled in the program took academic support classes and engaged in other forms of individual tutoring, specialized academic advising, and social programming. As a math support instructor, I had taught many of these students over the summer and gotten to know them fairly well. The vast majority of my students were underrepresented students of Color, which was a stark difference from the general student population at the university. While they had taken classes together over the summer with a large cohort of students enrolled in the program, they were now very much a racially demographic minority in their math courses. We spent most of our class time talking about how lectures and discussions had gone, reviewing homework and classwork problems, and preparing for exams.

I'll never forget the day of the first exam for my students who were enrolled in Pre-Calculus. There was a frenzied energy when they burst into the classroom to tell me how—just prior to the exam, when everyone was taking their seats and setting up their pencils and calculators as the GTAs passed out the exam—one of their white GTAs started yelling at them to hurry up and sit down. I was shocked, and clarified a few times whether or not their GTA had actually raised his voice and yelled at them, which they confirmed, adding that not only did they feel frazzled before the exam as a result, but that they were extremely angry and upset that a GTA had yelled at them. Understandably, they found it disrespectful, especially since the exam period hadn't yet started, so yelling at them to hurry up was not only demeaning, but unnecessary. The racialized nature of the incident—where a white GTA was yelling exclusively at students of Color in the class—was also not lost on them.

Later that day, I ended up speaking to my supervisor about this math GTA's behavior. Unfortunately, that wouldn't be the last time I shared frustrations about the math department GTAs with her as it was her role to be a liaison between our department and the mathematics department. I distinctly recall reviewing for an exam with my Algebra and Trigonometry students. Unlike Precalculus, which had a large lecture taught by a faculty member and smaller discussion sections taught by GTAs, Algebra and Trigonometry was taught in small sections, usually with mathematics GTAs as the instructor of record. However, the instructors would all collaborate to create the exams, and students across

different sections took the same exam—albeit with different numbers in the problems. As we worked together in class on one of the practice exam problems, one of my students raised her hand.

“My TA told us that this kind of problem wouldn’t show up on the exam and that it wasn’t important for us to learn this concept. Can we skip to the next one?”

Another student turned back to her; eyebrows raised in disbelief. “My TA told us that we had to learn how to do this problem and that it would be important.”

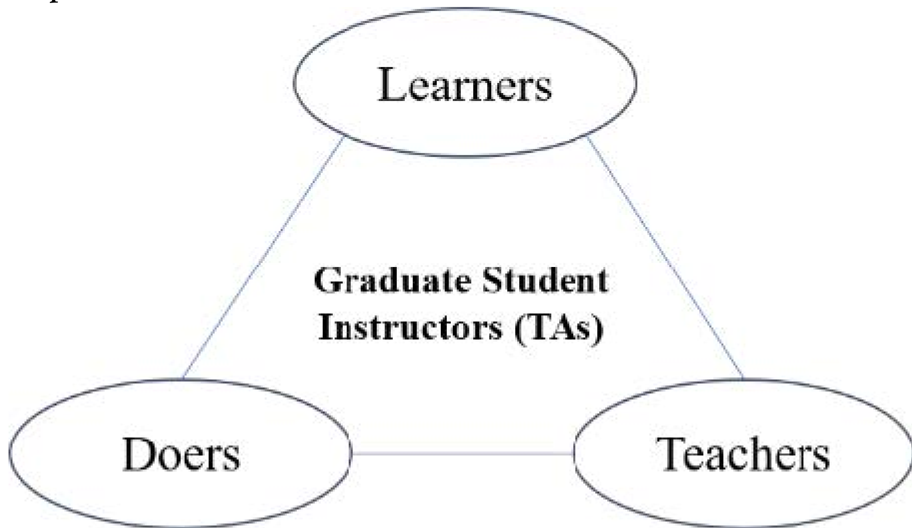
The class broke out in frustrated conversation—did they have to learn how to do problems like this one, or not? Some of my students had skipped over this section entirely in preparing for the exam, while others focused heavily on it. And they were all preparing for the same exam.

We ultimately ended up going over the problem, with several of my students now panicking that if a question like this appeared on the exam, they were going to get it wrong because they hadn’t studied it enough. I was frustrated at the lack of consensus between my students’ mathematics GTAs and felt powerless as a mathematics instructor who was outside of the mathematics department. While it could be argued that my students should be reviewing all of the course content to prepare for their upcoming exam, it was also their first full semester as undergraduate students. Furthermore, many of my students who were enrolled in Algebra and Trigonometry were not entirely confident in their mathematical abilities and wanted to focus on the content that would be important for their exams instead of being overwhelmed by every possible piece of information in their textbooks and lectures. They were acclimating to the pace of their classes, as well as to new living and social environments, trying to navigate transitioning to new communities and new roles as college students. As such, they looked to their GTAs as authority figures that they trusted, who were teaching them the ropes of how to be successful in their course. In providing inconsistent information across sections, I felt that the GTAs were disserving—even harming—my students, and I was frustrated and angry that they couldn’t observe the impact that they were having. As graduate students who were also taking courses in the math department, and who had been undergraduate math majors themselves not too long ago, didn’t they recognize the importance of being a good instructor, and how much that would influence their students’ experiences and academic trajectories?

At the time of my frustrations with my students’ GTAs, I clearly recognized the dual roles that they held as teachers and learners of mathematics. However, while I could also recognize the ways in which holding these multiple roles provided opportunities for GTAs to reflect on and strengthen their roles as teachers, I failed to see the constraints and challenges that navigating these multiple roles presented. Furthermore, I had not yet grasped that GTAs also held a third role in their departments

that added an additional layer of tension: doers of mathematics. These roles, which I would not come to fully appreciate until I became a GTA and instructor of record in the mathematics department, as well as a student in a graduate mathematics course, are illustrated below in Figure 1.

Figure 1. *The Multiple Roles of Graduate Student Instructors (TAs) in Mathematics Departments*



The multiple roles that GTAs hold in mathematics departments position them uniquely in the socialization of undergraduate students of Color. As *teachers* of mathematics—whether they teach discussion sections or are the instructor of record for undergraduate courses—they are directly involved in undergraduate student socialization (Harris, Froman, & Surles, 2009). However, many GTAs do not necessarily enroll in doctoral mathematics programs to teach, but to further their careers and research as *doers* of mathematics. Many teach as part of their funding packages in order to finance graduate school (American Mathematical Society, n.d.); as such, they may not primarily consider themselves as teachers of mathematics. A third role that they occupy in mathematics departments are the role of *learners* of mathematics, as they are still students and take coursework from mathematics department faculty.

The unique space that GTAs occupy in mathematics departments—learners, doers, and teachers of mathematics—means that they act as agents of mathematics socialization at a crucial point in their own socialization (Weidman, Twale, & Stein, 2001). Upon entering their doctoral programs, GTAs must learn the normative values, attitudes, and norms of their departments, programs, and institutions (Austin, 2002; Weidman, Twale, & Stein, 2001). These values may differ or conflict with the values that GTAs enter their institution with. However, their success as they progress through their program is contingent on their ability to adapt to their institutional culture and adopt the same norms and values as the full members of that culture (Weidman, Twale, & Stein, 2001). Thus, GTAs must determine whether success in their program will be beneficial to their future career and professional goals, and whether they should adapt to—and uphold—the values of their departmental culture.

At many universities, STEM departmental culture remains traditionally elitist and exclusionary. The

director of the American Association for the Advancement of Sciences' Center for Advancing Science & Engineering Capacity, Daryl Chubin, describes it as "a difficult culture… the culture of science says, 'not everybody is good enough to cut it, and we're going to make it hard for them, and the cream will rise to the top'" (Epstein, 2006; par. 13). Park et al. (2020) refer to this as the "competitive 'sink or swim' climate in STEM" (p. 2), which is reinforced by "the large size of introductory weed-out courses" (p. 2). This culture is also reflected in traditional teaching practices—particularly in mathematics. Such practices often involve imparting mathematical knowledge to students through lectures and gauging students' knowledge through high-stakes assessments (Bergsten, 2007; Hillel, 2001; Leyva et al., 2021). These teaching practices socialize undergraduate students by emphasizing what is expected and normative in mathematics classrooms, and what qualities are necessary to be "good" at math (Adiredja & Andrews-Larson, 2017; Larnell, 2016; Leyva et al., 2021). They also send the message that only a few select people "belong" in mathematics and STEM spaces and that most students are not "smart" or "innately talented" enough to make the cut.

While there are GTAs who do not align with, and thus seek to change, this competitive culture through their teaching practices, they face a multitude of constraints in doing so. One such constraint is time, which was also cited by STEM faculty at Boise State as a large barrier to teaching reform and changing the norms of STEM courses (Shadle, Marker, & Earle, 2017). Time constraints tend to be a large constraint on faculty priorities, especially given the multitude of priorities that are rewarded through processes such as tenure, while others—such as advising, mentorship, and teaching—are not as institutionally valued and prioritized through these processes (Dennin et al., 2017; Fairweather, 2010; O'Meara & Braskamp, 2005). This reward system is mimicked at the GTA level, with coursework, qualifying exams, theses, internships, and research often being key areas of stress and focus for graduate students, as opposed to their teaching. Teaching, then, becomes relegated to a job that pays for tuition and living expenses rather than a formalized part of the doctoral degree and professional development. In other words, mathematics GTAs' roles as *learners* and *doers* of mathematics are often more emphasized, supported, and prioritized by doctoral programs, making them more time intensive roles than that of teaching mathematics to undergraduate students.

I saw—and felt—these constraints play out during my second year as a doctoral student when I taught as a GTA in the mathematics department. Although I was not taking courses that year in the mathematics department, I was still taking graduate level courses in the College of Education, where my degree program is housed, and working on research projects with faculty. The undergraduate mathematics course I would be teaching was assigned to me at the end of the prior academic year, and I was excited to spend the summer reviewing the course content and preparing materials for the course. I was told that I would be under the supervision of a course coordinator who had been supervising this specific series of courses—which were math content courses for students in the elementary education major—for several years. My peers who had worked with this supervisor had excellent things to say about her, noting in particular how kind and helpful she was, and how much work she put into the course.

As the summer unfolded, I busied myself with other work, and towards the end of July I realized that I hadn't yet heard from my course coordinator and began to stress about learning the material and preparing for the course I would be teaching. Upon reaching out to my coordinator, she told

me where I could check out a textbook and told me that we would be meeting at the start of the semester with the instructor of the other section of this math course, who would be a GTA from the math department. I was confused why we were meeting so close to the start of the semester, and worried that it wouldn't provide enough preparation time. As I soon learned, part of the reason we were meeting so close to the beginning of the semester was because the other GTA had not yet been assigned; in fact, none of the mathematics GTAs had been assigned courses yet. Typically, this was something that didn't happen until the week before the start of the semester because of the number of international doctoral students that were enrolled in and employed by the mathematics department—finalizing visas and ensuring they would be able to attend the university took time, and the mathematics department wanted to be sure that they had a list of all the available instructors before assigning courses.

While I understood the rationale behind the mathematics department's decision not to provide teaching assignments until later in the summer, doing so discourages GTAs to prioritize preparing to teach a course. Understanding the mathematical content, goals, and structure of a course takes time; not providing this time at an institutional level signals to GTAs that these aspects of teaching are not important, valued, or prioritized—and can have detrimental effects on students' classroom experiences. I felt lucky that I had a course coordinator who was incredibly prepared and thoughtful; she provided us with a packet of lesson plans for each of our units, and we met prior to each unit to go through the unit curriculum. These lesson plans could be followed strictly, or we could make our own changes and adapt as was necessary for our sections.

In fact, each course that had multiple sections taught by GTAs as instructors of record had a course coordinator, though I am not sure how much of a standard practice it is for the course coordinators to provide lesson plans for GTAs. Even with the lesson plans provided by my course coordinator—which were thought out and consisted of many small group, active learning activities since my course coordinator had a mathematics education background—I still felt that there was never enough time in the week to adequately prepare for class and be the kind of teacher that I aspired to be, especially given that a single math course was only supposed to take up ten hours a week between teaching, prep, office hours, and grading.

Such time constraints were particularly felt during the weeks surrounding exams. We would meet as a course team to plan the exams and divide up the writing of questions, as well as create a point distribution for the grading rubric. Similar to my students who took Algebra and Trigonometry, all of the students in this course took the same exam, which is standard for courses that have multiple sections taught by GTAs. In theory, this creates a uniform level of "rigor" for a course level by helping to "standardize" the exams and ensure that the "playing field" for grades is even across sections. In practice, however, being graded on the same exam means across sections means that performance is in large part dependent on the quality of GTAs' teaching; since time and opportunities to grow as quality teachers are limited for GTAs, the implicit messaging then becomes that the "good" and "smart" students will pass the exams, regardless of the quality of their teacher, while the rest may feel—as a result of their exam grades—that they are do not "belong" and are not "smart" enough to persist in mathematics and STEM more broadly.

These time constraints that mathematics GTAs face in their teaching roles often mean that the GTAs who seek to change the competitive and exclusive culture of STEM within their classrooms must do

so by taking on extra, uncompensated labor and effort to transform their spaces to best serve their students—in particular, their students of Color. This labor cannot truly be transformative, however, without first reflecting on the ways in which GTAs are positioned and act as both agents and products of mathematics socialization in the unique roles they occupy within mathematics departments. Since socialization happens within the context of cultures, this reflection, in turn, cannot happen without an explicit understanding of the culture of mathematics departments and institutions of higher education in the United States.

Thus far throughout this chapter, I have referred to the ways in which mathematics spaces are often framed as exclusive and elite spaces, in which people who are "good" at math "belong", while others do not. I have also alluded to the ways in which this hierarchy is racialized, with students of Color often being signaled to—either implicitly or explicitly—that they do not "belong" or "fit" in mathematics and STEM spaces. As Leyva et al. (2021) explain, the exclusive culture of mathematics spaces and the hierarchy positioning people who are "good" at math and STEM as more intelligent and elite is framed by white logics and the ideology of meritocracy. While mathematics is often framed as an objective and neutral subject in which some people have innate ability and talent and others do not, the myth of neutrality serves to uphold and reinforce racialized hierarchies in mathematics, STEM, and beyond (Leyva et al., 2021; Lue & Turner, 2020; Martin, 2009). These hierarchies position Black and Brown students of Color at the bottom of the hierarchy, while positioning white and Asian students at the top, while hiding under the guise of meritocracy—a neoliberal concept through which individual Black and Brown students are pathologized while harmful structures remain in place (Bonilla-Silva, 2018; Lee, 2009).

As Bonilla-Silva (2018) explains, the myth of meritocracy is a form of color-blind racism that has become a dominant narrative to justify and shield white privilege—thus upholding white supremacy and systemic racism. While neoliberal discourses promote the idea that we live in a post-racial society—that is, a society "free" from racism—I contend, as a critical race mathematics education scholar, that racism is endemic and normalized in both our society and in mathematics education (Davis, 2019; Delgado & Stefancic, 2017). This normalization not only renders racism invisible, but also renders our roles in maintaining racism and white supremacy invisible. Mathematics GTAs, for example, play a role in maintaining the dominant racial order in mathematics departments through the maintenance of traditional teaching practices. These roles are normalized through their socialization process and the constraints that they face in their multiple roles within mathematics departments, making it difficult to even begin to identify how to enact truly transformative change in service of Black and Brown students of Color.

How then, can GTAs begin to enact this change? As stated earlier, critical reflection is key. Understanding the ways in which racism and white supremacy operate in society to maintain the dominant racial order and protect whiteness is a necessary first step. Understanding the roles that institutions of higher education and mathematics departments play in these operations is an essential part of this step. From there—or perhaps in parallel—reflecting on the ways in which power and prestige is concentrated within the STEM fields and in mathematics, and how the myth of meritocracy operates to racialize that power concentration is key for GTAs to consider as a foundation for reflecting on their own mathematics and academic journeys. While mathematics GTAs

face various constraints in their roles at institutions of higher education, there is also privilege and power associated in their roles as agents of mathematics socialization for undergraduate students of Color. True change cannot happen without acknowledgement and acceptance of this power and its benefits.

In providing these steps, I by no means wish to suggest that I have all the answers for how mathematics GTAs ought to navigate their roles as agents of mathematics socialization for undergraduate students of Color, or how they might dismantle broader systems of racism and white supremacy at their institutions. Rather, I invite them to reflect and work alongside me in identifying and naming these structures and systems, as well as our own roles in them. After all, as Delgado and Stefancic (2017) remind us, it is only "once named [that] it can be combated" (p. 51).

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CHAPTER 6.

TEACHING FOR BLACK GIRLS: WHAT EVERY GRADUATE STUDENT INSTRUCTOR CAN LEARN FROM BLACK GIRLHOOD STUDIES

THERESA HICE-FROMILLE

KEY TAKEAWAYS

- The neoliberal university undervalues teaching and upholds standardization practices that reproduce harm towards marginalized students. Black Studies approaches to education challenge these education standards.
- Teaching for Black girls is a pedagogical approach derived from Black Girlhood Studies in which the instructor commits to engage students as their co-creator, co-witness, and co-conspirator.
- All graduate student instructors can implement curricular tools and instill pedagogical values, such as instructor responsibility, student agency, collaboration, and reflexivity, to engage a practice of teaching for Black girls. In so doing, instructors model behaviors that promote Black girl thriving within and beyond the classroom.
- Instructors in STEM can recognize their power within scientific production and engage teaching for Black girls to empower marginalized students and address the harms that have been inflicted on communities and the environment in the name of science.

INTRODUCTION

I don't remember many details from my first teaching experience, but I do recall the feeling of dread as I entered a small classroom one winter evening. As I was new to the research university setting, I did not have any personal experience with teaching assistants (TAs) from which to draw, and I doubted my ability to effectively facilitate the learning of sixty students. By the time I began my teaching

assistantship in January of my first year in graduate school, the two-day teaching assistant training required of graduate students in my department was months behind me. The training included a mix of information about administrative regulations and practical teaching strategies, but very little information had stuck with me through the hectic first quarter of graduate coursework.

I know that I was woefully underprepared for my first quarter of teaching and that I did not facilitate student learning in the ways that I advocate for now; however, the experience motivated me to seek out additional resources through which to cultivate my teaching skills. Despite a rough introduction, I have developed a true love for teaching in higher education and enjoy learning from, and with, equally-motivated peers. Through my enrollment and leadership in campus programs that prepare novice educators for the demands of teaching and help them deepen their commitments to undergraduate learning, I have identified graduate students as significant catalysts for innovations in higher education teaching praxis.

Graduate students provide support to undergraduate students through their TA and graduate student research (GR/GSR) appointments, and many serve as formal and informal mentors. For example, graduate students may work in research labs, at campus resource centers, or with other university programs that allow them to connect with students within and beyond their departments. Despite the worry and self-doubt that graduate students may experience as first-time and early-career instructors, I find that they are often eager to design and lead courses in their fields and excited by the prospect of engaging students with shared academic interests. Their enthusiasm for connecting with students and awareness of the importance of positive instructor-learner relationships for student success signifies their potential for enacting a positive influence on the higher education community (Austin, 2002).

At the same time, graduate students enrolled at research institutions must learn to navigate the marginalization of teaching-focused positions and goals (Austin, 2002; Boyer, 1990; Hunt et al., 2012; Simmons et al., 2021; Smollin & Arluke, 2014). The neoliberal university's preoccupation with generating revenue guides institutional interest towards the productive capacity of faculty as researchers rather than as teachers (Boyer, 1990; Litwin, 2009; Shannon et al., 1998). Such a discrepancy in the priorities of higher education is reflected in the training–or lack thereof–available for instructors. For example, Blouin and Moss (2015) investigated teacher training for graduate students enrolled in sociology programs throughout the U.S. and Canada and found that while formal efforts have increased slightly and consistently across programs in the past twenty years, about 82% of the programs surveyed did not offer regular teaching courses for TAs and even fewer require that TAs complete formal training. The authors remark, "It is hard to imagine a graduate program neglecting to offer a required course that teaches their graduate students how to do research, yet this regularly happens for teaching" (2015, p. 134). Indeed, the message communicated to graduate students is that their pedagogical endeavors are less important and professionally meaningful than their achievements in research. This, of course, is despite universities' need to seek out (at least in word, if not in deed) tenure-track faculty candidates who are proficient in teaching and research in order to remain within the budget constraints imposed by a neoliberal agenda (Austin, 2002; Blouin & Moss, 2015). Although many graduate student instructors (GSIs) demonstrate enthusiastic commitment to their students, they often find themselves without a pedagogical model to which they may refer as they develop their praxes (Boman, 2013; Shannon et al., 1998).

My research interests guided me to find a theoretical home in Black Studies, but it is also within this

multidiscipline (Daniel, 1980) that I was inspired to cultivate my pedagogical praxis. Black Studies' presence within the academy and its grounding commitments to community needs and social justice exemplify the dual prioritization of research and pedagogy that many graduate students are striving to achieve. As I began cultivating my black studies mind, or situating myself within the capacious lineage of Black thought (Hine 2014), I was introduced to the sub-field of Black Girlhood Studies. Scholars of Black girlhood emphasize the creative capacity of Black girls and the necessity of educators working *with* Black girls, "and therefore being in relationship with them as co-creators of knowledge, co-witnesses of their genius, and co-conspirators of the radical acts of freedom they imagine and enact" (Owens et al., 2017, p. 119). It is within this framework that I have lovingly constructed my pedagogical praxis.

I have many years yet to hone my teaching craft, and I aim to continually improve and adjust to the needs of my students, but I am adamant that the pedagogical possibilities of the research institution are achievable within a Black Girlhood Studies framework, which is applicable to every discipline and field. I provide within this chapter an outline of the goals and values purported by Black Studies and how these are further developed through the critical interventions of Black feminist thought; a brief review of the pedagogical values identified by scholars within the emerging sub-field of Black Girlhood Studies; a critical reflection on the ways that I implemented these values into my development of an upper-level undergraduate course; and additional consideration of the ways that GSIs in STEM disciplines can meaningfully engage these values.

While it is often assumed that Black Studies and its contributions are only relevant to the humanities or social sciences and, more specifically, Black communities, I maintain that it is important for *all* educators to invest in its goals. I recognize the enthusiasm many graduate students have for putting their knowledge into practice and their flexibility when prioritizing student needs over established teaching conventions. I also hope that the attention given over the past several years to the problematization of national claims about the success of post-civil rights education is (re)igniting commitments to justice-oriented pedagogy and a radical re-envisioning of higher education. Just as emancipation did not equate to the eradication of slavery, school desegregation did not ensure equitable access to education (Harris, 1993; Du Bois, 1998; Castro et al., 2019; Givens, 2019). More to the point, pervasive racism in the contemporary education system will only be countered by the thick and even application of anti-racist and pro-Black pedagogical commitments throughout the academy. I posit that these commitments may be realized through the careful (i.e., care-filled) pedagogical prioritization of Black girls and I call upon graduate students, as energetic members of the professional teaching community, to provide a necessary foundation for its application.

BLACK STUDIES AS A PEDAGOGICAL FOUNDATION

The introduction of Black Studies programs and departments to universities in the mid-twentieth century was part of a long history of Black initiatives that recognized public education as a right to be afforded to all (Du Bois, 1998; Castro et al., 2019). A poignant example of this commitment is the fact that even during segregation, historically black colleges and universities never pursued exclusionary admissions on the basis of race despite the reverse standing true for historically white institutions (Castro et al., 2019). The persistent exclusion of racially minoritized students from higher education has prompted scholars to reflect on the ways in which quality education is treated as a property right of whiteness rather than a universal right afforded to all (Harris, 1993; Ladson-Billings, 1995). Within

this framework of analysis, an individual's propensity for accumulating the skills sanctified by elite universities is reliant on denying others the opportunities to cultivate these same skills. Disciplinary boundaries restrict inter-field collaborations and the inequitable financial support afforded to STEM as compared to social science, arts, and humanities departments. This siphoning of resources to disciplines with significantly lower rates of racial and gender diversity exemplifies just one of the ways that stringent intra-academic boundaries are reinforced and intellectual competition is encouraged (Kniola et al., 2012; Ma & Xiao, 2021; Newfield, 2010). Scholars continue to uphold the assumption that high-level skills are scarce (Newfield, 2010). To this end, Daniel (1980) suggests that Black Studies constitutes a decentralized multidiscipline rather than the addition of an ethnocentric program into an already divided academy.

A Black Studies approach to higher education commands indiscriminate access and service to the needs of marginalized communities. Embedded within these priorities is the necessary interrogation of the national and global social, economic, and legal practices that have prevented equitable access to quality higher education. Black Studies challenges all educators to recognize the "world as it is and [to create] the conditions of possibility for a new one within and beyond the university" (Roane, 2017, para. 12). Thus, Daniel's (1980) proposition indicates a foundational intent to implement the goals of Black Studies throughout the university and, in turn, ground academic research and teaching in social wellbeing.

In a similar effort to distinguish the Black Studies project as a radical reimagination of educational priorities, Hine (2014) outlines the characteristics shared by Black Studies scholars. By presenting the "black studies mind" as those "historically sedimented and diverse practices and modes of thought" that scholars engage throughout their teaching, research, and academic aspirations, Hine invites Black and non-Black scholars to engage in the critical perspective of Blackness in order to advance a particular political agenda within the university (2014, p. 12). Unlike engaging a race-neutral or colorblind approach to teaching, in which the instructor attempts to ignore the conditions in which students live and learn and assumes that students possess the same skills and values upon course enrollment, instructors who exercise a Black studies mind consider how, and to what extent, their course design enables and empowers marginalized students to thrive. Instructors must attend to the harms of anti-Blackness in traditional, objective approaches to research; uplift the contributions of Black and other marginalized people to the discipline; and extend knowledge founded on principles of equity and justice. These practices destabilize interdisciplinary partitioning and resist the segregation of knowledge.

EXPANDING THE BLACK STUDIES MIND: THE INTERVENTION OF BLACK GIRLHOOD

Hine's (2014) analysis of the Black studies mind asserts the inseparability of the project of Black Studies from the contributions of Black feminism by including *intersectionality* as one of its five constitutive characteristics. Indeed, by outlining intersectionality as the first characteristic, she offers Black feminist thought as fundamental to the liberatory potential of Black Studies. As an analytic tool, intersectionality is used to understand the complexity of human experience as it is shaped by many axes of social division (such as race, class, gender, and geographic location) that overlap and influence one another (Hill Collins & Bilge, 2016). It is useful, for example, in helping scholars recognize the ways in which a disregard of differences in subjective experience amplifies the inequitable treatment of those who embody multiple marginalized identities. At the onset, Crenshaw (1989) employed

the concept to decipher the harm that occurred when the law failed to recognize discrimination against Black women as motivated by either race (due to their gender) or gender (due to their racialized status). Intersectionality is also employed to assist Black feminist scholars in identifying and challenging patriarchal, misogynist, homonormative, and nationalist ideas when they are reproduced within Black Studies (Hill, 2018).

While Black feminist thought has ensured that the contributions of Black Studies extend beyond the Black American, cis-gender, heterosexual, and male experience, scholars within the emerging field of Black Girlhood Studies critique the omission of youth perspectives from Black feminist scholarship (Halliday, 2020; Smith, 2019). As theories in Black Girlhood Studies draw conclusions about social life from the multiple and overlapping identities that shape Black experience, they constitute Black feminist thought (Collins, 2000). However, the exclusion of youth voices in theoretical development indicates that not all Black feminist scholarship falls within Black Girlhood Studies (Smith, 2019). Black Girlhood Studies scholars address the ways that the experiences of Black girls, in particular, are excluded from study or submerged within categories of youth (generally), Black children (broadly), or girlhood (without specifying the realities of racialized difference). Additionally, they challenge the deficit framework through which Black girls and Black girlhood are generally examined, when they are even discussed at all.

Many investigations into Black girlhood attend, at least in some way, to the spaces of schools. Education is "one of the most important protective factors in a girl's life," but schools are significant sites in which Black girls are surveilled, criminalized, and demeaned (Morris, 2016, p. 3). Black girls are mandated to attend school, and yet education policy, curriculum, and social norms conspire to push them out (Morris, 2016). Scholars of Black girlhood prioritize "the political relationship of being in community with and for Black girls" and thus engage strategies in research, teaching, and activism to uplift and protect Black girls (Owens et al., 2017, p. 118). Indeed, Butler (2018) finds that those educators who "express a deep concern for Black girls' health, lives, well-being and ways of being" (p. 33) develop curricula to facilitate Black girl thriving in school. Such curricula necessitate educators' capacity to learn from and alongside Black girls as they collaboratively interrogate the ways that Black girls are represented and regarded and highlight Black girls' collective strategies of survival.

The educators that Butler (2018) surveyed attend to more than their students' academic performance, they demonstrate care by maintaining concern for the implications of the curricula and their teaching practices on students' lives (Ladson-Billings, 1995). Although Butler's investigation focuses on educators who self-identify as Black girls/women[1], commitment to Black girls' thriving can, and should, extend beyond personal experience, and anti-racist and pro-Black teaching must be engaged by non-Black instructors, too. Following Black Girlhood Studies scholars' emphasis on working with and alongside Black girls as co-creators, co-witnesses, and co-conspirators, GSIs of all racial backgrounds can establish a political commitment to teaching *for* Black girls by embedding within their pedagogical praxis an attention to Black girls' well-being within and beyond the classroom.

1. Butler (2018) follows the Black Girlhood Studies tradition of using "girl" in a way that challenges the dichotomous separation between girl and woman, asserting that Black girlhood is both a fluid category and lifelong process and, therefore, experienced by those in young and adult bodies (Brown, 2014; Cox, 2015; Hill, 2019).

Preparing the course

Throughout the process of designing a course for my campus's inaugural Black Studies minor, I held a single question in mind: *What if I were to teach this course only to Black girls?* As Black students make up a mere 4% of the population at my historically white institution, the scenario was unlikely[2]; still, I felt it necessary to investigate what it might be like to facilitate a course that fit the needs and desires of novice Black women scholars. I reconceptualized what a quality course entailed by pondering what my course would look like from start to finish should all my students identify as Black girls.

I started this process by considering the three stages of the understanding by design (UbD) framework developed by Wiggins and McTighe (2011; 2005). However, I quickly realized that the UbD framework, though useful in providing a curricular foundation as I built a course from the ground up, did not align with my goal to teach for Black girls. The UbD framework may evade reproducing a deficit model, in which educators assume students' educational failure is due to individual and cultural deficiencies rather than inequitable pedagogical practices (Ladson-Billings, 1995; Picower, 2009), but it also renders irrelevant the skills with which students already possess and forgoes consideration of student contexts and individuality (Cho & Trent, 2005). Within the UbD framework, a course with high alignment–one in which the instructor's lessons, assessments, and learning objectives are connected and coherent–is a quality course (Wiggins & McTighe, 2011). But teaching for Black girls entails more. Drawing from Black Girlhood Studies, teaching for Black girls requires that educators work alongside Black girls–as co-producers of knowledge, co-witnesses to their genius, and co-conspirators in the struggle for equity and freedom (Owens et al., 2017).

The UbD framework encourages teachers to undergo reflective practices but to the ends of determining whether or not they have appropriately identified what students are (mis)understanding from the course content (Cho & Trent, 2005). Indeed, as with other standards-based educational reform initiatives, epitomized by the No Child Left Behind Act of 2001, UbD prioritizes the role of the teacher as an assessor (Cho & Trent, 2005). Wiggins and McTighe (2005) direct instructors to link the "desired results" or learning objectives identified in the first stage with the "established content standards," such as those dictated by local and federal governments. By defining assessments as "those performance tasks and related sources of evidence" and teaching as "enabling performance," Wiggins and McTighe (2005) evade critical inquiry into educational standards and the responsibility of teachers to dismantle or otherwise challenge them.

Assessment does not always entail grading and, indeed, the UbD framework instructs teachers to regularly incorporate ungraded and low-stakes assignments into curricular planning to ensure that

2. The campus also maintains Hispanic-serving institution (HSI) status. HSIs generally tout greater Black student enrollment than predominately-white institutions (PWIs), but this is not found to correlate with stronger feelings of campus belonging (Garcia, 2019; Pirtle et al., 2021).

assessment is not left until the end of the course (Wiggins & McTighe, 2005). However, the UbD framework in no way advocates for teachers to challenge the institutional expectation of assigning grades. Critical literacy theorist Asao B. Inoue (2019), asserts that "grading, because it requires a single, dominant standard, is a racist and White supremacist practice" (p. 5). Distinguished educational theorist Gloria Ladson-Billings (1995,) further details that when grading is at the center of pedagogical praxis, "the goal of education becomes how to "fit" students constructed as "other"…into a hierarchical structure that is defined as a *meritocracy*" (p. 467, original emphasis). Taken together, these analyses oppose assessment-driven frameworks such as UbD and conclude that the assignment of grades, as tools used to measure students' proximity to whiteness, is in service to white supremacy and to the detriment of marginalized students, including Black girls. Thus, in the language employed by Wiggins and McTighe (2005), assessment-driven teachers enable their students to perform whiteness and base assessment on how convincingly they accomplish this task.

Alongside upholding whiteness, hooks (2003) and Inoue (2019) conclude that grading fosters a fear-based approach to education that affects instructors and students. They posit that instructors become preoccupied with the potential professional consequences of low testing scores within their class while students, fearing the wrath of their teachers should they underperform, doubt their capacities to learn and fixate on answering questions correctly rather than thoughtfully (hooks, 2003; Inoue, 2019). The result is a classroom ecology generated by hierarchical and competitive relationships among students and between students and instructors (Inoue, 2019). For Black students who are already exposed to institutionalized discrimination, such an ecology could be especially detrimental to learning and further minimize the possibility of cultivating positive student-teacher relationships, which are positively associated with fostering students' senses of belonging and improvements in academic achievement (Legette et al., 2022).

If, as I assert, teaching for Black girls necessitates that educators engage their students as co-creators, co-witnesses, and co-conspirators, then a radical re-articulation of learning through the interrogation of educational norms and standards must also ensue. In designing my course, I sought to recognize and begin repairing the harm inflicted on students who may have encountered biased disciplinary policies, apathetic educators, and an individualistic campus climate, and encourage deep and critical inquiry into the course themes of race, identity, and belonging in the African Diaspora and the meaning of learning. For many students, even those who were intrigued by the disruptions I posed to the norms of university coursework, the task was uncomfortable. I altered or excluded many of the elements of the course that students had come to expect. For example, I omitted assignment due dates, and rather than declaring universal learning objectives, I prompted students to contemplate what they wanted to learn in the course and develop individualized course goals. Perhaps the most perplexing element of my course plan was the implementation of a hybrid grading contract (Danielewicz & Elbow, 2009; Inoue, 2019).

Grading contracts are a set of terms that an instructor and their students agree upon at the beginning of the course (Inoue, 2019). Although there are many different approaches to grading contracts, Inoue's (2019) insistence that traditional grading and assessment-driven pedagogy stems from an institutional commitment to whiteness led me to incorporate greater emphasis on labor than quality into my proposed contract. Even when I emphasized quality writing I did so by deferring to students' definitions of excellence through my implementation of self-evaluations (Appendices C and D). In

this way, students were prompted to set the standards of excellence and evaluate their work and class contributions accordingly. I used a minimum grade of a C to indicate the labor necessary to pass the course to accommodate students who intended to enroll in the course on a Pass/Fail (rather than letter grade) basis. This lessened the workload for students who anticipated having less time to engage course materials without the threat of penalty. Students who enrolled in the course on a letter grade basis were guaranteed a B following the assumptions of conscientious effort and commitment to labor outlined by Danielewicz and Elbow (2009) and Inoue (2019). Students who anticipated earning an A in the course committed to complete additional coursework (i.e., more labor) and demonstrated via self-evaluations how their work achieved excellence according to their own definitions.

My use of a grading contract set the tone for a learning ecology that challenged the status quo. As contracts must be agreed upon by more than one party, I could only propose a contract–the final version had to be negotiated and approved by students. Additionally, the language of a contract implies that re-negotiation, or a return to the contract to arrange different terms of agreement, is always possible. The document, alone and in combination with several other curricular choices that I outline below, addressed four pedagogical values that emerged from the political demands of teaching for Black girls. These values–instructor responsibility, student agency, collaboration, and reflexivity–helped guide me in maintaining my relationship with students as one of co-creation, co-witnessing, and co-conspiracy.

On par with the motivations of Black Studies, I hoped that by introducing students to different ways of thinking about their relationship to higher education, I also prompted their investment in a university structure that dissolves the segregation of knowledge and uplifts, rather than denigrates, Black girls. Accordingly, I intend for this chapter to motivate GSIs to commit to teaching for Black girls and empower them to develop a pedagogical praxis that engages justice-oriented, rather than standards-driven, ways of teaching and learning. Teaching for Black girls does not necessitate a shared racial or gender identity among instructors and learners, but it does require both to unlearn and critically examine commonly held beliefs, norms, and goals (Hill, 2018). GSIs with a variety of intersecting identities and within every academic discipline can initiate a commitment to teach for Black girls by prioritizing instructor responsibility, student agency, collaboration, and reflexivity in their curricular design.

Instructor responsibility

Contract grading encompasses each of the four pedagogical values that I prioritize in teaching for Black girls, but it is especially indicative of the instructor's responsibility to students. As contract grading presents students with a tangible document with which they may use to hold the instructor accountable (Danielewicz & Elbow, 2009), it helps initiate a co-conspiratorial relationship between the instructor and students. To me, co-conspiracy connotes a tone of covert action or concerted efforts to engage in illicit behavior. Drawing from a Black Girlhood Studies framework, I find it useful to think about the role of educators in this way as they embark on a controversial approach to learning that eschews the demands of neoliberal standardization. Engaging in conspiracy also

suggests an intimate level of trust between participants, as you might expect only those with whom you have built trust will endeavor to jointly participate in illicit behavior. Here, illicit behavior indicates concerted efforts to challenge the hegemonic status of white supremacy within higher education. Thus, curricular elements that highlight instructor responsibility prompt educators to model accountability to the class and individual learning and build trust between the instructor and students.

Detailing the process of creating a grading contract is beyond the scope of this chapter (see instead Inoue, 2019), but I provide here an outline of the grading contract that my students approved at the beginning of the course (Appendix B) and indicate in bold the changes that were made during the mid-quarter renegotiation process. Labor-based grading contracts do not dictate the types of course assignments that instructors must engage; rather, they prompt instructors to consider the time that students must dedicate to following the assignment guidelines (Inoue, 2019). In this way, assignments are not differently weighted as they are when grades are assigned. Upon receiving completed assignments, instructors should provide individualized feedback to help students advance their learning.

In a writing-based course such as mine, this may mean providing students with written and/or verbal feedback to assist them in strengthening how they articulate ideas, extend concepts, and synthesize what they have learned. For example, the grading contract in my course included two autoethnographic essay assignments that students could submit for my feedback. Whether or not they chose to submit for feedback, they had to submit revisions for one of the essays and indicate on their self-evaluations how their revisions demonstrated excellence. I provided suggested due dates for all assignments and indicated that students seeking instructor feedback needed to submit by a certain date but largely eliminated submission deadlines. Thus, I demonstrated to students that I trusted them to prioritize their work as they saw fit.

A second way I modeled accountability was by providing students with a list of teaching objectives or things that I would engage to facilitate student learning (Appendix A). My university requires that course syllabi include a list of student learning objectives that should clearly outline the knowledge or skills that students will acquire during the course. On my course syllabus, I positioned proposed student learning objectives alongside my goals for facilitating learning. This modeled to students that I, too, should be held accountable to course commitments.

Finally, taking responsibility for the course also meant acknowledging that students were in my care. In so doing, I remained conscious of their existence as more than bodies in a classroom (material or virtual) and attuned to the ways that they were engaging in the course. As the course took place during the height of the COVID-19 pandemic and on the heels of a summer filled with white supremacist violence and anti-police violence uprisings, I was acutely aware of the additional stress that students were experiencing. To ground the course—and each class meeting—in student wellbeing, I facilitated mindfulness exercises and regularly asked students to reflect on how they were feeling as

they entered the class, how they felt during and after reading course texts, and how they were caring for themselves as the quarter progressed. As I demonstrate in Table 1, students indicated satisfaction with each of these curricular approaches, noting that they presented a meaningful intervention during a disruptive social climate.

Student agency

I aimed to empower students to exercise agency by encouraging them to take initiative in constructing individualized learning objectives and by determining the capacity to which they engaged course assignments. I deferred to students in determining course outcomes by constructing a syllabus that outlined concepts and themes related to the object of study but leaving it up to students to guide which material we spent the most time with or even eliminated from our agenda. Students approached their objective design with intentionality and indicated such goals as engaging critically with specific concepts or writers, improving written articulation, developing respectful critiques, constructing well-informed questions, and using African diasporic theory to deepen solidarity with Black communities. In their self-evaluations and final presentations, student returned to their objectives to demonstrate what they had learned in the course. While students could submit a written final project, they were also invited to develop a creative expression of their learning to present to the class. Examples of these presentations included interviews with family members, a memorial altar for writers with whose work we had engaged in the course, and songs and paintings inspired by specific course themes or concepts. The result was a beautiful tapestry, the diversity of which represented the many different ways that students chose to approach the course and demonstrate what they had learned.

My instruction of autoethnographic writing methods also allowed students to demonstrate agency in two significant ways. First, students were permitted to write a traditional essay investigating a course concept if they did not feel comfortable writing an autoethnographic piece. In this way, students were invited to exercise agency in choosing which assignment form was best for their learning. Second, students who did chose to engage autoethnographic writing were empowered to critically examine their lived experiences. Autoethnography is a qualitative research method that presumes that the writer's investigations of their own experiences are just as informative as an investigation of someone else's. This method, then, places value on the writer's ability to turn inward and presents an opportunity for marginalized writers, in particular, to leverage personal encounters to respond to and resist racist, sexist, homophobic, classist etc. narratives and norms. Although it remains marginalized in academic research, autoethnography is a foundational method employed by Black women intellectuals who invite others to bear witness to their claims (Brown-Vincent, 2019). In designing a course assignment rooted in the history of witnessing, I embraced my role as a co-witness to students' creativity and genius while upholding the pedagogical value of student agency.

Collaboration

Each of the four pedagogical values highlighted counter those upheld by the neoliberal university, but collaboration is perhaps the most recognizable as it directly contradicts the hierarchy of knowledge and the demands of competition. I implemented collaborative course elements such as open class discussion, group presentation projects, and instructor office hours to motivate community-building. By facilitating dialogue about course texts, I encouraged students to collectively analyze arguments and assist each other in answering and posing questions about the readings and deciphering how they fit into the broader course themes. It was important that I demonstrate to students that I valued their commitment to inquiry rather than their ability to formulate coherent impromptu arguments. By modeling encouraging behavior such as praising students for asking interesting questions and thanking students for their contributions, I demonstrated the ways that I hoped students would participate in the space, thus establishing a collaborative cultural norm (Yosso, 2005). On several occasions, I reached out to students ahead of class and asked if they were comfortable sharing portions of their writing assignments with peers. Sharing their work allowed for students to learn from one another and participate in collective celebration of peer work.

Students were also required to complete a presentation in which groups of 4-5 peers facilitated class discussion of a course text. In my experience, the social dynamics of group work do not always benefit all students. Group work can instigate anxiety among students who are concerned with relying on others for a grade. My use of contract grading eliminated this anxiety, but in order to further encourage students to approach group work as an exercise in collaborative learning and view each other as co-creators of knowledge, I provided a self-evaluation rubric (Appendix C) that required each group member to consider their individual contributions to the presentation and the overall groups' demonstration of excellence. I provided students with a presentation format and, to accommodate students' varying time commitments and schedules, I permitted use of class time for presentation preparation. A similar concern for student schedules prompted me to offer flexible office hours so that students could meet with me as a group or individually to discuss the course or receive feedback on their writing or presentation plans. I implemented attendance to at least one 15-minute instructor meeting into the grading contract for students seeking to receive an A in the course to demonstrate respect for students' time and encourage interpersonal trust between students and myself.

Reflexivity

Bridging the four pedagogical values is the role of reflexivity throughout and following the close of the course. Reflexivity is a key tenet in feminist praxis, and Black Girlhood Studies scholars, specifically, emphasize its importance in ensuring continuous attention to the ever-shifting needs of Black girls (Smith, 2019; Smith, 2012). Reflexivity reinforces accountability to the collective and demands interrogation of our daily practices, beliefs, and behaviors (Butler, 2018). As I have detailed in previous sections, I incorporated self-evaluation rubrics into the grading contract. While grading rubrics are used to identify student proficiency in skills established by the instructor, self-evaluation rubrics facilitate student reflection on their accomplishments and identification of points for improvement. The assignment of these evaluation rubrics communicated to students that accountability to themselves and their community of peers takes precedence over their accountability to the instructor.

Instructors are ultimately accountable to the students whose learning they are responsible for facilitating. To this end, I engaged in a scaffolded process of reflexivity that included a formal post-quarter course evaluation and weekly memos about the successes and challenges of the course. Formal course evaluations are a normalized aspect of university teaching. Constructed by the university, evaluations permit students to communicate their (dis)satisfaction with instructors by ranking instructor effectiveness, though these evaluations often reveal gendered and racial biases (Goos & Salomons, 2014). Along with the grading contract re-negotiation process, I used feedback throughout the course to adjust course reading requirements, lecture delivery, and assignments. By recording weekly memos, I collected observations of the effectiveness of the course from my standpoint. Along with the formal course evaluation, I used the ideas that I recorded in my memos to revise the content of the course and gather ideas for adjustments to my general teaching practices. By utilizing my training in ethnographic methods to observe the successes and challenges of course design and implementation, I reinforced the necessary convergence of pedagogy and research within the research university. I indicate excerpts from student feedback in Table 1 to demonstrate that without explicit knowledge of my pedagogical values, students noticed and appreciated the way these values framed the course. The trust that we built in this course makes their constructive critiques and suggestions for improvement all the more meaningful, as I know that they recognize me as their co-creator, co-witness, and co-conspirator.

Table 1. *Four Pedagogical Values for Teaching for Black Girls.*

Pedagogical value	Curricular implementation	Student feedback
Instructor Responsibility	• Grading contracts • Instructor-facilitated course objectives • Principles of universal design • Mindfulness exercises	"… I appreciate that she gave us a space to reflect on how remote learning has impacted our lives personally and academically." "She was patient and supportive throughout our individual experiences with the material and never was judgmental in how we related to what [was] presented." "I hate remote learning but Theresa made all the difference. She did guided meditations during class and always had…pulse checks on the class as a whole."
Student Agency	• Co-constructed learning objectives • Assignments that engage methods significant to non-dominant learning practices (ex: autoethnography)	"I really enjoyed the agency given to us students to have a say in our assignments and accommodations made for completing them." "[She] empowered us to make this course about what we hoped to learn and achieve on an individual level. Creating our own learning objectives and working as a class to make edits to the syllabus so that we had more realistic expectations about our capacity as students was really cool and honestly, should be the future of teaching."
Collaboration	• Open discussion • Non-competitive/ celebrative atmosphere • Group assessments • Required office hours (individual meetings with instructor)	"[She] valued the connections with us, and wanted to make sure we all connected to the content as well as each other…" "Remote instruction made it harder to connect with peers at the beginning of the course…[however] I felt the most connected and engaged with classmates in this course than I have in past courses …"
Reflexivity	• Self-evaluation rubrics[3] • Teaching journals	Overall effectiveness: "I hope this class continues to be offered and I see it as critical for the retention of ABC [African, Black, Caribbean] students and creating a more understanding campus community." Constructive feedback: "Maybe, for her next class, Theresa could include audio/visual content in her lectures to engage students with the topics she is talking about." "The slides were dense at times and it was difficult to understand the complex theories that we were discussion [sic] without having taken previous classes."

ADDITIONAL CONSIDERATIONS FOR TEACHING FOR BLACK GIRLS IN STEM

My course was situated within a humanities department and my educational training in sociology may make the arguments and recommendations I presented in this chapter more legible to graduate students teaching within a humanities or social science department. As such, I feel compelled to provide additional consideration for GSIs in STEM. There are myriad academic initiatives that aim to integrate social justice commitments with these areas of study. The work of scholars within science and technology studies (STS), and feminist STS scholars specifically, has produced fascinating and pragmatic research on the inextricable link between socio-political facts and innovations in STEM.

3. Both self-evaluation rubrics that I used were modified versions of "Final Growth Reflection" and "Rubric for Rigor" written by Savannah Shange (personal communication, January 13, 2021).

Contemporary scholars such as Ruha Benjamin (2019), Safiya Noble (2018), Jenny Reardon (2017), Harriet A. Washington (2008, 2021), Kim TallBear (2013), Alondra Nelson (2016), and James Doucet-Battle (2021) have addressed topics in technology, engineering, medicine, and biology and genetics. Additionally, Black feminist astrophysicist Chanda Prescod-Weinstein has addressed the implicit connection between racial justice and science in her debut book, *The Disordered Cosmos: A Journey into Dark Matter, Spacetime, and Dreams Deferred* (2021).

Just as I designed my course by holding in mind the realities of being a Black girl in an institution that constantly calls for, or participates in, our exclusion (Morris, 2016), Prescod-Weinstein (2021) considers what it means to be a Black woman/femme/non-binary scientist and how scientific frameworks perpetuate racist, imperial, and sexual violence. She presents the following:

> …[W]hat are the conditions we need so that a thirteen-year-old Black kid and their single mom can go look at a dark night sky, away from artificial lights, and know what they are seeing? What health care structures, what food and housing security are needed? What science communication structures? What community structures? What relationship to land do they need? And I do not mean to ask these questions on behalf of a child who has been marked as highly gifted and who is confidently planning to study astro/physics at Harvard or Caltech one day. I mean any thirteen-year-old Black kid. A Black feminist physics requires asking these questions and understand that there are a whole series of human-made structures that interfere with the night sky, not just passively, but actively, aggressively. (p. 260).

Prescod-Weinstein's reflections on who is permitted to participate in scientific inquiry forces an interrogation of what constitutes "physicist thought" and to which futures scientific studies will contribute. They detail the barriers they have encountered in the field as they have worked to heal from racial, sexual, and class trauma and sustained their passion for theoretical physics research. As I read Prescod-Weinstein's beautifully painful account, I found myself pondering how might their journey have been better supported if their teachers were committed to teaching for Black girls? What kind of liberatory possibilities become realities when scientists recognize the value in becoming co-creators, co-witnesses, and co-conspirators to all Black girls?

By drawing attention to the inequitable distribution of power—and with it financial and social resources—within academia, Prescod-Weinstein (2021) critiques the neoliberal university's role in harming communities and the environment. Further, they condemn the "power statement" that scientists, "the most economically powerful intellectuals in academic institutions," make "when they choose to ignore a politics of solidarity" (p. 266). As educators, scientists could commit to such a politic by cultivating a pedagogical praxis that takes as its center the wellbeing of marginalized students. This can and should extend beyond the classroom. Graduate students in STEM are well-positioned to challenge the deficit narratives that reinforce scientific exclusion and should advocate for current and future students within and beyond their campuses. It is important that graduate students who seek to pursue industry jobs or faculty

positions that do not require many classroom commitments understand that this power follows them into these spaces; and that as researchers they will continue to play a pivotal role in the way that science is communicated to students.

CONCLUSION

The pedagogical goals and skills of Black Studies cannot be bounded by the confines of a particular department or the campuses of historically Black colleges and universities (HBCUs) as their funding fluctuates with the tides of social interest. Students cannot rely solely on Black Studies programs and Black teachers for providing anti-racist and pro-Black pedagogy. The continued marginalization of Black Studies from academic prestige accompanies the racial disparities in the professoriate. In 2018, the National Center for Educational Statistics (n.d.) reported that Black men and women each account for only 2% of full-time tenure-track professors. Critical education scholars relate this contemporary trend to the active pushout of Black educators immediately following school integration, arguing that the neoliberal values upheld by the academic institution permit the continued exclusion of Black thought and Black people. By committing to teach for Black girls, graduate students in all fields may work to alter the future of academia and university learning.

In this chapter, I have posited teaching for Black girls as a pedagogical approach derived from Black Girlhood Studies. I offered curricular planning techniques and presented specific tools, including instructor learning objectives, student self-evaluation rubrics and a grading contract, that GSIs may implement in their courses. I also demonstrated how these tools and various assignments, such as autoethnographic essays and group presentations, work to instill within the course four pedagogical values: instructor responsibility, student agency, collaboration, and reflexivity. Finally, I linked these values to the necessary roles of educators as co-creators, co-witnesses, and co-conspirators and presented course feedback to demonstrate that students could identify these values without prior knowledge of them. Ultimately, I narrated my process of integrating the lessons I have learned in cultivating my Black Studies mind to cultivate a cohesive pedagogical praxis that uplifts the students most vulnerable to the inequities and violences imposed by the neoliberal university.

The normalization of the pedagogical values and practices shared here will also hopefully help to shift the ways that teaching is recognized in the research university and in graduate programs and the standards of teaching writ large. As more graduate students, specifically, engage these practices and demonstrate their effectiveness in fostering holistic student success, the standards for teaching in higher education will also shift. Graduate students, as both current instructors and future faculty, who implement these values into course design and teaching practices and make them the basis of their pedagogical praxis will model to students liberatory ways of knowing and learning, thus training the next generation of researchers and educators to maintain this ethos. As graduate

students mentor their peers and demand better from their faculty leaders, they will also shift the culture of the university and the priorities of higher education.

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CHAPTER 7.

VALIDATING STUDENTS' DIVERSE IDENTITIES

ERIN HUGHES

KEY TAKEAWAYS

- Recognizing and appreciating students' identities is important for learning and feelings of academic empowerment.
- The ways in which we can amplify students feeling validated is by being responsive to their needs and respecting who they are both inside and outside the classroom.
- The ways students may feel invalidated are by perpetuating the power dynamics between student and teacher, disregarding students' mental health, and engaging in inflexible standards.
- Students may feel more able to take on the difficulties of academia when we help them take a strengths-based approach to who they are.

Oftentimes, when we think about a course, the first things that come to mind are the syllabi, the specific projects, what topics to cover, and what format to teach in. While the topics and course names may change, what most drives the class is the make-up of the students. With each class and each cohort of students, how we should approach topics, what discussions take place, and so much more is dependent on the students in our classes. Students bring to class their diverse identities, experiences, beliefs, and backgrounds. These different aspects to their identity often influence the way they interpret material, just how our own identities influence the way we understand and choose the material as well. Importantly, as graduate student instructors (GSIs), we should be mindful to appreciate and validate the diverse identities students are bringing to the classroom to create an inclusive environment for our students. While that last statement applies to everyone, we know

academia has not always been, and continues to not always be, a safe space for all students (Dupree & Boykin, 2021; Llorens et al., 2021). Having their identity invalidated can have deleterious effects on students. Therefore, it is important as GSIs to learn what identities make our students who they are and how we can validate those identities.

This chapter discusses the ways in which students have felt validated and invalidated at the university by their GSIs, professors, and the university at large. Further, we dive into students' identities and the ways in which they believe those identities influence their current and future academic endeavors. Through the course of a quarter at Northwestern University, I engaged in a teaching-as-research project through Northwestern's Searle Center for Advancing Learning and Teaching. The goal of my research was to understand how students understood their varying identities relating to their academics, how students can feel empowered academically, and in what ways we, as graduate students, as well as others in the university, have helped or hindered students.

BACKGROUND

Students come into college with a varying array of identities. Part of what makes up a person's identity is the self-concept, anything they would consider "me" or "mine" (James, 1890; McConnell, 2011). One's self-concept could include their characteristics (e.g., hard-working), roles (e.g., parent), physical attributes (e.g., red hair), and/or identities (e.g., woman). Ultimately, the self-concept is a stable overview of who one believes themselves to be. The self-concept is not only one's conceptualization of who they are, but it is influenced by one's environment as well as influences the way one interprets the world (Schmader & Sedikides, 2018). Thus, the self-concept has an important role in how one moves through the world, including how our students experience academia (e.g., Williams, 2019).

The self-concept can be thought of as being made up of different self-aspects or roles that each have associated attributes (McConnell, 2011). Deemed the multiple self-aspects framework, the idea is that based on one's current situation/environment, different aspects of the self may become "activated" and thus influence one's current perceptions, goals, and attributes. For undergraduates, the role of being a student is often a more salient self-aspect. According to the multiple self-aspects framework, when a role is activated (e.g., student), then attributes associated with that role (e.g., hard-working) as well as goals (e.g., to do well) will also be activated. This may suggest then that during students' time in class or at the university, when their student identity is salient, the students will be thinking about their goals and how who they are can help achieve those goals. To this end, the current study asked students to contemplate how aspects of their identity could be advantageous to their academic endeavors. While certain characteristics/roles have been traditionally valued in the academic space, it has also been quite clear that not all aspects of students have been treated the same (Dupree & Boykin, 2021). Thus, it is imperative for us as GSIs to know how best to help students feel those aspects of their self are validated. One of the ways we can do this is by learning about their identities and empowering them to consider how those aspects are a strength within academia.

THE ACADEMIC ENVIRONMENT

While there has been progress within academia, we still encounter large disparities in the treatment of students with minoritized backgrounds (e.g., Williams, 2019). Thus far, the data on college students imply that discrimination and prejudice within the rest of society manifests within academia as well

(Monroe et al., 2008). This discrimination can be observed in a number of communities, including students of color, gender minorities, students with disabilities, and those in the LGBTQ+ community, to name a few. The prejudice and discrimination enacted within academia have deleterious effects on students' outcomes both academically and emotionally (Williams, 2019).

Research examines what students with minoritized identities mention as certain prejudices and discriminatory practices that they contend with. A too common experience students mention are microaggressions—daily exchanges that seem like subtle or indirect statements or actions but are demeaning towards students with minoritized identities (Williams, 2019). An example of a microaggression would be assuming a student is not American and asking to know where they are from *originally*, signaling the student does not belong in America. College students of color report that microaggressions are the most common form of daily racism they experience (Williams, 2019). These microaggressions contribute to feelings of anxiety, stress, and trauma. Further, students who are part of the LGBTQ+ community also report experiencing microaggressions within their departments, leading to feelings of discomfort and a sense that they must act counter to how they would like (Boustani & Taylor, 2020). These are just a few examples of how students with minoritized identities feel devalued and have aspects of who they are invalidated while at the university.

Ultimately, students with minoritized identities may experience detrimental outcomes due to being invalidated at their university, as invalidation is a form of discrimination. Students who face prejudice and discrimination often feel a sense of anxiety, distress, and lower quality of life at their university in response to repeated experiences of discrimination (Williams, 2019). Further, we observe higher attrition rates for students with minoritized identities both at the undergraduate level and graduate level (Brunsma et al., 2017; Monroe et al., 2008). Some important factors that play into these higher attrition rates of underrepresented students are the systemic biases they face at the university level as well as less mentoring support on a more individual level (Brunsma et al., 2017). While it is difficult as GSIs to make changes at the university level, it is possible to do our part by engaging in interpersonal interactions that validate students and their different identities within our classes.

It is important to recognize and accept students' diverse identities, especially in relation to helping foster positive outcomes (Townsend et al., 2019), which is something we, as GSIs, can engender. One such positive outcome can be feelings of academic empowerment, or students' feelings of being prepared and able to control their academic experiences and outcomes. Being motivated to do well and have control over one's experiences within academia can be due to feeling like one is capable, despite challenges (Lane et al., 2004). According to identity-based motivation theory, one's self-concept includes varying self-aspects that are constructed within one's current environment and result in being motivated to act in accordance with the salient identity (Oyserman & Destin, 2010). This theory specifically notes that people will perceive not only situations but also difficulties based on whichever identity is most salient. Thus, it is imperative to understand how students feel academia considers their identities within the context of their class, as feeling positive about their identity within academia could positively impact their motivations and possibly feelings of empowerment. Further, research suggests that when people do not feel their identity is being validated, it often leads to poorer outcomes, such as reduced psychological well-being (Garr-Schultz & Gardner, 2019). By understanding what behaviors validate versus invalidate students' identities within the context of

academia, we can not only better interact with our students but also prevent doing any emotional or academic harm as well. This drive led to my project on validating students' diverse identities.

TEACHING AS RESEARCH PROJECT

Northwestern University's Searle Center for Advancing Learning and Teaching has a program called the teaching-as-research project, otherwise known as TAR. A TAR project involves utilizing the classroom to engage in research that improves both learning and teaching. Graduate students who conduct a TAR project will develop a research question, implement the study within the class, and analyze and report on the results. As we move to engage in evidence-based research practices, it is helpful to remember that your teaching is a place that can enable you to do research on what works best for your students. This program allowed for me to examine the following questions:

- How does feeling like one's self-aspects aren't traditionally valued in academia relate to academic empowerment?
- How does feeling like one belongs in the university's community relate to feelings of academic empowerment?
- What relates to feeling validated versus invalidated within the university?

The goal of this research was to understand how students' varying aspects relate to their academics, how students can feel academically empowered, and in what ways have we, within the university, helped or hindered students. Overall, the hope was to gain an understanding of how students think about their identities within the context of academia, including the different prejudices that mar our universities.

METHOD

Participants

The students who took part in the study were enrolled in an upper-level psychology course during the winter quarter of 2020, in which I was one of the graduate teaching assistants. There were 136 participants altogether across all the surveys. Students who took part had the following demographics, gender: 78.7% women, 18.4% men, 1.5% nonbinary/third gender, 1.5% not reported; ethnicity[1]: 11.0% African-American, Black, African, or Caribbean, 21.3% Asian-American, Asian, or Pacific-Islander, 70.6% European-American, White, Anglo, or Caucasian, 8.8% Hispanic-American, Latino(a), or Chicano(a); year in school: 11.0% first year, 18.4% second year, 35.3% third year, 30.9% fourth year, 1.5% fifth year, 1.5% other, 1.5% not reported, and with an average age of 20.53 years (SD = 1.53, 18 – 28).

Materials

Survey 1

Self-aspect prompt. This prompt asked students to think about their self-aspects and to write in three. This was the prompt, "There are multiple aspects of ourselves that make up who we are. Some

1. Students could select as many ethnicities; thus the percentages add up to over 100%.

of these aspects are core/central to who you are. These aspects would be what you feel truly defines you. We are interested in the aspects of your self-concept that you believe truly make up who you are. These self-aspects can include anything you consider a part of yourself such as an identity (e.g., race, gender, religion), roles (e.g., student), relationships (e.g., daughter), characteristics (e.g., empathetic). Please, in the space below, write in 3 aspects of your self-concept that you consider part of who you are."

Surveys 2 – 4

Self-concept aspect asset. Participants responded to the following prompt about one of their self-aspects each week. The prompt was, "Please write about how [insert self-aspect] could be an asset in your current academic endeavors or could be an assent in your future plans."

Self-aspect's core level. This was a 1-item measure that students responded to for each of their three aspects. The item was, "Please rate how much [insert self-aspect] reflects your core characteristics (aspects that are central to who you are)" on a 1 to 7 scale.

Traditionally valued in academia. This was a 1-item measure that students responded to for each of their three aspects. The item was, "In academia, there are specific self-aspects (identities, characteristics) that have been traditionally valued to the detriment of other aspects. Please rate how much you believe [insert self-aspect] has been traditionally valued by academia" on a 1 to 7 scale.

Survey 5

Academic empowerment (adapted from Townsend et al., 2019). This was a 6-item measure that asked students to report how much they felt they could control how well they did in school (e.g., "I'm certain I can master the skills taught in my classes this year"; $M = 5.64$, $SD = .83$, $\alpha = .81$).

Social and academic fit (adapted from Walton & Cohen, 2007). This was an 8-item measure that asked students to report how much they felt they fit in with both the academic and social community at their university (e.g., "I feel like I fit in with the academic community at Northwestern University"; $M = 5.03$, $SD = .92$, $\alpha = .85$).

Validation prompt. The prompt students responded to asked what has helped them feel validated since starting at Northwestern University and what has made them feel invalidated. The prompt was, "Since starting at Northwestern, what do you feel has positively influenced your ability as a student? What has made you feel seen/heard/included at the university? What has made you feel disregarded by the university? What have your teaching assistants/professors done that has been helpful or harmful? Please give as much detail as you feel comfortable sharing."

Procedure

Students were approached in the first week of class and were told this was a volunteer opportunity to take part in a study examining how students think about their identities within the context of academia. All students received a link to Qualtrics every other week for 10 weeks resulting in 5 surveys. Each time, students encountered an informed consent noting what they would be asked, that they could choose to not respond, and that their responses would remain anonymous, confidential, and would not be examined until after the quarter concluded. Students could take part in all 5 surveys

or just participate in the final survey, even if they not done the previous surveys. The first survey entailed responding to demographics, a series of questionnaires[2], and a prompt about their self-concept aspects. Surveys 2 through 4 were identical. For each survey, one of the three self-aspects students listed in the first survey were piped in. Students responded to a prompt asking how that specific self-aspect could be an asset in their academic endeavors. Students also responded how core that self-aspect was to who they are and how traditionally valued in academia that self-aspect was. Finally, for the last survey, both students who had been responding throughout the quarter and students who just wanted to take part in the final survey responded to the following: demographics (if this was the first survey they took), academic empowerment, fit to the university's community, and an open-ended prompt asking about their experience at the university. I tried to get a more holistic view of the research questions by examining students' responses both qualitatively and quantitatively.

RESULTS

The first research question was how does feeling like one's self-aspects are not traditionally valued in academia relate to academic empowerment? This question is centered on the idea that feeling one's aspects are not valued could have negative consequences for students' motivation and well-being. To examine this question, I regressed students' scores of how traditionally valued their self-aspects are in academia on feelings of academic empowerment. Here, there was a significant positive association, $B = .18$, $p = .017$, 95% CI .03, .32. This means feeling one's aspects were valued in academia related to having greater academic empowerment. This may suggest that when students' identities are invalidated or when students experience discrimination such as microaggressions, this could have deleterious effects on their feelings of doing well and having control in their classes.

For the second research question, how does feeling like one is part of the university community relate to feelings of academic empowerment, I regressed one's feelings of fit to the university community on feelings of academic empowerment. This question also centers on the idea that feeling like one belongs at the university would relate to feeling like one can do well in their classes. Here, there was another significant positive association, $B = .15$, $p = .035$, 95% CI .01, .29. This means that when one feels like they belong at the university, they also feel a greater sense of academic empowerment. Stated another way, this could mean when one does not feel like a part of their university's community, they feel less capable in their classes. This is important because previous research has shown that universities can often cause students with minoritized identities to not feel the same level of fit (Castellanos et al., 2016). This lends another reason to why ensuring that we create inclusive environments in our classrooms and beyond is important to help engender students to feel able to do well at the university.

The last research question in my project was to understand when students have felt validated versus invalidated at the university. This question was answered in part by reading through and looking for themes within students' responses to the prompt of how their aspects have been an asset to their goals/endeavors, as well as the prompt that specifically targeted the experiences of validation and invalidation by various members of the campus community.

Students had varied self-aspects that I coded into three different themes: characteristics, roles, and

2. As this was part of a larger study; not all of the measures taken are reported in this chapter.

group identities. For characteristics, some examples are empathetic, independent, insecure, perfectionistic, intelligent, and community-oriented. Out of the 270 self-aspects, 125—or approximately 46%—fell into the characteristic category. For roles, some examples are student, sibling, artist, athlete, woman, partner, and daughter. Out of the 270 self-aspects, 95—or approximately 35%—fell into the role category. Lastly, for group identity, some examples are Mexican-American, queer, Lutheran, Jewish, first generation student, and feminist. Out of the 270 self-aspects, 50—or approximately 19%—fell into the group identity category.

Next, students considered how their different aspects were an asset to their current and future academic endeavors. The hope for this exercise was that by asking students to interpret their own self-aspects as strengths, it would remove the focus from what academia has valued and instead focus on what they value about themselves. Students' responses largely did consider the positives, even when they mentioned that an aspect would not be thought of within the context of a university. For example, one student wrote,

> I don't think being queer is a direct asset in my current academic endeavors. However, I will say that being queer has opened my eyes and really has helped me engage meaningfully with issues regarding marginalized communities. This time spent thinking about marginalized communities and other's emotions has made me more empathetic and in turn, a more compassionate and enjoyable person to be around. All academic endeavors and future careers depend on my ability to get along and work well with others…

When we asked how their self-concept aspects were an asset, a majority of students' responses connected their aspects to their academic endeavors in unique and positive ways, like how compassion or empathy means they have better connections with their professors or peers, how holding a minoritized identity has given them a unique perspective both in the classroom and in their organizations, and how characteristics like ambition or intelligence have been traditionally valued and aids in their doing well in class. However, some students did note the barriers that academia can hold onto based on their self-aspects. For example, one student wrote,

> Being a woman has been helpful in shaping my world view, and can potentially also be an asset in getting a job. But obviously there is gender discrimination that has probably influenced me – I dropped mathematical methods in the social sciences for a variety of reasons, but partially due to a lack of community.

This quote showcases students' awareness of how their self-aspects can relate to their academics and be influenced by people within the university due to their beliefs. While some of the responses did have negative experiences within them, a majority of the time, students still found a way to connect their self-aspects back to a strength. This may be one avenue for reminding students and ourselves as instructors to think of our students with a strengths-based approach rather than a deficit one. One of the ways to do this is to incorporate pedagogies that center how there are multiple ways to learn, multiple ways to know, and multiple experiences to value (Destin et al., 2021).

Finally, students responded to the ways in which they have felt both validated and invalidated at the university, including by administration, professors, and GSIs. For times students felt validated by their professors and GSIs, they noted certain themes like being reached out to individually, instructors thanking students for sharing in class, instructors showing that not only are they available to help but that they *want* to help, instructors prioritizing discussion over lecture when possible, instructors

making it a priority to connect with students and learn their names, and instructors acknowledging the difficulties students are facing. Largely, the themes seemed to breakdown into what could be done in class (e.g., receiving and implementing feedback, exams that accurately reflect course content), making an effort to connect (e.g., learning students' names, smaller explanations for those who feel uncomfortable speaking in class), feelings of gratitude (e.g., thanking students for their hard work), and showing a desire to help students (e.g., meeting individually to discuss students' goals/aspirations). One response included, "I definitely think my ability as a student has been positively influenced by professors and [teaching assistants] who make it a priority to get to know the students and who act in a very approachable and understanding manner."

Further, there was a general sense that instructors who strived to create an inclusive space in their classroom and office hours were especially helpful. In this vein, students specifically noted when GSIs have checked in on them emotionally because they forgot to turn in an assignment or their grade had dropped, had mandatory office hours in the first week to get to know them, and offered flexibility and believed them when they said they needed more time. Students also appreciated instructors who knew and recommended resources for students' well-being, both emotionally and academically. Beyond just GSIs, students noted that having a community is what has helped them feel seen and heard. In particular, students mentioned older peers who demonstrated how to succeed, finding student groups where they could be their authentic selves, spending time with a core group of friends, and spaces that offered a general sense of being included. Ultimately, validation seemed to come by being treated as "human first, student second," as one respondent put it.

Certain themes emerged for invalidating experiences. These themes include instructors creating and emphasizing a divide between themselves and the students, instructors disregarding feedback on the class from students, fostering a competitive environment, engaging in microaggressions, and disregarding mental health. Here, the different responses seemed to breakdown again into what is happening within the classroom (e.g., when there's a disregard if the class is too difficult, competitive atmosphere), disrespect (e.g., microaggressions, not learning how to pronounce a student's name), and a disregard for one's personhood (e.g., ignoring mental health issues, not trying to understand marginalized identities). One student response noted, "I've experienced microaggressions… [instructors] not taking the time or effort to remember how to pronounce my name, despite me telling them continuously, casual mentions of racism within a class without any sort of critical analysis or critique."

In general, the interpersonal interactions that seemed to create the most invalidation were those in which instructors tried to maintain a power structure by separating themselves from the students, creating inflexible standards, disregarding students' mental and physical well-being, and engaging in behaviors that highlight how prejudice and discriminatory practices are still very much a part of academia. These themes also transpired in the larger university community with students noting how the administration largely thinks of students as numbers rather than thinking of them as individuals.

Overall, my teaching-as-research project offered insight into what experiences relate to students feeling academically empowered, part of the community, and accepted within the university. Students who feel like they are being valued also seem to feel that they can and will do well in their classes. Further, those who felt like a part of the community also felt like they could succeed. By diving into their responses, we can recognize that students wrote about themselves in a way that highlights how

all the different aspects of who they are can be a strength. By validating and respecting students in a way that is empathetic, we can help engender an inclusive environment for them.

APPLICATION

Next steps include thinking about how we, as GSIs, can support undergraduate students in a way that highlights their strengths and validates their identity. Firstly, it seems that feeling valued relates to feeling like one will do well academically. An initial step could be thinking about how we can show our students that we value who they are. Perhaps, this may include having students tell us about who they are on the first day of class or engaging in a short exercise whereby students write about who they are and how their aspects will be an asset to their learning in the class. Right off the bat, centering students' identities in a way that is valued within the class could help aid them with feeling like they can succeed.

Secondly, we observe that feeling like one is part of the community at the university also relates to feeling like one can do well academically. Part of creating a community can start with us in our classes. This could be done by having students create their own ground rules for the class, having students do getting-to-know-you activities (e.g., fast friends task), and creating an inclusive space where students can sense that their thoughts are valued and respected. Inclusive spaces may be engendered by focusing on getting to know students, focusing on collaboration rather than hierarchy between instructors and students, and reminding students that their backgrounds and experiences lends themselves to have unique perspectives when looking at different topics.

Lastly, students wrote about a wide range of experiences that helped them feel validated at the university and experiences that caused them to feel invalidated. Largely, feeling validated centered around instructors making an effort for students to feel heard and respected. Some concrete ways to do so is having each student come to office hours to meet, asking why students are taking the course, learning their names, and prioritizing the feedback students give to mold the class to the current set of students. Students reported feeling invalidated in situations when it seemed like research mattered more than the students, when there was a disregard and a disbelief in students' mental health struggles, and when power dynamics between instructors and students were perpetuated. Here, it seems that again showing students we care by supporting them and creating an environment of collaboration, we can alleviate some of the negative experiences students have. See Table 1 for possible examples and solutions.

CONCLUSION

Overall, students come into class with a diverse range of self-aspects that include characteristics, roles, identities—all of which are important to who they are and how they understand the world. We, as GSIs, can do our part to help students feel validated, listened to, and cared for while at the university. By being intentional with creating inclusive environments for students, we can also hopefully engender feelings of community, belief in their ability to succeed academically, and feelings of support. Ways to potentially accomplish this are by being flexible, listening to students, showing signs of gratitude, and creating a collaborative atmosphere.

Table 1. *Themes and examples of invalidation incidences and possible solutions.*

Theme	Examples	Possible Reason for Feeling Invalidated	Possible Fix	Hopeful Outcome
Mental well-being	– Disregard for students who were struggling with their mental health	– Felt like the instructor lacked in care and disregarded the students as people	– Work with student one-on-one or with the university's mental health services to come up with a plan	– Student can feel cared for while also getting the services they need
Inflexibility	– Disregarding feedback from students in class – Having a student take an exam on the day of a relative's funeral	– Felt like there was no opportunity for discussion – Felt ignored and disrespected	– Incorporating students' feedback through use of a mid-class survey	– Students feel like class is more of a collaboration
Environment	– Fostering a competitive environment – Telling students this is a class to weed unqualified students out	– Felt like instructors were trying to brew animosity amongst students rather than comradery	– Acknowledge the difficulty level of a class but work with students to build confidence	– Students feel hopeful entering the class while being aware of the challenges
Power	– Reminding students that there's a hierarchy	– Students find it hard to reach out when an instructor is trying to uphold the power differentials	– Having expectations for the students but also letting the students have expectations for instructors	– Reduces the power differential rather than enhances it so students feel more open to talking
Communication	– Not providing feedback on assignments or solid instructions for students to follow	– Students felt like they may be set up for failure by not having directions	– Give as much feedback when possible and tell students communication is open to discuss assignments	– Helps students feel as if they can approach an instructor with questions both before and after assignments
Discrimination	– Engaging in microaggressions such as mispronouncing students' names even after being corrected – Not acknowledging the institutional barriers that affect some students	– Can make students feel othered or that their instructor did not care to learn their identity – Can also feel stagnant that instructors aren't updating their beliefs by examining different paths to academia	– Take time to really get to know students' names and backgrounds – Taking the time to learn about what institutional barriers may impact academia for students	– Students feel equally valued and that their identity is one that is appreciated in that space
Administration	– Administrators ignoring students' concerns and focusing more on the fiscal aspects of the university	– Students feel like they're just being used for money and aren't being listened to	– Advocating for students and talking to administration	– Students can see you're on their side and you're using your power to help them

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CHAPTER 8.

HOW CAN GRADUATE INSTRUCTORS PROMOTE DIVERSITY, EQUITY, AND INCLUSION IN THEIR COURSES?

TANEISHA VILMA AND NATALIE LOW

KEY TAKEAWAYS

In this chapter, readers will find

- Strategies to include Diversity, Equity, and Inclusion practices when designing the course syllabus.
- Considerations for fostering equity among students through the format and scoring of course assessments.
- Methods to include diverse cultures and contexts in course materials to increase representation.
- Strategies for promoting Diversity, Equity, and Inclusion in various components of a course by graduate instructors who have different levels of course autonomy.

There is significant enthusiasm for fostering diversity, equity, and inclusion (DEI) across higher education institutions (Booker & Campbell-Whatley, 2018; Klonoski et al., 2018). However, approaches for implementing these practices in individual courses are not always focused on graduate instructors. In this chapter, we seek to provide tangible strategies for graduate instructors to promote DEI in their courses while acknowledging the challenges that graduate students may encounter. First, we will consider the way that the course is structured. This will include methods to promote equitable practices while designing the course. Next, we will discuss the way in which the course is presented. This portion of the chapter will focus on equitable practices during the course, such as the content that is being presented, course delivery, and how the course material is discussed. Third, we will discuss various methods that graduate instructors may consider to engage students with

course content, for example, including in-class activities that are completed individually or in groups using varying formats. The final section of the chapter will acknowledge some potential challenges to incorporating equitable practices in a course. Ideally, we hope to develop courses which provide opportunities for all our students to succeed.

EQUITABLE PRACTICES

What are some practices that graduate instructors can engage in to foster DEI in their courses? Based on our academic experiences, it was not often made explicit how equity or inclusion would be promoted in the course. In our own teaching endeavors, we have worked with students from diverse backgrounds. This includes students of different race and ethnicities, belonging to varying socio-economic backgrounds, first-generation college students, and non-traditional college students. Collectively, these experiences have made us notice a need to facilitate a more equitable course climate. Therefore, in this section, we will explore potential strategies that can be used when developing the (i) syllabus and (ii) assessments for the course.

Syllabus

Regardless of the course you teach, the first day typically involves going over the syllabus with the class. The syllabus is, often, the first point of contact between instructors and students. It contains course-specific information (e.g., format of the course, assessment information, etc.) and reflects the instructor's pedagogical approach (Ching, 2018; Parkes & Harris, 2002). Many instructors include a diversity statement in their syllabus, a statement that contains information related to diversity and social justice issues (Fuentes et al., 2021). This may include a separate preferred name and pronoun statement as well as family-friendly policies that acknowledges various family-related commitments that students may have. For example, instructors can consider giving parents the flexibility of bringing their child to class if they are not able to find childcare and request for non-parents in the class to leave the seats closest to the doors for parents (Fuentes et al., 2021). This may be especially important for students who seek to balance the demands of family and academic commitments successfully (Beeler, 2016; Kensinger & Minnick, 2018; Sy & Romero, 2008). While this is useful for instructors to make their implicit intentions and values explicit, these diversity statements may be limited in their effectiveness if they are not discussed with students. Below, we discuss two ways that graduate instructors can use the syllabus as an effective tool to promote DEI.

First, it would be useful to highlight the diversity statement(s) in the document when discussing the syllabus on the first day of class. When students receive the syllabus, the first sections they turn to are typically the sections on course assessments and grading policy. More often than not, students are likely to skim over the section on course policies, especially when the syllabus is long. To navigate this issue, graduate instructors can go over these sections when they discuss the syllabus. Actively discussing these statements with students creates greater awareness of the ways that instructors are attempting to promote DEI in the course. Below are two sample course diversity statements. Dr. Alisse Portnoy from the University of Michigan included the following statement in an Introductory-level English class:

> In our structured and unstructured discussions and dialogues, we also will have many opportunities to explore some challenging issues and increase our understandings of different perspectives. Our conversations may not always be easy; we sometimes will make mistakes in our speaking and our

> listening; sometimes we will need patience or courage or imagination or any number of qualities in combination to engage our texts, our classmates, and our own ideas and experiences. Always we will need respect for others. Thus, an additional aim of our course necessarily will be for us to increase our facility with the sometimes difficult conversations that arise as we deepen our understandings of multiple perspectives – whatever our backgrounds, experiences, or positions (Portnoy, 2014).

The College of Education at the University of Iowa recommend this second statement:

> Respect for Diversity: It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you. (University of Iowa College of Education, 2021, "Syllabus Checklist" section).

However, because these points are developed by the instructor, the various DEI statements may not resonate with students. To help students feel more included, instructors can consider developing the course DEI statement as a community building activity. To do this, instructors and students can work together on the first day of class to brainstorm ideas for the DEI statement. For example, to begin the discussion, instructors may first acknowledge that everyone in the classroom has several socio-cultural identities and then express their commitment to minimize systematic forces of oppression throughout the semester (Fuentes et al., 2021). After which, students will be asked to list down strategies that they think can promote DEI in the course. All responses will be kept anonymous. Once everyone has responded, a large group discussion will be held and students can vote on the top five strategies they would like to include in the statement. Sample questions that can be asked to students to facilitate the discussion include, "Describe the classroom environment that you would feel comfortable to learn in?" and "How can we create and maintain a classroom space where differences are respected and valued?". As instructors, we appreciate hearing our students' perspectives through this process. From the student's perspective, when they feel that their voices are heard, they may be more willing to participate in class and share unique viewpoints with their peers during the course (Cunninghame et al., 2020). Throughout the semester, it may be useful to refer back to the statement depending on the climate of the course and to make revisions, if needed.

Second, in addition to including a diversity statement in the syllabus, graduate instructors can consider including a preferred name and pronoun statement. Class rosters and university data systems are provided to faculty with the student's legal name and, sometimes, with the legal gender marker (Beemyn & Brauer, 2015; Linley & Kilgo, 2018). Although some universities may allow students to change the way that they would want their preferred or proper name to appear in the class roster, this may not be the case across all institutions. As instructors, we try our best to remember our students' names knowing that this makes them feel welcomed and included in the course. For our classes, we ask students to complete a welcome sheet or index card on the first day of class to indicate their preferred names and pronouns while introducing themselves. However, because not all students may feel comfortable disclosing their pronouns (MacNamara et al., 2017; Poor-Pariseau, 2021), it is useful to make this portion of the activity optional rather than mandatory. Having this information makes us feel more confident interacting with students, especially when our courses include a diverse

group of students (e.g., students who abbreviate their first name, students who decide to use their middle name, students who prefer or identify with names other than their given legal names, and nonbinary or transgender students who identity with a different name).

Course Assessments

Regardless of the course taught, students in class have varying learning abilities and styles. The course assessments should not only be developed with the goal of achieving the course objectives but also of promoting DEI among students within the course. We will present several strategies that we have used based on our experiences as graduate instructors.

One strategy we recommend is to ensure that the weighting of the course assignments is as even as possible. Exams and quizzes are the most common assessment formats used (Parkes et al., 2003); however, students from marginalized groups may struggle with these approaches (Chung et al., 2010 Lin et al., 1998; Wei & Liao, 2011). If exams and quizzes have the highest weighting in the course, this may place marginalized students at a greater disadvantage compared to their peers. To promote equity, instructors can plan the course so that the total points associated with exams make up less than 50% of the course grade. For example, we may include three non-cumulative exams in a course and supplement the exams with assignments, quizzes, and in-class activities. Having more in-class activities and low-stake quizzes that are worth more points are useful in alleviating feelings of test anxiety that students may have with heavily-weighted exams (Salehi et al., 2019; Zeidner, 2007).

A second strategy, if the nature of the course allows for this, is to include different types of assessment questions within the exam. One method we have used is to have a mixture of multiple-choice questions and short-answer questions (Irwin & Hepplestone, 2012; Stowell, 2004). In some cases, when students have the option to select several short-answer questions to respond to, this allows them to drop the questions that they feel less confident in attempting.

While incorporating different types of assessment questions is useful for promoting equity and inclusion among students, we acknowledge the potential limitations that graduate instructors may encounter when using question formats that do not allow for automated scoring. For example, courses that graduate instructors teach are often lower-level introductory or general education courses that have a large student enrollment size such as Introduction to Psychology, General Chemistry, and Fundamentals of Mathematics (Mutambuki & Schwartx, 2018; Shortlidge & Eddy, 2018; Tilley, 2014). Thus, including different types of assessment questions may be challenging or even unrealistic for graduate instructors to implement because of the amount of grading involved and the time taken to grade the exams. If graduate instructors are required to include exams and automated scoring methods are used, these exams can be supplemented with alternative assessments. For example, group activities or projects would minimize the number of individual assignments to grade. Additionally, some students may be more successful with group papers or projects as they can complete these assignments over a period of time compared to high-stakes exams.

Finally, giving students the opportunity to drop their lowest quiz or assignment score may be a helpful assessment strategy. There are times where students may miss a quiz or assignment either because they forgot to complete it or experienced a personal difficulty. Although some students may

contact their instructor to express their concerns and ask for an extension, not all students who are experiencing similar issues may feel comfortable doing so. Allowing students to drop their lowest quiz or assignment score also reduces the stakes associated with each assessment and may alleviate feelings of stress. Therefore, this strategy may help to promote equity among all students in the course.

EQUITABLE DELIVERY OF COURSE INFORMATION

Next, we will discuss the way that the course is presented. This portion of the chapter will focus on equitable practices during the course, such as the content that is being presented, course delivery, and the way that the course material is discussed.

Discussion of course content

First, when discussing theories and key concepts, it is important to include content that is representative of diverse cultures and contexts. Though this may be more readily applicable to the social sciences and humanities, simple strategies such as acknowledging the lack of representation or using data from diverse populations can be implemented in STEM courses.

In many fields of study, the foundational content that is taught to students is not inclusive. Research is often conducted by and focused on specific demographics (e.g., male, White scholars) (Henrich et al., 2010; Roberts et al., 2020; Scharff et al., 2010). A quick search of "founders" of most fields of study emphasizes this issue. For example, in psychology, the introductory theoretical frameworks examining attachment are exclusively by white scholars that include majority white samples (Bretherton, 1992; Schneider, 1991). Thus, it is the norm that articles and textbooks discussing the development of attachment theory present a limited interpretation of the construct. In such cases, instructors can first acknowledge the considerable underrepresentation and then perhaps present the issue within a historical context. Additionally, this can be a learning opportunity for students to consider potential ramifications and why this lack of representation might be occurring.

Historically, there has been a gender disparity in STEM fields. Instructors can incorporate the historical context for this persistent issue when discussing relevant content. For example, if the course material involves a lecture on deoxyribonucleic acid (DNA), the instructor can highlight that chemist Rosalind Franklin made significant contributions to the discovery of the double-helix structure of DNA; however, it was Maurice Wilkins, Francis Crick and James Watson who received complete credit and were awarded a Nobel Prize (Maddox, 2003). Instructors can cite that the lack of representation is likely a result of systemic inequities in the field, which results in certain researchers and groups being silenced and not included. Relevant examples would highlight that researchers from underrepresented groups may not have had the same opportunities for their contributions to be acknowledged. Therefore, theoretical frameworks from different perspectives specifically from individuals who have been historically underrepresented in the discipline must be incorporated. The customary theories could be supplemented with literature conducted by scholars of color and/or with a diverse sample. Highlighting the work of scholars from underrepresented groups allows this exposure to students with shared identities. Researchers have demonstrated that representation within a domain is more likely to encourage students to pursue similar studies and careers in the field (Davis, 2008; Martin & Fisher-Ari, 2021; Rainey et al., 2018).

Increased representation encourages students to explore the limitations of generalizability when

people of similar demographics (e.g., ethnicity, socioeconomic status, sexual orientation) are included. Instructors can be intentional about discussing the concerns of applying findings from a restricted sample across racial groups, gender, or cultures. For example, subsequent attachment studies demonstrated that initial findings and interpretations of patterns of classifications were not always transferable to countries such as Israel and Japan (Van Ijzendoorn & Kroonenberg, 1988). Additionally, lack of representation in clinical research has detrimental consequences to health outcomes. It was found that only 5% of the genetic markers associated with asthma in white Americans applied to African Americans (White et al., 2016). Thus, differences in response to medications that are developed based on white Americans in clinical trials may not be as effective for African American children. Providing relevant real-world examples allows for critical thinking opportunities on the significance of inclusion and equity within the field.

Some fields may intrinsically consider DEI content (e.g., sociology, cultural anthropology); however, other domains may not. Thus, it may be more challenging to incorporate DEI content in courses such as statistics or research methods. One strategy is to include case studies or data that are inclusive and a representation of various demographics (e.g., race, gender identity, political affiliation, religion, etc.). Examples of where to access diverse datasets include, The National Science Foundation's National Center for Science and Engineering Statistics (https://ncses.nsf.gov), Pew Research Center (https://www.pewresearch.org), and the U.S. Department of Education's National Center for Education Statistics (https://nces.ed.gov). However, this requires an awareness to not reproduce a token marginalized perspective. For example, instead of only including data of undocumented people with a sole focus on the Mexico-United States border, information on undocumented individuals from Canada or European countries could also be included (Fong & Chan, 2008; McCorkle, 2018). Additionally, referencing Asian countries or "Eastern culture" and only using outcomes reported from China does not consider the vast cultural differences across the continent. Thus, instructors across domains should be mindful and intentional about the types of data that are used in their courses.

When instructors present diverse materials or content that includes traditionally marginalized groups in their courses, it is important to also provide an explicit rationale for the inclusion of the materials. Though this is useful for all instructors, it is particularly necessary for instructors who belong to dominant identity groups to provide a context and a clear indication of why they are presenting specific materials to avoid examples of appropriation or further tokenization. Furthermore, students may not feel empowered to voice concerns over problematic examples that are shared due to perceived instructor-student dynamics. By having greater awareness of these issues, this can help to minimize harm especially to students who are part of traditionally marginalized groups. We hope instructors challenge dominant narratives and diversify knowledge through acquiring a more thorough understanding of course content.

Presentation of Course Content

The aim is for course materials to include images, videos, and examples that reflect diverse representations. When designing course slides and resources, instructors can incorporate content from various cultures and contexts (e.g., pictures, names in examples). This assists with learning and retention as students may find it easier to connect with the content (Raynaudo & Peralta, 2019). For example, when developing or reviewing course materials, instructors can evaluate the identities of people in presentations and how they are being depicted (e.g., only people of color in

presentation when discussing poverty). Using examples during class to reinforce the course can be an accessible learning tool. However, it is important to consider the messages the examples may send to students (e.g., equating Arab or Middle Eastern heritage to being Muslim, Asian students as being good at math, men preferring STEM professions, etc.), which can unintentionally reinforce harmful stereotypes or continue to perpetuate problematic narratives. In content videos or other visual elements, the speakers and experts could include individuals from various backgrounds and/or provide different perspectives. Additionally, displaying cultural practices or experiences across different contexts demonstrates that although certain practices may be common and beneficial in one context, they may not necessarily be useful or present in another. Offering varying perspectives allows students to critically think about the false universality of a dominant culture.

The goal is to have the classroom be a supportive and welcoming environment for all students. It is well documented that students' social and academic outcomes significantly improve when there is a sense of belonging to the campus community (Fuentes et al., 2021; Museus et al., 2017; Rainey et al., 2018). Increasing diverse representation and providing diverse perspectives in the course allow students to feel valued, which, then, facilitates engagement and improves performance (Cheryan et al., 2017; Maruyama et al., 2000).

COURSE DELIVERY

Graduate instructors may consider a number of methods for students to engage with course content. It is the responsibility of the instructor to establish and facilitate an encouraging and inclusive environment where students can succeed. There are several methods that might encourage engagement with course content. First, for courses where lectures are the primary mode of instruction, lectures can be supplemented with small group discussions and interactive in-class assignments. From our experience, students consistently report positive evaluations of in-class activities. These activities are typically completed in groups consisting of varying formats (e.g., response to a prompt or video, example quiz questions based on content in lecture, etc.). Benefits of this approach are that students are able to engage with one another and receive an immediate self-assessment of course materials. Additionally, this allows for structured time for students to reflect on the material and report back to the larger class. The in-class activities also provide the instructor with feedback on content that students have found challenging and that may need to be reviewed.

Second, some students may have difficulty focusing when one same mode of instruction is used for the entire class period. Thus, having different instruction modes may help students sustain their attention, refocus, and ultimately retain more information (Barr, 2014; McCarty et al., 2016). Graduate instructors may consider implementing a flexible class structure—that is, there are components of the class that are the same every session while others vary from day to day, depending on course goals. For example, each class session can start with three learning objectives and a dedicated portion to lecture. However, other components of class can differ by day or week (e.g., dedicated time for group activities every two class sessions). This provides consistency, so that students know what to expect, but modifications to the class format help sustain engagement (Heilporn et al., 2021). Additionally, when possible, graduate instructors can implement community building activities (e.g., 10 minutes during the first class session of the week). During these activities, students will first connect with one another while completing an activity and then report back to the class. Simple activities that are not time consuming may set the tone for the class by increasing

student comfort level. As a result, students may be more inclined to ask clarifying questions or willing to share a comment and provide responses during the lecture or discussion if they have engaged in community building activities. Thus, adjusting teaching methods may be a beneficial practice to implement equitable delivery of course content.

POTENTIAL CHALLENGES WITH IMPLEMENTING DEI IN COURSES

The primary objective of this chapter is to provide graduate instructors with strategies to implement DEI in their courses. We hope that the chapter can encourage graduate instructors to consider DEI in several ways, not only during course discussion of identities and demographics. However, we do recognize that because graduate instructors will encounter varying levels of independence when developing and implementing a course, some of these strategies may be challenging to use. Below, we discuss the ways that DEI can be promoted by graduate students who have different levels of autonomy in developing the courses they teach.

First, those who are directed to follow predetermined procedures and use established course materials may have limited opportunity for significant changes to curriculum. Graduate instructors may have varying levels of experience or comfort and thus may feel apprehensive in facilitating discussing DEI topics in courses. Alternatively, they may fear repercussions for introducing particular issues if those issues are not deemed appropriate as part of the course or the department goals (Alvarez McHatton et al., 2009). In these cases, graduate instructors can focus on using thoughtful and representative examples, consider course delivery, and establish a welcoming environment via statements in the syllabus or discussed at the beginning of the course. Though topics of diversity and equity may not be explicitly discussed, these practices can facilitate an environment where more students feel supported and welcomed.

There are also graduate students who have the ability to create their own classes with significant autonomy. This allows the instructor to curate an equitable course that considers course policies, assessment scoring, the addition of representative content, and teaching practices. Graduate instructors can obtain recommendations from students such as providing opportunities for anonymous feedback via surveys. For example, in our courses we have asked students, “What has been going well for you this semester?”, “What has been challenging for you this semester?”, “As the instructor, what could I be doing to improve the class to help you learn?” and “What could you be doing to improve your experience in the class?”. Students are also asked to add any other information that they feel comfortable sharing to facilitate engagement and learning. The anonymity gives students the opportunity to honestly share their experience in the course without fear of repercussion. Alternatively, feedback can be obtained indirectly through assessing the classroom climate. This includes the levels of student engagement, liveliness of discussion, students’ openness to learning and/or discussing different perspectives, students’ feelings of their backgrounds and/or identities being valued, and the levels of collaboration and support within the peer environment. Through these experiences, graduate instructors may be more equipped to identify course inequities and present potential suggestions to foster an inclusive environment that can be shared with other graduate students and faculty members within the department.

CONCLUDING THOUGHTS

As graduate instructors who aspire to become full time faculty, we have taken advantage of our early teaching opportunities to cultivate who we want to be as teachers. This is not limited to the content of the course, but it is equally important to consider how to create a space where all students have the opportunity to feel included and be successful. Part of this desire comes from our journeys as students of color where our identities and experiences have not always been included in course content. Throughout our undergraduate experience, we had grown accustomed to not seeing the work of scholars with shared identities or limited representation in samples being generalized to a greater population. As a result, it has become our priority, as graduate instructors, to develop strategies that increase representation in our own courses.

Additionally, we also recognize that many long-lasting policies often go unnoticed by the individuals who developed them. Because we may have also experienced these course inequities throughout our academic journeys, we can work with the department to identify and address these issues. Thus, it would be beneficial to reconsider the course practices and policies that are often implemented and to consider modifications, where necessary, to promote equity and inclusion. We hope to continue developing and implementing these strategies to create spaces where current and future students can thrive.

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CHAPTER 9.

NOTHING ABOUT US WITHOUT US: PRACTICAL STRATEGIES FOR ACCESSIBLE PEDAGOGY

JENNIE BAKER AND HEATH J. WOOTEN

KEY TAKEAWAYS

- This chapter explores practical strategies based on the lived experiences of the authors, who are disabled graduate instructors.
- Theoretical approaches to accessible pedagogy should be rooted in praxis that accounts for the material realities of the disabled people it professes to be for.
- Most classroom interventions at present are accommodations, which are based on the medical model of disability; this chapter describes an approach to accessible pedagogy rooted in the social model of disability, and an ethics of disability justice.
- Instructors can explore ways of implementing accessible praxis by rethinking the ableist assumptions inherent in such areas as time, space, grading, participation, and technology.

We are writing this chapter from the firmly held perspective that accessible pedagogy should build from the experiences of disabled people. In other words, "nothing about us without us." In the following chapter, we share our personal experiences, theoretical backgrounds on accessibility and disability, and practical suggestions for the accessible classroom. This chapter is organized as an orientation to accessible pedagogy, as we understand it, from our experiences and relative positions. We hope that our narratives will lend shape to the nebulous menace of "academic ableism." To do this, we begin from a place of sharing stories before moving into theoretical frameworks and,

finally, invitations to reflect on opportunities for (re)thinking classroom practices to make them more accessible.

AUTHORS' POSITIONALITY

Heath

As a chronically ill graduate instructor, accessibility and accessible pedagogy are constantly on my mind. In the interest of acknowledging my full positionality, I am a queer white man who suffers from hypothyroidism, depression, and frequent cluster headaches. My experiences as a student are marked by a pervasive brain-fog and fatigue and a struggle to complete assignments in a timely manner. As a graduate instructor, my illnesses manifest in an anxiety that I am failing my students if I do not deliver course content enthusiastically, which is difficult to live up to.

The COVID-19 pandemic has compounded many of my anxieties in regards to teaching. I did not begin teaching until August 2020, when the pandemic at my institution had yet to reach its peak. Because I had recently relocated to the other side of the United States, I did not have a local doctor, and I would not be able to get an appointment for several months; however, graduate teaching assistants were required to prove disability in order to move to an exclusively online course delivery. I was unable to secure such proof, so I was required to teach in person. While we eventually were given the opportunity to teach online without conditions the next semester, we were offered few mental health resources. Most of my non-classroom time was spent alone, unable to motivate myself to do anything other than sleep and attend class. Time felt like a luxury I could not afford.

These experiences prompted a line of thinking: if I was suffering this much as a graduate student and instructor, how might my students be feeling during this time? How can I support their development as writers while also ensuring that my course delivery is as accessible as possible? It is from this viewpoint that I enter this chapter, hoping that—in some way—I can help alleviate the struggles of current and future graduate instructors and their students.

Jennie

To echo Heath's introduction, throughout our collaboration on this chapter, we often found ourselves pondering accessible pedagogy at odd times throughout the day. Few parts of our writing process took place during standard "working hours." I am never *not* thinking about accessibility; as a chronically ill and disabled graduate instructor, the accessibility of an event, class, or program determines whether or not I can even get in the door. To explain, I will introduce you to my bodymind. I am a white, queer PhD student with an immune disorder, several chronic illnesses, a physical disability that limits my mobility, and post-traumatic stress disorder (PTSD) among other mental disorders. I've sometimes referred to myself as "medically complicated." I've lived with some of these conditions my entire life, while others emerged and reshaped my adulthood. I've lost jobs, been punished in school, and faced social exclusion due to my disabilities, whether named or unnamed; I've been marked as a paradoxical overachiever and "problem student."

My experience with the COVID-19 pandemic has been fraught and complicated. By the time COVID-19 emerged in the United States, I had been recently diagnosed with my immune disorder and shifted my career from secondary education to higher ed, where the flexible schedule allowed

me to work around my frequent hospitalizations and periods of protracted illness. I was almost always sick at work. When the pandemic closed down the university where I worked at the time, I was already three months into a battle with acute bronchitis that rendered me unable to climb the stairs to my second-floor office. I thrived in the entirely online environment of the early pandemic, briefly shielded from exposure to infection of any type. When the university returned to in-person operations, I had to acquire a recommendation from a doctor to work remotely. I was able to get a remote work accommodation on the sheer chance that I had been very recently hospitalized and diagnosed with a devastating, life-altering medical condition. I had to declare the fact of this diagnosis frequently, to produce evidence of it at a moment's notice, as evidence of my continued existence in a pandemic from which everyone was desperate to "move on."

I enter this chapter from this place, in this bodymind, recognizing that the present moment is fraught and demanding. The pandemic has laid bare the inherent inaccessibility of numerous structures that we take for granted, and instructors must take up the task of teaching accessibly and safely during a time of continuing uncertainty. The purpose of this chapter is, first, to meet instructors at that place, recognizing that the demands placed on graduate instructors in particular are numerous and heavy. This chapter is an attempt to sit with ideas about and approaches to accessible pedagogy, to offer points of reflection, and ultimately, to share in the great burden that is teaching in the continuing and emerging post-pandemic.

A NOTE ON ACCESSIBLE THEORY AND PRACTICE

We believe that pedagogical theory and academic discussion of accessibility should be accessible to all, without eradicating the necessary complexity of work informed by theory. In writing this chapter, we strive to hold ourselves to the same pledge Jay Dolmage (2017) makes in the opening of *Academic Ableism*: "On these pages there will be an effort to create accessible theory, answerable to all" (p. 31). We understand this pledge to mean two things. First, we center access in our rhetorical choices, and therefore pledge to pair theoretical concepts, jargon, and concepts associated with discipline-specific communities with simple explanations and discussions, so as to "welcome in" any number of possible readers, as well as to clarify any possible material implications of these concepts upon disabled people. Second, Dolmage's caveat, "answerable to all," centers the necessity of accountability in accessible pedagogy. Just as disabled scholars should be centered in the development of accessible theory and pedagogy, they should remain ultimately accountable to those who are affected by the practical measures they develop. Therefore, we welcome pushback, revision, insight, and complication of the strategies that we unpack here.

In order to ground this discussion in contemporary explorations of accessible pedagogy, we turn to Tara Wood's "Cripping Time in the College Classroom." As composition instructors, we primarily approach this topic from the realm of writing pedagogy, but we believe that this particular article illuminates how many approaches to accessible pedagogy fail to do the work of unpacking and applying densely theoretical concepts. Wood "aims to critically re-conceptualize time in the pedagogical practice of writing classrooms" (2017) through an examination of crip time, defined as "a recognition that trauma/disability affects time and what we can do in said time" (Blackburn 2019, p. 82). In a qualitative study on student perspectives, "Cripping Time" functions to establish that 1) assignments that must be completed within a normative time frame (such as timed writing) place undue stress upon disabled students, 2) inflexible deadlines are detrimental to student success,

and 3) students conceive of time in disparate ways. From a theoretical standpoint, Wood elucidates various issues with normative time frames; however, from a practical standpoint, it is uncertain how instructors are supposed to apply these ideas as praxis and how potential applications would materially affect disabled students.

In this way, there is an inherent inaccessibility to such theoretical approaches to accessible pedagogy. At the beginning of "Cripping Time," Wood (2017) acknowledges the inevitability of temporal structures in the classroom: "every class has a first day and a last day. Every class has due dates, measures of time for when students should complete a task, and a stop-time for their work on that task" (p. 260). This inevitability is frustrating, but as the article moves forward—acknowledging the struggles of disabled students without giving practical suggestions for application—, it becomes apparent that "Cripping Time" is not concerned with solving the issue but with simply identifying it. This critique is not to suggest that Wood's work was for naught, but to propose that more work must be done to make accessible pedagogy truly accessible to those who need it most.

It is imperative that we as instructors are cognizant of our own biases regarding time, space, grading, and technology, while also recognizing that in reorienting the classroom to an accessible pedagogy, we must work through our own discomfort. In this process, we are often challenging our own notions of "good teaching." As Wood (2017) points out, "we may enforce normative time frames upon students whose experiences and processes exist in contradiction to such compulsory measures of time" (p. 260-261). As Asao B. Inoue suggests in *Labor-Based Grading Contracts: Building Equity and Inclusion in the Compassionate Writing Classroom* (2019), "Sometimes our work as teachers and scholars cannot be cool, objective, unemotional, and purely reasoned. Sometimes it must hurt, cause us some discomfort, so that we really change" (p. 6). In this spirit, we ask our readers not to overhaul their approaches to teaching overnight, but to carefully consider the following suggestions according to the amount of labor they are willing and able to commit to.

FRAMEWORKS: THE SOCIAL MODEL OF DISABILITY AND DISABILITY JUSTICE

Discussions of access and disability in the academy, while gaining attention in the last few decades, remain steeped in ableist assumptions— ableist meaning discriminatory on the basis of (dis)ability and illness. We identify two significant barriers to genuinely anti-ableist theory and practice. The first, as articulated by M. Remi Yergeau (2013), is an insistence that disabled people remain the subject of research on accessible pedagogy, never the source of embodied knowledge and lived experience to inform that research. Yergeau writes,

> Access, as we've come to represent it in the field, functions as a narrative of remediation and erasure. Within disability contexts, much of our scholarship positions access(ibility) as a project of rehabilitation. That is, there is a set of able-bodied us's eagerly waiting to rescue a few, rare disabled thems who are in dire need of help ("Rehabilitation ≠ what we do").

Applied to pedagogy, this is a practical consideration: implementing more broadly accessible practices requires input from disabled people across a spectrum of embodied experiences. Otherwise, accessible praxis becomes a limited accommodation (Hitt, 2021, p. 88). Perhaps more importantly, however, is Yergeau's observation considered as an ethics of pedagogical practice, one that acknowledges student agency as including agency over their embodied experiences and needs. By

considering disabled students as a body of study, rather than knowing bodies that have rights in their classrooms, pedagogical practice often falls short of embracing practical and ethical anti-ableism.

The second barrier to anti-ableist theory and practice is the ready availability of accommodation as the primary means of implementing accessibility measures in the classroom. Accommodations are changes made to classroom activities according to the needs of a disabled student, only for that single student, typically on the basis of a certain medical diagnosis. In higher education, accommodations are typically processed by a Disability Services office, whose responsibility is to take in information about a student's medical conditions and/or existing alternative education plans from K-12 in order to generate recommended accommodations for the student. These accommodations are then delivered to the instructor. Instructors typically learn of a student's status as disabled through the delivery of these accommodation letters, which require the instructor to follow the accommodations as described, backed by the punitive force of the ADA. This is a deeply flawed and limited system for practical reasons, as discussed in the introduction to this chapter, which Yergeau (2013) expands upon. "To accommodate is to retrofit," she writes; "it is to assume normative bodies as default and to build spaces and infrastructures around those normative default bodies; it is to deal with deviant bodily and spatial conditions as they bubble out at the seams" ("Reason). The accommodation model assumes that disability exists where it is defined by medical diagnoses or aptitude tests. Determining disability purely based on these factors is deeply exclusionary for a number of reasons. As we touched on in our positionality statements, access to a formal medical diagnosis is not a universal standard. Access to medical services and evaluations is far from universal, and is heavily influenced by class, gender, and race. In the accommodation process, there is little space for the disabled student themself to advocate for their needs; instead, they are proverbially talked over by doctors and institutional bureaucrats, who make decisions about the students' welfare without them.

In addition to being gated by way of the medical system, accommodations are also often temporary. Accommodations are institution-specific, created when a disabled student goes through the process of submitting medical paperwork or school records and an institutional body writes accommodation letters based on the recommendations outlined in this paperwork. These accommodations often lapse with the arbitrary end of a semester. As Dolmage (2017) writes, accommodations "'fix' space, but retrofits also have a chronicity—a timing and a time logic—that renders them highly temporary yet also relatively unimportant" (p. 79). This is because accommodations are slow to come and fast to expire, the process to get an accommodation letter is slow and cumbersome, and letters typically only apply for a single semester. The accommodation model is not simply unjust: it simply does not work well as a way of practically supporting student learning.

Further, considering accommodation as retrofit reveals another shortcoming of this model, which is the labor demand on the instructor. Accommodations suggest that the way an instructor is teaching currently is whole and complete; its inaccessibility to certain students is the problem of the student and not the instructor. Accommodations demand that the instructor take on additional labor of "retrofitting" their teaching practices to accommodate certain students.

As a result, many instructors, especially graduate student instructors, feel disempowered to implement accessible praxis because they read accessibility as yet another demand on their already-overflowing plates, an add-on to teaching practices that they are already being asked to learn and implement quickly, perhaps even for the first time. Current discussions of accessible theory and

practice tend to problematically align access interventions as abstracted from the labor those interventions demand, an intervention carried out through a rearrangement of syllabus readings rather than a reimagining of the labor demands of instructors and students. Our intervention is to call for a reimagining of the work of accessible praxis as an opportunity to rethink labor and power as collaborative in the classroom. We believe this intervention to be especially important from our position as graduate instructors, whose labor in academic hierarchy is so often deeply undervalued.

To push back against these harmful ways of thinking about disability, we offer the social model of disability as an alternative way of understanding the lived experiences of disabled people and creating genuinely generative anti-ableist praxis. The social model of disability posits that "We [are] not disabled by our impairments but by the disabling barriers we face in society" (Oliver, 2015, p. 1024). Put another way, disability is not located in the medicalized body of the individual, as suggested by the medical model of disability, but rather created through the (in)accessible ways in which society is configured. A person may not experience a medical issue as disabling, for example, until it prevents them from participating in a certain exercise in class. Many people found themselves disabled during the COVID-19 pandemic when the medical issues that render them "high-risk" never bothered them specifically in the past. Similarly, the social model allows for a wider diversity of experience in (dis)ability, creating space within disability studies discourses for people who experience ableism in the absence of a formal medical diagnosis or are otherwise restricted from receiving a diagnosis by socioeconomic barriers. The social model of disability does not universally describe all (dis)abling experiences, nor should it be allowed to flatten the diversity within the disability community. Rather, this model invites us to consider the ways in which our pedagogical praxis may force students to experience certain structures as disabling. The critical focus shifts from the disabled individual to the structures of society.

In his reflection on the social model of disability thirty years after he first introduced it, Mike Oliver (2015) reflects that while the model has been largely successful in reframing dominant modes of thinking about disability, "the hegemony of special education has barely been challenged," and while some barriers in higher education have been removed, "the social model has also barely made a dent in the employment system" (p. 1024). This presents a clear challenge for graduate instructors, whose designated role in higher education straddles student and instructor, often taking the less-advantaged elements of each. Graduate instructors are often tasked with reconciling the differences between the promises of "diversity and inclusion" that pepper public-facing rhetoric in higher education and the so often deeply regressive policies that affect them as students and the students that they teach. Further, while teaching practices in higher education may be informed by the social model, the medical model remains the law of the land when it comes to seeking and granting accommodations as a student. Even as a graduate instructor creates an accessible, inclusive classroom community, they may be excluded from classroom communities in which they themselves are students.

In addition to reframing disability with the social model, accessible pedagogy relies on an ethics of disability justice, which considers the ways disabled, chronically ill, and otherwise medically complex people are marginalized, and seeks to generate alternative systems, policies, and lifeways that honor and celebrate difference over normative modes of existence. The disability justice performance project Sins Invalid defines disability justice as "a vision and practice of what is yet-to-be, a map that we create with our ancestors and our great-grandchildren onward, in the width and depth of

our multiplicities and histories, a movement towards a world in which every body and mind is known as beautiful" ("10 Principles"). Importantly, disability justice consists of vision and practice; it is something considered as well as it is done, and as such, the practices envisioned below draw from theory to develop practice.

Our gloss of theoretical concepts and practical suggestions draws from several frameworks developed by disability studies. In order to move away from a medical model and toward an accessible pedagogy that centers disability justice, we approach our suggestions as part of a larger practice of "deep accessibility," developed by Star Ford and expanded by Dolmage (2017) as a system of five "levels" of accessibility that move beyond just "getting there and getting in" to consider that

> Once we are there, we need to be able to perceive all that is going on, sort important information from noise, and sense the action without delay or undue stress […] We also need to have ways for all bodies and minds to understand the orientation of the architecture– to understand its ideologies and affordances as well as how it might divert bodies and minds […] and we all need to be able to communicate. Finally, we all need to be able to ask our questions, make our ideas known, and share in discourse in a shaping way (Dolmage, 2017, p. 119).

Dolmage's explication of deep accessibility demonstrates that we must think deeply about our pedagogical praxis and grasp at the root of certain teaching practices and structures in order to open them up and render them accessible. This framework builds upon Universal Design for Learning (UDL), a framework that rewrites universal design principles into pedagogical practices and similarly writes against the retrofit model of accessibility. By rethinking our pedagogical practices to center access, we create more equitable classroom communities in which all members are able to participate and shape their learning, from instructor to student. Critically, deep accessibility lightens the burden on the instructor to retrofit existing policies and practices and shifts the focus to allow students and instructors alike to collaboratively build a shared classroom space. Brewer et al. (2014) describes this as a "culture of access," in which "we need to create spaces where students have multiple access points for engaging content and expressing themselves—making space for students to come over to discussions of pedagogical accessibility" (p. 151, italics original).

ACCESSIBLE PRAXIS: PRACTICAL STRATEGIES FOR THE ANTI-ABLEIST CLASS

Each section listed below stands as an invitation to (re)think how certain aspects of pedagogical practice and normative classroom structures can create barriers to access for students. We identified several common strands throughout our review of the literature and organized this section into a few sites of (re)vision. This section is by no means exhaustive, and in our gloss of theoretical concepts, we devote more time to moving toward practical applications of theory over explicating the theory ad nauseum. Therefore, in each of these short meditations, we invite readers to think critically about their values in the classroom and offer gestures toward incorporating accessible pedagogy and disability justice into those values and practices. The practical strategies that we suggest are primarily informed by our experiences as both graduate instructors and disabled students in addition to anecdotal evidence from other members of the disability community. Finally, our focus on practice is also a push back on a problematic positioning within disability scholarship, "when access is only a question of texts—products divorced from labor/ers," which positions students seeking access "as bodies in need of help" (Brewer, 2014, p. 151). Instead, we hope that readers will begin to see themselves as collaborators with their students in creating a culture of access in our classrooms.

Our suggestions in the following sections are primarily informed by our own lived experiences as students and writing instructors. We do not suggest that these strategies will work in every classroom, and, therefore, we do not suggest that they will work for every student or instructor; still, we invite readers to adopt, modify, and otherwise "crip" these strategies in order to make learning accessible for students and to make teaching more accessible to graduate instructors.

Time

Time is one of the most pervasive normative structures in educational spaces, and it often goes entirely unnoticed and unquestioned. People in disability communities might be familiar with "crip time," which refers to a mode of temporality that is flexible and malleable according to the needs of a particular bodymind—some simply use "crip time" as shorthand to mean "going to be late." This reveals the ways in which time structures create expectations that disabled people may struggle to meet. If someone struggles with arriving on time due to the unpredictability of their illness, for example, then they will certainly struggle similarly to attend class sessions that begin at a rigid, defined time. In this way, even the most shallow level of access, simply "getting there," can become a barrier.

Understanding that time is a normative structure that can create disabling conditions for people with chronic illnesses and disabilities, then, we might rethink ways of interacting with time in our classrooms so as to incorporate the compassionate flexibility of "crip time." To frame this (re)thinking, it is helpful to examine several particular pedagogical structures that work with time.

As discussed above, even simple temporal structures such as strict class beginning and end times assume a normative relationship with time. If a student is late, we might consider this a communication of the student's lack of interest or care about the course. Certainly, regardless of our individual teaching practices, our students have been conditioned to think of their management of time as a measure of their engagement with the course. While the scheduled meeting times of a course are administrative structures that can be difficult to push back on, consider the time that *is* under your responsibility within those administrative constraints. Students may be expected to devote a certain frame of time to your class meeting, but in what ways might you support your students' learning as it spills outside of those boundaries? Consider how much time you are asking students to spend on your particular course and *when* you are asking them to spend that time. When asking students to have a reading prepared for a certain time, consider when and how that reading is done, and how you might provide students more agency in making these decisions for themselves. Give students a heads-up as to what they will be doing in class on a particular day, so that students are able to plan around the demands of your class meeting. Transparency and collaboration are key in any accessible pedagogy; consider ways of communicating respect for your students' time by being open about what you are asking them to do with it. Finally, to further divest from carceral and punitive dimensions of class time, we might rethink tardiness as a communication of a barrier to access and an opportunity to build support rather than a subversive behavior to be punished.

Strict deadlines also assume a normative relationship with time, as they carry implicit expectations of labor attached to a certain time frame. Deadlines, like so many classroom structures, are complicated in myriad ways by the demands of the bodymind, and as such, there is not one universal pattern of deadlines that will work for every student. Further, having no deadlines at all, or having deadlines

that carry no accountability whatsoever, may very well increase the labor on the instructor who must contend with assignments coming in on a wide variety of timeframes. Contract grading, grading systems that are designed as agreements between student and instructor, can provide a way of negotiating these timeframes. When establishing a contract with students that outlines course expectations and criteria for achieving certain grades, the contract also establishes certain deadlines for meeting those criteria. By allowing students to revise those deadlines, either individually or collectively as a class, the instructor invites student engagements with time into the contract of the course, and students are able to choose deadlines that work well for their specific needs and context. As Jesse Stommel (2020) suggests, it is necessary to revise these practices with the start of each new class, as each classroom community will have different needs. In addition to collaboratively negotiating deadlines, "soft" deadlines can also establish accountability without assuming a normative relationship with time. "Hard" deadlines are set at a certain day and time and often carry punitive consequences for submitting work after the deadline. "Soft" deadlines are suggestions for turning in work by a certain date in order to stay on track with the course of the class and carry accountability; what "accountability" can look like varies on instructor, course, and class community dynamics. For some instructors, accountability might look like reaching out to students who have not turned in work by a certain time to check in with progress; for others, it might be using asynchronous modes of assessing participating, such as check-in questions. Generally, low-stakes check-ins on progress throughout work in a course help build a culture of accountability without enforcing normative structures of time.

SPACE

To disabled bodies, space is critical. Will a disabled body be able to access a particular space? To navigate it? To feel comfortable within it? Space, in this context, takes on physical and mental import. With that in mind, we call on instructors to carefully consider their classrooms as an accessible space. Lorelai Blackburn (2019) suggests in her dissertation *Toward a Trauma Informed Pedagogy* that the ideal approach to office hours is letting students "choose how, where, and when to meet" (p. 81). Students are offered various in-person opportunities to meet—in Blackburn's office, in a computer lab, or in another location—as well as online methods. This approach to office hours shifts control and power to the students. They are able to determine what works best for them, regardless of ability. We suggest that instructors take this approach even further to encompass regular classroom meetings as well.

Instructors of all stripes understand that our institutions will assign specific spatial and temporal parameters to our classes—we *must* meet in this specific place at this specific time; however, we challenge those parameters. As we navigate the COVID-19 pandemic, the spatial dimensions of our classrooms are in a constant state of flux. While in-person and online course deliveries are self-explanatory, hybrid models are increasingly common. Instructors may be required to coordinate simultaneously both in-person and online spaces for their students. In our experiences, the hybrid model has failed due to a lack of institutional support and explanation. Our institution never specified guidelines as to how hybridity can and should be effectively implemented in the classroom and instead left it up to faculty and graduate instructors–many of whom had never experienced an online teaching environment–to figure it out. Still, despite our personal experiences with hybridity, there are certain lessons we can take from hybrid models and practically implement into our courses regardless of format.

Firstly, we must acknowledge the complexities and disabilities of our students—visible and invisible, acknowledged and ambiguous. Some students may not be able to attend classes regularly, but they still deserve access to the same experience as their able-bodied peers. Therefore, we call upon instructors to revise the spatial aspects of course delivery. There are, indeed, many ways to achieve this revisioning. For example, lecture materials can be made available online asynchronously for students who are unable to attend class. Office hours can be made available via both online and in-person modalities, according to the needs of the students and instructor. Finally, the notion that attendance should be a graded, quantified category in assessment should be dismissed. This is not to say that instructors should ignore their students' patterns of attendance, but that we should understand that for certain students, access to physical and online space is not constant. Rather, their access is subject to change according to their disabilities.

Regarding the latter suggestion, it may prove difficult for instructors of larger courses to implement non-attendance-centered grading strategies as the instructor may need to implement several specific and individual accommodations. There are also classes–such as workshop-based writing and laboratory-based science courses–that demand participation from students in order to assess success. As one of the authors of this chapter has taught in both of those contexts, we advise careful consideration of the language on your syllabus. We suggest that instead of setting hard boundaries for attendance such as *you are allowed three absences or you can miss five attendance questions*, you instead gently suggest such boundaries and encourage students to communicate their concerns and limitations with the learning model you employ. As instructors, we strongly believe that we are not beyond critique, and especially as chronically ill and disabled instructors, we understand and are open to any complaints our students may have about access.

What we hope to emphasize in this section–and indeed within this chapter–is that accessibility is not a one-size-fits-all solution. Rather, it is something that must be actively pursued with each instructor and with each group of students. We implore you to carefully consider how your praxis and policies affect your students' access to the learning space and adjust according to their needs and situations.

Grading and Participation

Much of the contemporary scholarship on grading has revealed that traditional grading methods reproduce racism, misogyny, and colonial power structures, and rarely in fact contribute to the values higher education claims to hold (Kirschenbaum, et. al. 1971; Butler, 1987, Kohn, 2011, Stommel, 2020). There are a number of alternatives to traditional grading that offer significant advantages in accessible pedagogy. Ungrading, as proposed by Jesse Stommel (2020), centers metacognition and reflection as the primary determinants of students' grades. Students guide the conversation on their progress in the course, and the instructor uses student reflections as evidence in contributing to those conversations. Reflective writing is a relatively common and well-researched practice within composition studies, but it is also adaptable and helpful in other fields. In fields that typically rely on testing to give feedback on student progress, collaborative exams with embedded reflection can open up this space for student agency. Similarly, labor contracts link grades to student labor, decoupling grades from arbitrary measures of "quality" or "correctness." Grading contracts are also inherently participatory, bringing students into the conversation on assessment and taking first steps toward addressing the power dynamics between instructor and student. One of the most important aspects in moving toward alternative grading systems is practical implementation, of course, and graduate

instructors in particular might feel anxiety in pushing back against such a fundamental administrative structure. As with time, you do have aspects of grading and assessment that you are responsible for, independent of administrative structures; we often internalize far stricter rules than we actually face (Stommel, 2020).

Technology

In a world still ravaged by the COVID-19 pandemic—and indeed, in the world that will emerge post-pandemic—it is unsurprising that we feel inclined to reassess our online teaching praxis. As online learning becomes more prevalent, it is crucial that we critically consider accessibility in terms of the technologies and programs that we bring into our classrooms. We hope our anecdotal perspectives will help prompt discussions about access in online learning spaces.

There are many options for course delivery in an online setting, and many of these options have come to the fore in the wake of COVID-19. While some—such as the Google suite of programs—have experienced popularity for several years, others—PearDeck, Zoom, Voice Thread, SeeSaw, and FlipGrid, among others—have only recently entered the wider consciousness of instructors across disciplines. While each of these programs occupy a certain niche, it is important to recognize that each time we implement one of these programs in our classrooms, we are asking our students to learn how to use something that is potentially unfamiliar and inaccessible.

In our opinion, it is important to think carefully about adding additional programs to a course. There are some that are likely unavoidable like Zoom and the Google suite of programs, but each time we add an additional program, we must either take the time (which we may or may not have) to instruct our students and ourselves in using those programs or operate under the assumption that they will figure it out on their own time. It is clear then, that for both students and instructors, excessive use of new technology can build barriers to accessibility.

We ask that instructors consider the full range of these programs' functionalities rather than arbitrarily adding additional programs—and therefore, labor. For example, the chat function on Zoom can replace PearDeck in many scenarios, while Google Drive hosts a space for students to upload multimedia content in addition to fulfilling many other functions. In our perspective, the approach that makes the lives of our students the clearest and most accessible entails incorporating the fewest possible technological barriers to our praxis.

CONCLUSION

In this chapter, we hope to have grounded theoretical approaches to accessible pedagogy in actionable praxis, but we recognize that our work here is only a small piece of the continuing and evolving conversation around accessible pedagogies. Our suggestions regarding praxis are largely founded upon our lived experiences as disabled and chronically ill graduate instructors. While each instructor can adjust their praxis to be more accessible to disabled and chronically ill students, the issue of accessibility in the classroom is a systemic one, bound by the dictates of governments and institutions; however, even as the medical model of disability builds barriers to widespread accessibility, we hope that instructors can use the suggestions within our chapter to move toward a more accessible and equitable space for all students.

Once again, we ask you to carefully consider your pedagogy and praxis in order to move toward a classroom experience that is truly accessible to all students, regardless of (dis)ability. We also implore you to keep your own (dis)abilities in mind as you make this journey. Any measure of accessibility in a course cannot be attained overnight. There is bound to be discomfort and frustration along the way, but we encourage you to lean into your discomfort in order to displace and disrupt the inaccessible classroom, to foster access to all, and to—hopefully—bring about systemic change.

With this being said, we do not mean to suggest that the onus of affecting change rests solely on the shoulders of graduate instructors. Rather, we would like to gesture—as we have throughout the article—toward theoretical approaches to accessible pedagogy that omit the praxis element, thereby making the information contained have little practical import. Such theoretical approaches must be revisioned to incorporate the perspectives and lived experiences of the disabled people they affect.

As mentioned above, the issue of accessible pedagogy is pervasive, rooted deeply in institutional and governmental attitudes toward disability. This is not to say that there is no hope. Indeed, if we can take even small actions in our own classrooms toward equitable and accessible pedagogy and praxis, then we are one step closer to broader and truer accessible structures in academia.

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CHAPTER 10.

TEACHER AS STUDENT: MATTERS OF EXPLORATION AND RADICAL VULNERABILITY IN THE CLASSROOM

ELIZABETH GIARDINA

KEY TAKEAWAYS

- GSIs can find pedagogical value in demonstrating an exploratory learning process, and, in sharing the partialities that come with that process, we can find opportunities for our own intellectual development and well-being.
- Radical vulnerability is a powerful tool for building a community of responsibility and care.
- Acts of transparent vulnerability can reframe course content as relevant to students' broader lives, while also modeling a method of community- and self-care.

On a Tuesday afternoon, I was standing in front of a classroom full of Introduction to Literature students. I'd spent the previous week rereading the course texts, organizing the class Canvas website, buying a dry-clean-only pencil skirt, and ceaselessly tinkering with the wording of my syllabus. It was the first academic quarter I'd built my own syllabus from the ground up, the first time I got to teach a whole course about literature to a room full of undergraduate students. As I plugged my computer in and set up the projector, my mind buzzed with ideas, nerves, and a contradictory yet compulsive desire to exude a calm sense of authority. When I finished arranging my materials, I told my students that throughout the academic quarter, they'd each be tailoring and practicing their own ongoing, open-ended writing process. I was asking them to become comfortable sharing their writing imperfections, while I avoided mentioning my own. My impulse to cultivate a polished demeanor was glaringly at odds with my learning objectives.

One day a couple of weeks into the quarter, I accidentally minimized the slides I was projecting at the front of the room, revealing the unrestrained mayhem of my writing process to the whole class. On the left-hand side of the screen, students could see all of the unsorted documents that littered my desktop—tortuously labelled things like "newattempt," "FINALdraft?," "chapter2_draft4," "definitelyfinaldraft," and so on—some open and some only half on the screen. On the right-hand side of the screen, they could see an open draft of an in-progress dissertation chapter with bolded words like "uggggh" or "i don't know what im saying here" scattered among some more cogent sentences. One note revealed some rudimentary lyrics I had written about a jar of spaghetti sauce in the back of my fridge. I felt exposed, but, after cracking a quick joke about the disorganization of my computer, I began to collect myself. Instead of turning back to my slides right away, though, I found myself explaining my messy writing process, which often includes writing something entirely random or ridiculous when I feel stuck. My students' engagement, laughs, and follow-up questions showed me that trying to adopt the persona of an unassailable expert hinders my teaching effectiveness, and it is in fact pedagogically powerful for me to frame myself as a participant in the ongoing process of learning. I realized that day that if I want to encourage my students to become comfortable with vulnerability and taking intellectual risks, I need to cultivate a classroom community that both supports and celebrates them in taking those risks.

My pedagogy has since been informed by what I see as one of the greatest strengths of graduate student instructors (GSIs)—our position as students. Our very title announces us as works in progress, as parts of a larger student community. All teachers are still learners, of course, including the most prestigious faculty at the top of our fields. We GSIs, however, often teach while still discovering and solidifying our scholarly commitments, and this puts us in an advantageous pedagogical position. We bring an exploratory register to our considerations of course material, helping us simultaneously employ our expertise and demonstrate the open-ended learning processes by which we acquire expertise. Students also approach me with questions about graduate school, what it means to be a student while also being a tutor or instructor, and how they might imagine the continuation of their educational journeys. Teaching as a graduate student affords me opportunities to build solidarity with undergraduate students—an endeavor that enriches the classroom community and the learning process as a whole. Though I situate this essay in my experiences as a GSI, this mindset extends beyond my career as a graduate student to other teaching and educational roles, to wherever sharing my own learning process would clarify the learning process for others. However, as scholarship has shown, many educators of color, Black educators, and LGBTQIA+ educators are forced to deal with implicit, structural, and outright biases that undermine their authority in the classroom on a regular basis (Brown McNair et al., 2020; Chesler & Young, 2007; Kogan et al., 2010; Perry et al., 2009). With these facts in mind, I do not mean to suggest that GSIs understate or belittle their own expertise in service of a congenial classroom atmosphere. Rather, I am suggesting that we frame our own exploratory vulnerabilities as a part of the learning process, modeling for our students the habits and resiliencies of a lifelong learner. As bell hooks writes in Teaching to Transgress (1994),"Engaged pedagogy does not seek simply to empower students. Any classroom that employs a holistic model of learning will also be a place where teachers grow, and are empowered by the process. That empowerment cannot happen if we refuse to be vulnerable while encouraging students to take risks" (p. 21). GSIs can find pedagogical value in our status as "students," and, in sharing the partialities and imperfections of our exploratory learning processes, we can also find opportunities for our own intellectual development and well-being. While this kind of radical vulnerability is instructive in

conveying course concepts, it is also a powerful tool for building a community of responsibility and care. During the challenges of 2020 that rendered many of us more vulnerable than ever, my ongoing commitment to vulnerability helped me continue to support, learn from, and build community with my students.

IN-PROGRESS

The task of writing is nonlinear and embarrassing. As I often demonstrate to my students, writing is not a tool of translation you use to unidirectionally stamp pre-formed ideas onto a page. It is an amorphous tool of thought—a process of figuring out what you think about a certain topic, who your audience is, and what you'd like to say to your audience. This means that you might find, in the middle of your draft, that the piece is going in a direction you never expected. So, you need to backtrack. You might cut out huge chunks of paragraphs and then put the chunks back, or you might reorder the paragraphs, or you might delete, halve, and reword sentences to accommodate a new revelation into earlier pieces of the draft. A finished piece helps communicate ideas, but the acts of writing and revision help us arrive at new and nuanced versions of our own thoughts.

Literary scholars have long theorized how the expressive and formal capacities of poetry and literature shape the discovery of new ideas, the phenomenological experience of consciousness, or dialectical discourse (Bradfield et al., 2021; Kramnick, 2018; Levinson, 2018). Interdisciplinary and educational scholars have also made the case that understanding the process of writing as a method of open-ended exploration is useful in a variety of contexts, including composition studies, education, and the sciences (Foley, 1989; Galbraith, 2009; Magee, 2019; Sommers, 1980). In short, writing is a process of discovery. Though this might sound a bit facile at first, writing-as-discovery challenges the writer to dwell in discomfort, humility, and partial knowledges. Nancy Sommers (1980) describes this "dissonance" as "the incongruities between intention and execution." She goes on to write, "Good writing disturbs; it creates dissonance. Students need to seek the dissonance of discovery" (p. 387). When you write to discover, you begin writing before you know exactly what you want to say. As the artist Francis Bacon wrote about his painting process: "I don't in fact know very often what the paint will do" (Magee, 2019, p. 299). Writing-as-discovery asks you to risk writing a draft that is incomplete or too revealing; it asks you to risk wasting time, being wrong, or even looking silly.

The discomfiting risks of writing-as-discovery are reflected in the uncomfortable subject-position of the student in the process of learning. When I emphasize my own incomplete knowledge, or my own embarrassingly messy drafts, I champion the position of "student" and take ownership of my own in-progress learning. To be a learner is to be in the thick of a process that is never quite finished. My pedagogical choices in the classroom encourage myself and my students to dwell in the dissonances born of on-going learning and writing processes. For instance, I have developed a discussion method that organizes class discussion around student ideas and open-ended inquiry. After separating the class into groups, I ask each group to invent one discussion question. As we cover in class, a discussion question is one that can be engaged from multiple viewpoints without being definitively provable. For example, one group came up with the question "What effect does second-person narration have in Tommy Orange's novel *There There* (2018)?" A question like this, though it has many wrong and partially wrong answers, has no single correct answer. It's a debatable question. After each group creates and shares a discussion question, I then ask the students to return to their groups and come up with possible answers to another group's question. When we return to discuss as a full class, students

share and synthesize their perspectives: "the second-person narration makes you a part of the story" or "it contrasts with the Prologue and Interlude that use the pronoun 'we'." I guide the discussion and challenge the class with follow-up questions, but the students lead themselves and each other into open-ended inquiry.

A student-centered discussion method can be applied to many disciplines—for example, in a biology course, students might create open-ended questions about a peer-reviewed study, how it was conducted, and how it builds credibility. The process of writing is a similarly transferrable tool that can help us understand the learning process as a whole. Early in the quarter, I assign the essay "Shitty First Drafts" (1994), in which Anne Lamott describes her own messy writing process: "Very few writers really know what they are doing until they've done it," she reassures us. "Nor do they go about their business feeling dewy and thrilled" (p. 22). In my class, I ask students to produce three drafts of each essay they write—a peer review draft, an instructor review draft, and a final portfolio draft. After receiving feedback on each draft, from a peer or myself, they create a revision plan and metacognitively reflect on their own writing processes. Lamott says she has three steps to her writing process, so I prompt them by asking, "How many steps work for you? Do you prefer to outline, or do you prefer to write without a plan? Do you edit as you write? What would you like to change about your writing process, what would you keep?" I also share my own process in class and tell them: "I've always hated outlining because I could never stick to a plan," "I only like to edit while writing if I don't know what to write next," and "I would probably lessen the amount of drafts I go through during my writing process if I could." I frame my writing process as a personal journey of trial-and-error; I am not trying to prescribe a one-size-fits-all technique. Rather, I am guiding my students to critically reflect on and hone their personal writing processes, a technique that will aid them throughout their academic and professional careers. There is no one right answer, and there is no Best Writing Process. The task is habitual—to iteratively reflect on your own writing process and evaluate whether it still works for you.

Writing and learning are both ongoing, open-ended practices that enmesh the learner within the text, their communities, and the world. In their acknowledgments to *Meeting the Universe Halfway* (2007), physicist and theorist Karan Barad writes, "writing is not a unidirectional practice of creation that flows from author to page, but rather the practice of writing is an iterative and mutually constitutive working out, and reworking, of 'book' and 'author'" (p. x). The open-ended process of writing involves the writer within an assemblage composed of the intra-actions among materiality, text, and people. Analyzing the "agential realism" of Niels Bohr's writing style, Barad claims,

> The world is an open process of mattering through with mattering itself acquires meaning and form…[T]he primary ontological units are not 'things' but phenomena…And the primary semantic units are not 'words' but material-discursive practices through which (ontic and semantic) boundaries are constituted. (p. 141).

As the materiality of the world shapes our processes of learning and writing, so too do our semantic and representational practices mutually shape the world around us. It matters how we write, and it matters how we learn. And so, the openness of writing and learning risks more than just personal embarrassment. It also risks a relationship with, and responsibility toward, our world and our communities. As bell hooks writes, "The engaged voice must never be fixed and absolute but always

changing, always evolving in dialogue with a world beyond itself" (1994, p. 11). A vulnerable, exploratory register in learning encourages the mutual work of community care—a practice that rejuvenates the classroom and broadly recasts learning as a constituent part of life.

IN THE WORLD

The year of 2020 rendered vulnerabilities increasingly visible. My students' emails about mundane class logistics began to mention their relatives dying of COVID-19, their plans to attend a protest against racial injustice, or their family having to flee the California wildfires. GSIs and other educators were tasked with creating an online course within a week without any prior training. The task of being vulnerable became less about embarrassment or imperfection and more about asking for the support you need, more about speaking frankly about how you're doing to both help yourself and to help others feel comfortable with asking for support. To practice radical vulnerability during times of crisis is to dare to open yourself up to a world that is already too much. The world was, and is, too much with us.

Radical vulnerability demands abundant care and compassion as well as the frank acknowledgement of, and critical reflection on, the world. Learning does not take place in a vacuum where some pure form of scholarly investigation can be pursued. "To bring a spirit of study to learning that takes place both in and beyond classroom settings," bell hooks writes in *Teaching Community* (2003), "learning must be understood as an experience that enriches life in its entirety" (p. 42). The texts we read, but also the daily acts of teaching and learning—grading, lesson planning, reading, and writing—are always impacted and shaped by the broader socio-political circumstances we live through. In the fall of 2020, I assigned the first installment in a fantasy trilogy, N.K. Jemisin's *The Fifth Season* (2015). My students and I took the post-apocalyptic novel not only as an opportunity to reflect on the climate catastrophes of California but also on how the lived experience of racism shapes and amplifies the most brutal consequences of anthropogenic climate change. In online class discussions, my students grappled with Jemisin's narrative style, how it makes the global experience of apocalyptic disaster personal, and how it refuses to allow its reader to be a passive observer. After the quarter, I received multiple emails from students letting me know that they appreciated the choice of novel and intended to continue reading Jemisin's trilogy on their own. Vulnerability in the (virtual) classroom opens up the possibility for learning to extend beyond the classroom, as a practice in and of the world.

I also shared with my class a writing habit of mine that helps me prioritize my well-being. I was first introduced to Natalie Goldberg's book *Writing Down the Bones* (1986/2016) when I was an undergraduate at Rutgers University, and it helped me develop what Goldberg calls a "writing practice" in which you commit to freewriting for a certain amount of time every day. She writes: "One of the main aims in writing practice is to learn to trust your own mind and body; to grow patient and nonaggressive. Art lives in the Big World. One poem or story doesn't matter one way or another. It's the process of writing and life that matters" (p. 12). I opened up to my students about how my writing practice has helped me through some difficult times, I gave them a small excerpt of Goldberg to read, and then I set up a twice-weekly, optional freewriting session on Zoom. I explained that no one would earn points if they showed up or not, and I would not be collecting their freewrites; the time was set aside just for the students and their thoughts. People sporadically showed up, and as finals loomed, fewer and fewer people joined, but a handful of students let me know they appreciated the space and intended to continue a writing practice beyond the classroom. An act of

transparent vulnerability—divulging that I also need supportive, healthy habits to cope with difficult times—reframed the content of my class as relevant to my students' broader lives, while also modeling a method of community- and self-care.

The importance of vulnerability in my classroom grew throughout the challenges of 2020, and my students and I continued to support each other. We would offer each other grace for mistakes we had made or balls we dropped. One week, I updated my students that it would take another couple of days to return their first paper feedback, and a few replied they understand how difficult things are and hope I'm doing okay. My students shared with me tragedies they were enduring. I made my deadlines more forgiving and introduced a partial-contract-grading system;[1] I wanted to emphasize that everyone needed to prioritize staying safe and learning as much as they can, not worrying about earning a particular grade (Sackstein, 2020). The openness of these communities—and my learned habit of casting myself as an exploratory, student learner who is open to improvement—helped set a supportive tone during a time of crisis. And yet, I intend to refer to these lessons in my future teaching and learning situations, regardless of whether a global emergency is affecting me or my students at the time. Making space for exploration and vulnerability not only helped me support my students during difficult times but also recontextualized our course content as a part of their own immediate experiences, encouraging them to engage with literature, composition, and analysis on new and more complex levels. My students considered how the skills they practiced could support them outside the classroom. They grappled with how our course materials and learning objectives could help them analyze a world that grows increasingly more complex and inscrutable. Modeling vulnerability in the classroom helps undergraduate and graduate students support, learn from, and encourage one another. It fosters a community of mutual responsibility and care in which learning becomes a process that both shapes and is shaped by the world it investigates. The imperfect, and sometimes embarrassing, vulnerabilities that accompany open-ended inquiry are in fact powerful opportunities to reconsider how we want to write, how we want to learn, and how we want writing and learning to fit into our lives.

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1. I employed a grading contract whereby students were guaranteed a B grade if they completed a list of required assignment, and students could earn higher grades depending on whether they challenged themselves to take on particularly complex topics in their papers or participated fully in class discussion and other smaller assignments and activities. I also require my students to engage in metacognitive tasks like process memos that reflect on their writing process, as well as peer review, whereby they can give and receive feedback outside of a traditional grading structure.

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CHAPTER 11.

TEACHING TO FAIL: CREATING VULNERABLE LEARNING COMMUNITIES TO FACILITATE STUDENTS' GROWTH

AVANEESH NARLA

KEY TAKEAWAYS

- In today's academic environment, students perceive no room for failure. Thus, they do not explore or take risks, and this limits their growth. As a result, the instructor must create opportunities for failure while mitigating the stress associated with failure.
- Opportunities for failure can be created in the curriculum and course structure through scaffolding, formative assessments, and extensive feedback. The instructor must also adopt a growth mindset when it comes to the students' abilities.
- Instructors can create an environment where failure is expected by being vulnerable in the classroom themselves and highlighting their failures and subsequent growth. Graduate students are particularly well-placed to do so because of the proximity of their experience to that of their students.
- Higher education institutions emphasize learning as a transaction that can be measured and count failure against both students and instructors. Thus, instructors (and students) are incentivized to present themselves as having control and mastery rather than being vulnerable in the classroom. We must overcome these forces to create a shared learning community that emphasizes strong interpersonal relationships in the classroom.

FAILURE IS AN OPTION

When I started college eight years ago, I was encouraged by my teachers to take risks. I was told that college was the one time that I could explore and fail without any serious (negative) consequences. But

soon, I realized that most students do not approach college with that attitude. In today's cut-throat world, students' anxieties regarding their careers preclude risk-taking and promote the perception that they cannot fail (Beiter et al., 2015; Yang et al., 2021). Competition and the association of self-worth to the arbitrary selection criteria for graduate schools, fellowships, and prestigious jobs has led to one dictum in the classroom: You Must Succeed.

In the summer of 2021, I taught 250 pre-health students for whom this dictum is the loudest. In informal conversations with me, students repeatedly shared their perception that getting an A in as many academic courses as possible is non-negotiable for them because of the unforgiving system they are navigating. Further, they feel that most instructors have been weaponizing this immense stress and fear to get students to perform academically, hanging the carrot of good grades to get students to follow a narrow path instead of allowing them to explore the content itself. Instead, I decided not to establish an expectation of success in the classroom, but rather one of failure and subsequent growth. My position as a graduate student instructor was invaluable in establishing this expectation and has transformed the perspectives of my students and me.

I now realize that though institutions of higher education operate assuming that learning is a transaction that can be codified, measured, and used to determine the worth of both educators and students, shared vulnerability in the classroom is what allows for growth, exploration, and innovation. The course I was tasked to teach was not unique in any way, and I believe that higher education would benefit greatly from more courses designed and led by educators, and especially graduate students, who are prepared to be vulnerable and empathetic.

CRAFTING STRUCTURES THAT ENCOURAGE FAILURE

The course I taught was the introductory mechanics course in the Physics department at the University of California, San Diego. I taught it twice remotely over five weeks, and I was supported by two graduate teaching assistants (TAs), who graded assignments and held office hours, and one undergraduate "Supplemental Instructor" who led group problem-solving sessions. The course covered five basic concepts in mechanics (each covered over one week) and assumed only basic mathematical knowledge as a prerequisite. Students could participate in the course either synchronously by attending lectures and problem-solving sessions or asynchronously by watching recorded lectures.

The first way I designed the classroom to establish an expectation of failure was by allowing for ample opportunities in the course structure for students to fail and recover, without potentially losing out on their final grade. I designed the course to rely heavily on scaffolding, i.e., instructional support that is gradually removed as students develop their own learning strategies (Sawyer, 2005). In my course structure, scaffolding consisted of two components. The first component was the guidance given as each topic was introduced and slowly removed until the students were expected to solve a complex problem without guidance. For example, when I introduced a new concept, I demonstrated how to utilize the concept to solve problems, and then asked the students to redo, in detail, the same problem with different numbers. Then, I provided a detailed worksheet that guided them through solving problems themselves. The next assignment was a problem set with optional hints for each problem. And in the weekly quizzes, most questions were broken into sub-parts that guided the student to the final answer. Thus, the guidance provided to the students was gradually removed, leading up to the

final exam when the students were expected to demonstrate mastery by doing the entire problem on their own.

FACILITATING AN IMPASSE

Guidance in solving problems with scaffolding has been extensively documented to be effective in helping students learn (Brown et al., 1989; Beed, 1991; Wood, 1996). However, the level of structure that must be provided to students in their tasks has been extensively debated (Kapur, 2008). Though I decided to provide a significant degree of structure, there is extensive recent evidence that even if tasks are ill-structured, failing in these tasks can be a productive exercise in failure (Kapur, 2008, 2010, 2015; Kapur & Bielaczyc, 2012). What is central to the learning process is not the structure itself but the facilitation of impasse, i.e., when a student realizes that they lack a complete understanding of a specific piece of knowledge (VanLehn, 1999; VanLehn et al. 2003). In fact, it was found that learning did not take place despite instructor guidance of the concept if the students did not reach an impasse (VanLehn et al., 2003). This is because the impasse initiates a metacognitive process of explanation and reflection in which students contrast their deficient concepts with the correct concepts and subsequently establish accurate mental models (Chi, 1996; Kapur, 2008; Oser & Spychiger, 2005; Siegler, 2002; Tulis et al., 2016; VanLehn et al., 2003).

Thus, it is incredibly vital that students be encouraged to challenge themselves and reach an impasse early on, with positive attitudes associated with the impasse. Guided assignments facilitate reaching an impasse by providing accessible tasks as early as right after the concept is introduced. In contrast, expecting the students to develop a mastery of the concepts before starting problem-solving often intimidates them when they start working on problems on their own. Early and frequent impasses counter-intuitively serve to make concepts more accessible by altering the expectations regarding failure and impasses—as steppingstones rather than as hurdles. However, it must be emphasized that the instructor must only expect failure and impasse appropriate to the difficulty of the problem relative to the knowledge of the student. The instructor's perception of the abilities of the learner is incredibly important to determine the learner's perception of their own learning ability (Braun, 1976).

ALLOWING FOR LEARNING AFTER ASSESSMENT

The second integral component of the scaffold I constructed was the nature of the evaluations that allow students to understand initial assessments as opportunities for exploration that allow for mistakes rather than as stressful assignments. For example, the course TAs graded the initial assignments subjectively for honest effort rather than correctness and provided quick feedback on whether the problem was done correctly. The problem sets allowed for students to get some questions wrong and still get full marks (and even extra credit). Students could also resubmit quizzes with new randomly generated numbers for the problems to recover half of the points that they lost. These opportunities blurred the line between formative and summative assessment, with each assessment serving both purposes (Black & William, 2009).

It must be noted that a key element that makes an assessment formative is the feedback provided to the learners (Black & William, 2009). An unfortunate reality of our current education system is the over-reliance on summative assessments leads to undue stress placed on learners. The instructor must allow for participation and assessment that seek to mitigate this stress. Thus, I led students to

impasses by creating simple tasks and by removing the stress associated with an expectation of high performance in the assignment. This reduced anxiety, and students approached the questions as a challenge rather than as a stressful task.

TEACHERS MUST NOT BE AFRAID TO FAIL THEMSELVES

However, I believe that the real role of the instructor in cultivating an environment where failure and growth are embraced is in leading by example. In preparing to teach last summer (as much as one can prepare in a continually evolving pandemic), I spent a lot of time watching other instructors, what worked for them and what did not in the remote classroom, and diving into the literature to design the perfect classroom. In the end, I decided to adapt the cognitive apprenticeship model (Brown et al., 1989; Collins, 1991; Collins et al., 1991) to a large remote classroom by creating a dynamic classroom where students could actively participate. I decided to also make thinking visible by solving problems in real-time and in conversation with students. However, it was painfully apparent by the second lecture that this was just not working. I was unable to adapt techniques meant for small in-person classrooms that relied on proper infrastructure and resources for feedback to a large Zoom room with 120 attendees. Where I thought students would find a vibrant classroom full of discussion, they found my lectures, and the constant interruptions by other students, unorganized and confusing.

I was dejected but realized that I had to respond by listening and adapting. I sent an apology announcement to my students; redid all subsequent lectures with careful organization of the material, structured discussion, and student engagement into discernible modules with a cohesive flow; and re-recorded the content that I had failed to present properly. I kept making incremental improvements to the course as the session progressed and was very proud of the structure I had built when I taught it again (though I never stopped collecting feedback and tailoring it even when I taught it again). But what I am particularly proud of is the process as it demonstrated to my students that I took very seriously what I had asked them to do: identify their mistakes and grow by learning how to resolve them. And just as I provided opportunities for them to make mistakes, I asked them for the opportunity for me to learn from mine. My students proved to be incredibly forgiving and resilient, recognizing that I cared about their learning and was willing to put in the work to create a conducive environment. They repeatedly and overwhelmingly identified this process as being foundational to their learning in the class in anonymous feedback collected after the course and explicitly stated that they related to my learning process in their own learning process.

ADOPTING A GROWTH MINDSET

In the last two decades, the development of mindset theory (Dweck, 2006) has had huge impacts on education. Numerous studies demonstrate that people with a growth mindset (who view intelligence as malleable) work and learn more effectively than people with a fixed mindset (who view intelligence as static and unchangeable), displaying a desire for challenge and resilience in the face of failure (Dweck, 2006; Boaler, 2013). While this is usually interpreted to mean that interventions must focus on building a growth mindset in students (Aronson et al., 2002; Good et al., 2003; Blackwell et al. 2007), studies have also shown that the instructor must believe that everybody's ability can grow and give all students opportunities to achieve at high levels so that students can actually do so (Boaler, 2013; Stigler & Hiebert, 1999; Sahlberg, 2011). In particular, feedback on the "process" of problem-

solving (challenge-seeking, hard work, good strategies, focus, and persistence) instead of ability or intelligence creates a growth mindset and enhanced achievement in students (Dweck, 2014).

However, beyond giving opportunities to students, other educational theories suggest that students' learning environments strongly shape their learning and development (Pianta et al., 2003; Ryan and Deci, 2000 Mesler et al., 2021). A recent study found that in classrooms where teachers had a growth mindset, the students developed a growth mindset over time (Mesler et al., 2021). This is consistent with ecological systems theory, which postulates that rules, norms, and expectations established in the environment of the learner influence the development of the learner. Further, the immediate environment of the learner, which includes the teacher and the classroom, are among the most influential (Bronfenbrenner, 1992).

My experience shows that the growth mindset of the instructor in their own teaching abilities is perhaps just as influential in fostering a growth mindset in the student. By assessing growth mindset in teachers (what he calls the teacher mindset), Greg Gero found that instructors who endorsed more of a growth mindset valued learning over risk-free teaching or the appearance of good instruction (Gero, 2013). For example, instructors who endorsed more of a growth mindset agreed more that "The value of trying new teaching methods outweighs the risk of making a mistake" and "For me, the development of my teaching ability is important enough to take risks." They did not believe that a mistake-free lesson on their part or a lesson that went exactly as planned defined them as a good teacher (Gero, 2013; Dweck, 2014). When instructors view themselves as learners, there is a sense of vulnerability that their students can sense (Dale & Frye, 2009). Gero found that teachers with more of a growth mindset specifically confronted problems in their teaching head-on and were more likely to agree that "I discuss problems in my classroom teaching with others in order to learn from them" (Gero, 2013). They also engaged in more professional development, such as reading professional literature and observing other teachers, and specifically asked for feedback on their teaching from a respected colleague or supervisor (Gero, 2013; Dweck, 2014).

Thus, growth mindsets may be manifest in many ways in the classroom, ranging from the instructor inculcating a growth mindset in the students, to the instructor adopting a growth mindset regarding their students and their own instruction, which in turn facilitates development of a growth mindset in students. This allows students and instructors to take risks in the classroom and learn from the process of failing.

BEING VULNERABLE IN THE CLASSROOM

As a graduate student instructor, I am very aware of the power structures that we inhabit (Symonds, 2021). We are extremely precarious students/employees/apprentices (Fairbrother, 2012; Bolumole, 2020; Rao et al., 2021) employed by departments whose primary interest is research (Street et al., 1993; Robert et al., 2017), and our prospects as instructors are in part determined by student evaluations (Wachtell, 1998; Leckey & Neill, 2001; Chen & Hoshower, 2003; Mitchell & Martin, 2018; Alshammari, 2020). Even if we inhabit positions of authority in the classroom, we occupy a position of utmost precarity professionally (Andrzejewski et al., 2019). Thus, we are expected to demonstrate

how to succeed in the classroom and perform as a successful instructor with control and mastery over the course and its content (Dale & Frye, 2009) in order to establish ourselves as hirable instructors. Highlighting our failures in this context requires us to set all internalized expectations aside, be vulnerable, and be open to change, learning, and criticism (Dale & Frye, 2009; Dweck, 2014). This process can be deeply uncomfortable (Kelchtermanns, 2011), but in choosing to learn something new, students are being vulnerable every day (Brown, 2016). As Dale and Frye (2009) argue, we must "recognize and embrace vulnerability and love as necessary relational qualities in developing and maintaining both the art of learning and the art of teaching" (page 123). By demonstrating vulnerability, educators exhibit what we expect of our students: to choose discomfort and grow from the process (Dale & Frye, 2009). If we can do so, the opportunities we provide to students to fail without stress can be realized. In fact, due to our precarity and our simultaneous role as students, I believe that graduate students are particularly well-situated to demonstrate vulnerability in the classroom and thus lead by example. Our proximity to our students, in the experiences and cultural knowledge we share, the stage of our careers we are in, and the recentness of being in the classroom, enables us to empathize with our students and for our students to empathize with us (Harland & Plangger, 2004; Muzaka, 2009; Fairbrother, 2012). The mutual empathy emphasizes the need for us to be vulnerable in the classroom.

However, being vulnerable requires significant emotional labor (Andrzejewski et al., 2019), and graduate students must be trained to be vulnerable and empathize in the classroom (Dale & Frye, 2009; Kelchtermanns, 2011). Unfortunately, the little pedagogical training most graduate students receive is currently entirely focused on the curricular aspects of the classroom, and we are left without the tools or inclination to engage with our students as people (Andrzejewski et al., 2019). Our current system emphasizes teaching as a transaction where students pay tuition and we are expected to impart knowledge (in fact, it is in particular what the institution deems as the relevant knowledge). The system thus deemphasizes and even completely ignores the fact that educators have a strong relationship with their students as fellow learners and human beings (Dale & Frye, 2009; Andrzejewski et al., 2019). We must recognize that we have severe impacts on our students, and our students on us, and must be trained to understand and embrace this relationship (Dale & Frye, 2009; Kelchtermanns, 2011).

CREATING A SHARED LEARNING COMMUNITY

The impression that educators and students are merely involved in a transaction (Bradford, 1958; Parrish et al., 2011; Gunn, 2018 implies that neither students nor educators can risk failure in the transaction process (Dale & Frye, 2009). We are led to believe that we are failing each other if we "fail" in any way. As Dale and Frye (2009) argue, "the prevailing institutional conception of learning that has shaped our students (and us)" is that "to learn is to master; to control one's knowledge of facts, concepts, and theories" (page 124). Emphasizing the relationship between the educator and the student as fellow learners lets us recognize that both are resilient and can grow from failure. It allows for classrooms to be sites of exploration and risk-taking, with the possibility of great innovation in pedagogy as a result. Unfortunately, the systems of education in place do not incentivize such a

relationship. Institutions focus on metrics as a means to collapse the richness of the classroom into a scalable tool to assess both instructors and students (Pettersen, 2015; Gunn, 2018). Consequently, as Dale and Frye (2009) point out, "in a society increasingly dominated by consumerism, one learns to sell oneself and to assert and exalt one's attributes. The marketplace has little room for humility and is an arena in which asserting control and controlling vulnerability are prized actions" (page 124). However, a good instructor must overcome the forces of the system to create a shared learning community that can allow everybody to make mistakes and grow from the process.

Emphasizing the relationship as shared learners also allows educators and learners to appreciate each other as complete people with complex lives beyond the classroom. As a result, allowing for failure and growth extends beyond the limited curriculum of the course. When I started teaching my class, I hoped that I would show my students how wonderful and useful physics is. As proud as I am that they said that I was able to do that, what truly impacted me were the relationships that I formed and the appreciation of my students for me as a person and a leader who cares about them. While I was delighted to receive many grateful notes from students who were previously intimidated by physics but embraced and even mastered the course content by the end of the course, the note that touched me the most was from a student who got an F in my class. They were depressed and struggling with substance abuse, deep emotional pain, and homelessness while taking my class. They could not complete all the assignments, but I encouraged them to do what they could and, most importantly, take care of themself. They did not want to try because they felt that they would fail in the class anyway. I told them that it does not matter if they got a failing grade if they succeeded in feeling a little bit better about themselves at the end of the day, and if being able to do a few physics problems is what does it, then that's a victory. This student did a few problems every week, insufficient for me to give them a passing grade but enough to provide something for them to look forward to every week. I chose to see their inability to solve problems due to the challenges they were facing as an opportunity to identify what they needed at that moment rather than as a judgment of their worth and ability. And what they needed was not an A or even a passing grade but a shared learning community that allowed them to make mistakes and grow from the process. In the note, they said, "your encouragement this quarter is the one thing that got through to me above everything else. Above my parents and my friends telling me I could pull through, you reminding me that failing a class is not failing my whole war meant everything to me."

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CHAPTER 12.

NAVIGATING EVIDENCE AND KNOWLEDGE EQUITY

J. NICK FISK

KEY TAKEAWAYS

- Graduate instructors are awkwardly situated in the academy, which shapes their agency in teaching effectively and developing their own teaching practice.
- Evidence is a potentially fraught construct that is nonetheless necessary and accepted in the academy and can be leveraged in lieu of the often-wanting personal authority of graduate instructors to advocate better teaching practices while also developing themselves professionally.
- Principles of knowledge equity, which is foundationed on a pluralistic epistemological approach to knowledge building, can guide graduate instructors to consider a more expansive view and contextual approach to evidence to better serve students.
- Adoption of evidence-supported practices in the classroom needn't happen overnight; instead, it is more tenable—especially for graduate instructors—to shape their practice via sustained but small changes.

STUDENT FIRST, EDUCATOR... EVENTUALLY

Graduate students, by definition, pursue additional understanding and proficiency within a particular disciplinary domain. Unfortunately, most disciplines are not themselves pedagogy. Most educators in higher education, especially graduate students early in training, are informed first by their discipline—the norms, culture, and standards therein—with educational practice being conveyed secondarily, tertiarily, or not at all. This is at least initially the result of graduate admissions across natural sciences, social sciences, and humanities prioritizing primarily domain-specific skills and

writing (Posselt, 2016). Nonetheless, we are expected to teach. Our agency to direct not only minute-to-minute teaching but our own long-term development as instructors is limited by the often conflicting demands of the hierarchical academy, which itself can harm graduate instructors on the basis of their role in the university (Young et al., 2015).

AN EVIDENTIARY ESCAPE

Developing an evidence-based teaching practice is essential to teach effectively and inclusively. Failure to adapt one's teaching in line with evidence-supported practices constitutes a breach of duty at best and negligent harm at worst. For graduate instructors in particular, an evidence-based teaching practice can serve as the foundation for the continual, career-long refinement of their teaching and professional development. Turning to the scholarship of teaching and learning grounds educator development in principled techniques and frameworks not necessarily compromised by the particular institutional culture and structure we find ourselves in. We can instead turn to evidence-based practices to avoid replicating ineffectual elements of inherited instructional styles. There is a vibrant body of work in pedagogy on which to base our teaching practice, and much of it isn't strictly intuitive.

Perhaps this audience does not need convincing as to the utility of evidence-based practices, but I am nonetheless compelled to at least gesture cursorily at several examples. One of the most well-realized examples is the inclusion of active learning activities in addition to or in lieu of lecture (Bonwell et al., 1991; Freeman et al., 2014). Robust bodies of work exist to support that active learning approaches improve student learning outcomes, supporting their incorporation. At the same time, there is also evidence that student sentiment towards active learning tends to be unfavorable even if it results in better outcomes (Deslauriers et al., 2019). Taken together, these sources of evidence, which risk being at odds with one another, can be used to guide transparent and thoughtful active learning experiences that minimize ill-sentiment towards them.

Within each discipline, too, evidence supporting different approaches and practices can further tune interventions and innovation. Specific instruments can be made and calibrated to assess student misconceptions (Newman et al., 2016; Wright et al., 2014), physical models can be designed to hone student mental models (Newman et al., 2018), and approaches to promote expert thinking can be explored. Evidence also suggests that fostering a sense of community and belonging in the classroom improves student and faculty outcomes alike (St-Amand et al., 2017). I could go on, but there are works more focused on enumeration of these practices than the present.[1]

Importantly, "evidence" as a construct is generally accepted in the academy. Evidence-based approaches may offer graduate instructors immediate authoritative leverage in situations where their voices may be minimized due to dynamics of power in the academy by depersonalizing the advocacy of reformation of teaching practices. Rather than challenge rigid systems with admittedly nascent expertise and reputation, we can instead point "to the literature" as a way of justifying adjustments to better serve students. This approach, while admittedly doing less-than-nothing to challenge the underlying systems causes, nonetheless has particular potential for those whose authoritative voices are especially minimized—women and people of color, for instance. This friction between graduate

1. I find Borrego & Henderson (2014) a useful starting point.

student instructors and instructors of record is not contrived; many graduate students ultimately teach with their advisors or members of their committees where the power differentials are established and imminent. Evidence, then, can serve as an escape, if only partially, from the dynamics of power experienced by graduate instructors.

WHAT QUALIFIES AS EVIDENCE?

While essential, evidence-based approaches are not without their limitations. What constitutes evidence and authority varies between disciplines and is often foundationed upon problematic histories that discount marginalized voices and lived experiences. Thus, it is incumbent that evidence be wielded cautiously and critically. Evidence does not speak for itself—it is a component of stories told.[2] What stories are told, how they are told, and who tells them matters. This is no less true in education, which is uniquely positioned to cause or perpetuate harm—for instance, through the school-to-prison pipeline (Gray, 2019) or sustained exposure to institutionalized microaggressions (Nadal, 2008). Further, graduate student status as primarily investigators within our disciplines primes us to evaluate the evidence by the standards of our disciplines, which often vary significantly from evidentiary standards in pedagogy.[3]

When I run teaching workshops and introduce works by authors such as bell hooks or Asao Inoue, my participants (graduate students and postdocs) often resist admitting these works as evidence. Admittedly, one cannot rely exclusively on pedagogical theory, but not even experimentation and quantitative studies are safe from such scrutiny. The seminal work of Freeman et al. (2014) on the efficacy of active learning within STEM, which has reasonably strong quantitative results, regularly fails to pass muster as evaluated by physicists, chemists, and engineers in workshops I run—*even when the premise of the workshop is evidence-based teaching itself*. These participants and, by extension, many instructors carry the evidentiary baggage of their discipline with them as they enter the classroom.

It would be a disservice to the reader if I did not mention that, while evidence has the potential to be used to challenge institutional dogma, a narrow interpretation of what constitutes evidence does more than produce lackluster knowledge: it risks dogmatic reaffirmation of harmful or ineffective systems (Bernal & Villalpando, 2002). Thus, I am a proponent of a broad and contextual interpretation of what constitutes evidence and that what constitutes evidence admissible in knowledge building is simply what is useful for such building, as well as for the enrichment and extension of the knowledge built. One of my favorite distillations of this concept comes from Eve L. Ewing's (2018) discussion of her use of poetry in her largely sociological work *When the Bell Stops Ringing: Race, History and Discourse amid Chicago's School Closures*:

> I bolster my sociological arguments with evidence from a variety of disciplines… I also include poems in every chapter. I find that the poems serve **multiple evidentiary purposes** [emphasis added]: they offer a different sort of first-person account of the social forces discussed in the book, and they provide useful metaphors for reader understanding… (p. 203)

2. Disciplines, then, are just communities that evaluate the quality of the story.
3. This is trivially demonstrable if we consider statistical measures accepted in different fields. Particle physics generally only considers discoveries significant if they are robust to beyond 5σ in one tail of a normalized Gaussian distribution (i.e., a p-value no larger than 3 × 10–7). Such a high threshold for belief in pedagogy (and most disciplines) would render most evidence inadmissible.

Ewing here notes the utility of poetry as evidence in her work and that, as an efficient and evocative writer, the poems serve multiple purposes. That is, while the poetry can stand on its own merits, within the work, it serves a clear role in the collaborative knowledge-building process between Ewing and the reader and thus constitutes evidence *prima facie*. Instructors, then, should not discount forms of evidence used in the scholarship of teaching and learning based solely on those forms being different from evidence they encounter in their discipline.

EPISTEMOLOGICAL PLURALISM: "MANY THINGS GO."

I have, perhaps unhelpfully, established that teaching is filled with difficult to resolve tensions, such as the tension between evidence and the history of the production of that evidence and tension between what graduate students are trained to do and what they are expected to do. I now offer a solution to these tensions: Epistemological Pluralism. Epistemological pluralism is the idea that there are multiple different ways of knowing (Miller et al., 2008). As used here, the term goes further to assert that there *should be* multiple different ways of knowing. In his call for pluralism in the sciences (i.e., epistemology of the natural world), Hasok Chang (2012) insightfully summarizes this position: "The demand for plurality is the most crucial feature of pluralism… A system of practice that denies the rights of other systems to exist would have to be banned in a pluralist scientific regime." (p. 261) Critically, plurality does not itself condemn us to incommensurability, especially of the methodological variety (Carrier, 2001). That is, we are not obligated to admit that there is no metric by which to compare competing theories, statements, or ideas. Nor does pluralism strictly imply a relativist stance, where, broadly, truth is asserted to be narrowly construed and thus facts strongly dependent on the context they are invoked in (i.e., truth is relative) (Adam Carter, 2017). Rather, it simply obligates us to the idea that there could be many valid systems and principles used to know.[4]

In the context of teaching, pluralistic principles can guide instructors to not impose the evidentiary standard of their discipline onto the scholarship of teaching and learning, which has its own standards of evidence. This pluralism-informed approach does not preclude instructors from drawing on the wisdom of their field; rather, it prompts them to consider pedagogy as a field as complicated and nuanced as their own before instinctually evaluating evidence in vocationally-embedded ways. Indeed, evaluating for oneself evidentiary standards, questioning the nature of the authority which privileges certain voices, and critically but meaningfully engaging with models that conflict with their own are themselves features of expert thinking (Adams et al., 2008) expected of graduate students. The metacognitive process necessary to consider and apply different evidentiary standards in their own discipline should also prompt graduate instructors to refine what constitutes evidence within their teaching practice. Ideally, this manifests as instructors explicitly and iteratively incorporating evidence from the body of education research into their own teaching practice while also diversifying the material of their class itself, to the extent that they are able (Duran & Topping, 2017).

BEYOND THE ACADEMY: KNOWLEDGE EQUITY

> *"Pluralism isn't just diversity; it's something we create out of this diversity"* — Diana L. Eck

4. All this is a lengthy way to say that my embrace of pluralism, scientific and otherwise, doesn't mean I must hold in any regard proponents of "Flat Earth", those who propose that 5G caused the COVID-19 pandemic, or those who insist birds are real (see also: Russel's teapot).

Applying pluralism to the construction of knowledge, we arrive at knowledge equity—where both lived and learned experiences are reserved space and respected in collaborative knowledge building. A potent example of a system implementing knowledge equity is integrated knowledge translation (IKT) in medicine. IKT is a collaborative research framework that aims to synthesize experience from knowledge users, including healthcare providers, policy makers, patients, caregivers and members of the public—treating them all as *de facto* partners in research (Banner et al., 2019). On the scale of individuals (i.e., large systemic issues notwithstanding), patient and family engagement is foundational to attaining health equity. This helps shift medical thinking away from "patients as being problems to fix" towards treating them as partners in iterative knowledge building. That is, rather than solely the doctor querying their learned experiences to decipher the semiotic symptoms exhibited by a patient, doctors instead utilize their lived and learned experiences to engage with the lived experiences of the patient, iteratively refining the diagnosis into a form that both resonates with the patient's lived experience and satisfies formal medical reasoning.

The benefits to inclusion of knowledge equity in medicine—and especially in medical education— are not hypothetical: curricula that use knowledge equity are associated with reduced health disparities and increased physician practice in underserved communities (Denizard-Thompson et al., 2021). Likewise, the benefits of implementing knowledge equity in the classroom are not hypothetical. Knowledge equity frameworks recognize that teaching and learning, too, are part (and only part) of a lived experience. Using knowledge equity principles, graduate instructors can begin to build agency in the classroom while empowering their students to synthesize and apply their lived and learned experiences to produce durable knowledge. Consideration and incorporation of knowledge equity in content preparation and delivery facilitates engagement on the basis of *relevance, community,* and *authenticity*—all axes of engagement found in well-regarded teaching frameworks such as the 5E model or Universal Design for Learning (Rose, 2001). Care must be taken, however, as not to exploit the lived experience of students or instructors sheerly for the benefit of the academy: Space and encouragement, not obligation.

As noted in the discussion of plurality, practice of knowledge equity in the classroom (and beyond) does not commit us to necessarily respect all knowledge equally; rather, it obligates us to respect different ways that knowledge is built. At the teaching center[5], we use this case study to prepare instructors for possible "hot moments" which I think highlights this distinction:

> *You are leading a section on environmental hazards and racism. The readings for the course have discussed the prevalence of toxic waste dumps and the high incidence of lead poisoning near low-income communities of color in the United States, as compared with more affluent and white communities. After a long discussion, one student who has been quiet all semester asks, "Why don't these people just move away if there is so much evidence of environmental hazards in their communities?" They go on to add that people living in those communities must not care about their health or that the problem must not be as big as the readings make it seem. You notice some students react to this comment, but they don't immediately say anything.*

Here, principles of knowledge equity do not call on us to accept the student's conclusion, despite it being knowledge formed on the basis of a lived experience (i.e., not having grown up in such a community) and a learned experience (i.e., the readings). In this instance, knowledge equity simply calls for us to acknowledge and respect that the student's lived experience is a valid way of coming

5. The Yale Poorvu Center for Teaching and Learning

to know, even if the conclusion in this instance is harmful. Indeed, an affirmative commitment to knowledge equity in the classroom compels us to interject, deconstruct why the conclusion presented neglects the lived experiences of the people at issue, and to use the moment itself as a lived experience to construct knowledge that more accurately and holistically captures the truth.

Knowledge equity isn't simply a framework to address hot moments. It is best used proactively to build a foundation of trust and engagement within the classroom. I've given a version of the following prompt to teaching workshop participants to stimulate ideas of how to incorporate lived experiences in the classroom:

> *You teach a course focused on child psychology from ages 12-18. You are about to start a unit covering gender and sexuality (stereotype threat, gender identity, shifts in self-concept, etc.). You want to give space and encourage people to integrate their lived experiences into the scholarly discussion, but you want to make sure you do so in a way that is both safe and enhances the experience. What practices can you implement to ensure students feel welcome to participate? How can you check in to ensure your students are finding it a gainful experience?*

In this example, instructors are considering how to preemptively create the space and climate required for students to share and engage with their lived experiences during the collaborative knowledge building process.

I want to acknowledge that there are different courses and disciplines, each of which differ in the ease and degree to which principles of knowledge equity are able to be incorporated. The natural sciences, for instance, have gone to great lengths to excise lived experiences from knowledge building. They treat the human element of research as something to be controlled for or as a limitation of design. In fairness, this practice is not without rationale[6]. However, as I've endeavored to explicate, what constitutes useful evidence in knowledge building is contextual, and recognizing these contexts is evidence itself of expert thinking. I encourage my fellow scientists to acknowledge that teaching science and performing science are not strictly the same: the laboratory of the classroom is distinct. So, while lived experiences may not slot into collaborative knowledge-building seamlessly[7], they merit incorporation all the same.

CONSTRAINED: A GRADUATE INSTRUCTOR EXPERIENCE

Throughout this work, I have repeated that many graduate students have limited ability to shape what is delivered in the classroom. Constraints can be due to exogenous forces (e.g., institutional requirements) or endogenous ones (e.g., inexperience) as well as either over-structured (i.e., verbatim dictation of lessons and content) or under-structured (i.e., being provided little guidance) teaching experiences. Less than a fifth of universities provide three or more total days in professional development for graduate teaching, meaning that teaching experience itself is often the only teaching development received by graduate instructors (Gallego, 2014). Compounding this dearth of training, graduate students are not often "admitted to practice" into their programs by virtue of their teaching practice (Posselt, 2016), nor should this necessarily be the case. Still, this medley of starting points[8]

6. On the other hand, I—a practicing scientist—may have a vested interest in believing such rationale exists.
7. There is an argument to be had that experiential learning, which is prominent in the natural sciences (e.g., lab courses, research projects, etc.), constitutes lived experience a la epistemological empiricism.
8. A medley of starting points, I should mention, that instructors themselves contend with regarding their own students.

makes it difficult, institutionally, to execute gainful development of graduate student teaching. However, many institutions recognize this challenge and, rather than rise to meet it, seemingly throw their hands up in defeat or feign ignorance, leaving graduate instructors adrift without harbor.

BABY STEPS TO GIANT STRIDES

I find the prospect of completely restructuring my teaching practice in response to insightful feedback, interesting pedagogical theory, empirical studies, or to align more closely with my values overwhelming and not practical given the other demands on my time and, frankly, my wanting skill. Instead, I recognize two essential principles:

> *It is the trendline, rather than any point, that determines improvement in my practice.*
>
> *—and—*
>
> *There is no point in preserving human-made systems that don't serve people.*[9]

With these principles in mind, I advocate for iterative and sustainable teaching development. Development is not all about adding—adding indefinitely is not sustainable. Instead, it is also about deliberate subtraction, which is where the second guiding principle shines. What follows are tips and provocations to aid in the implementation of knowledge equity principles in the classroom.

Set boundaries at the onset: It is tempting and effective to model for our students what we hope for them. We can demonstrate expert thinking, for instance, or vulnerability (Blaine, 2014). But while, for some, teaching may be a calling and nourish the soul, it remains a job. Boundaries are necessary and healthy, especially for those who may have lived experiences which are traumatic or disclosure of which imperils their well-being. Do not strip-mine your trauma in service of a system that doesn't care about it. Before you teach, enumerate to yourself, in writing, which of your lived experiences you are willing to use in service of knowledge equity in the classroom. Re-evaluate this list often. Once you have identified what is on the table and off-limits regarding your own life, it will be easier to slot those experiences into discussion and teaching to prompt the reflection in the students as it will no longer be a "game-time" decision as to if it is appropriate.

Put the "student" back in "graduate student": You may not have many (or be unwilling to share) experiences you feel will contribute meaningfully to fostering an environment where lived experiences are respected and welcomed. But almost all graduate instructors will share something in common with their students: they are or were recently learners themselves. Learning *is* a lived experience. You are likely to share common experiences of learning with your students. If you are not comfortable sharing more personal axes of your life or simply don't feel that they merit space in the classroom, then you can use your lived experience of learning to model knowledge equity.

Multiple modalities: Students are people, too. They will have different levels of comfort and boundaries in bringing their lived experiences into the classroom. It is not your job to feel out each student's boundaries and cater your practice precisely to account for all of them. Time does not allow for it, especially in large class sizes. Instead, build multiple modalities—namely form, scale, and anonymity—into your material and vary them (think: UDL, but for knowledge equity). Some students

9. I find these principles are useful lodestars in navigating life outside the classroom, too.

will not share their lived experiences with you or even their peers—respect that. But there are other ways to engage the relevant metacognition and connect students' lived experiences to their learning: provide prompts to relate material to their lives in guided reading, for instance. Scale is also important—if you can build in ways for students to inject themselves into a cumulative term project, great. But equally important are opportunities that are formative and low-stakes, like one-minute papers, so that students don't feel as if their lived experiences are being graded.

Don't discount: Make it clear, both explicitly and through modeling, that multiple ways of knowing are welcome in your classroom. Build it into your syllabus and course compact. Verbally affirm students' experiences when they share. Note that this approach is not without risks. When someone introduces their lived experience as it contrasts to another student's lived experience or in opposition to the material, acknowledge that experience, but don't be afraid to point out why that way of knowing is not the most appropriate or is incomplete in this context. An embrace of knowledge equity is not entertaining all experiences as equally valid—you should condemn ignorance and hate unequivocally however you are able. But do not accost a student on the basis of their lived experience and do not allow other students to do so. Use the material or a discussion to address the issue; if ignorance persists, then the problem is bigger than you. Mitigate the harm to other students and to yourself and move on[10].

Kill your (and others') darlings: When pitching backwards design to new educators, I often frame outcome-oriented learning objectives as a test that course material must pass. *Does this reading actually contribute to any of the outcomes? Is there another reading that can serve multiple objectives? Does this question actually help me understand where the students are with respect to this objective?* You can test the materials, activities, lectures, and assessments against the learning objectives and, with the razor of Occam, trim away all that is not in service of those objectives. When you have a lot of freedom in the classroom, this method helps to constrain and structure teaching in useful ways. But what about those who have all the material foisted onto them from above? Rebel gently and trim it anyway. If something truly won't contribute to student outcomes, definitionally its absence will not be noticeable. Often, we are faced with the scenario where instructors of record will not perform backwards design. They will say, "*Cover x, y, and z*" and give you enough time to cover only "*x*". Like it or not, material will be omitted. So, do so in a principled way that maximizes the probability that your students will be able to engage with the material. That is, even if content coverage is not comprehensive, student engagement on a personal level will improve the chances that students will generalize principles or be able to transfer learning to the omitted content.

Stomaching distaste: For graduate instructors with limited leeway in how and what they present, knowledge equity offers another appealing feature: a way to stomach elements of what is being taught that we disagree with or neglects lived experiences. On one hand, we can accept that the material we are obliged to include represents one way—and not the only way or necessarily best way—of knowing. Acknowledging publicly the nature of how the knowledge was produced and how it may contrast with the lived experiences of many others—some of whom may be in the class—is a means of harm reduction for both students and instructors while not disadvantaging students for neglect of "the canon".

10. While a protracted discussion of mitigation strategies is beyond the scope of the present, I direct readers to Burton & Furr (2014) and Sue et al. (2009) for information on implementation and rationale for such.

Silence is its own statement: When discussing lived and learned experiences in the classroom, it can be difficult to elevate the voices of those whose experiences are often neglected. In many disciplines, such voices may have only been recently (and unequally) allowed into the conversation. When you encounter moments in the classroom where diversity of experiences is lacking, take a moment to point it out. Acknowledge that what is not being said (and who is not being given space to say it) is as important as what is—both within individual works and within the course itself. Ensure that your students know that questioning the mechanisms of knowledge production and distribution does not make them ineffectual scholars; the opposite is true.

Cite your sources: Being transparent with students is essential to earn student trust, which is requisite if students are to include their lived experiences in knowledge construction in the classroom (Winkelmes et al., 2016). Justify to them, as much as reasonable, both the subject-matter materials and your teaching strategies. Doing so will demonstrate that you are being thoughtful about the material (even if you have no say in the matter), and it will also ensure you have carefully considered your teaching. Students famously do not enjoy active learning, even though it works. But they will hate it even more if they don't know that it works. So be transparent not only with the facts you present in your discipline but also with why you are presenting them the way you are. If there is no rationale or evidence for something you plan to do, then remove it.

Listen, and do your best: Some students and peer instructors will have lived very different lives than you or have experiences that exceed your ability to truly empathize or understand. Your failure to understand is not a failing of character or of your vocational responsibility, but refusing to listen and adapt accordingly may be. Ultimately, you have to decide what experiences, when shared, are harmful or do not add substantively to the current knowledge-building task. Inevitably, you are going to get it wrong at some juncture. But by interpreting the words and actions of others generously, and encouraging your students to do the same, you create some space where those determinations can be made. Students recognize effort, too, and, even when they don't, you'll want to know and believe that you listened and did your best (and that you will do better next time).

BRINGING IT ALL TOGETHER

Tomorrow's faculty instructors are today's graduate instructors. The various forces influencing our teaching practice have long since been at work—after all, our lived and learned experiences, too, shape how we approach our teaching practice. Evidence should undoubtedly be foundational to how we approach teaching and we should advocate not only to remove barriers but to improve institutional support for implementation of evidence-based teaching. However, we must take care in the evaluation of what constitutes evidence for the purposes of our teaching. Principles of knowledge equity center the humanity of education, while being founded on firm philosophical and empirical bases. Ultimately, being deliberate about evidence and actively valuing diverse lived experience benefits the instructors, students, and institutions alike. While incorporating knowledge equity into our selection and valuation of evidence, we must also to retain our boundaries and agency through deliberate and considered action and disclosures. Further, we must not over-internalize our role in the valuation of different kinds of evidence in service of teaching as to exculpate faculty and administration of their role in perpetuating ineffective and harmful systems (Bathgate et al., 2019; Ebert-May et al., 2011; Kishimoto, 2018).

As a final note, valuing—not simply tolerating—lived experiences in the classroom is a prerequisite for the sort of radical reforms imagined and fervently advocated for by bell hooks, Asao Inoue, Leah Gordon, Kimberlé Williams Crenshaw, and so many others. Resistance to change, even in small and subtle ways on the lower rungs on the academic hierarchy, is to be expected. Remember:

Tæv uforknyt løs
på problemerne – men
vær forberedt på,
at de tæver igen.

Problems worthy
of attack
prove their worth
by hitting back.

—Piet Hein

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CHAPTER 13.

PRACTICING AND RESEARCHING PEDAGOGICAL METACOGNITION: BENEFITS FOR GRADUATE INSTRUCTORS DURING THE FIRST YEAR OF INSTRUCTION

AUDREY TOCCO

KEY TAKEAWAYS

While reading this chapter, graduate student instructors will be able to:

- Define, identify, and explain the benefits of pedagogical metacognition.
- Understand a graduate student instructor's experience with pedagogical metacognition in a learning community and how it enhanced her reflective and reflexive practices.
- Learn strategies to implement pedagogical metacognition in instruction.

First-year graduate student instructors juggle several responsibilities that require a great deal of thought. These responsibilities may include taking required classes, conducting well-designed research projects, presenting and writing findings, and teaching classes. Intuitively, these tasks could not be completed successfully without thinking. Thinking about one's thinking while engaging in these tasks is also crucial, but less commonly achieved. Metacognition – thinking about thinking – is critical to the learning tasks that graduate student instructors must tackle. When metacognition is practiced in teaching scenarios, it is referred to as pedagogical metacognition. Engaging in these reflective and reflexive practices – reflecting on and acting upon one's teaching – is vital for first-year graduate instructors because it provides an avenue for continuous monitoring and adjustment of instructional techniques and can help graduate student instructors identify areas for improvement.

Metacognition includes planning, monitoring, and adjusting one's cognitive processes (Flavell, 1979). Zimmerman (1990) uses his self-regulated learning model to explain that self-regulated learners

are aware when they know a fact or possess a skill and when they do not. Furthermore, self-regulated learners plan and set goals, organize, self-monitor, and self-evaluate their learning processes (Zimmerman, 1990). Metacognition is so important to learning that Ambrose and colleagues (2010) include it in their seven principles of learning and further define a cycle of self-directed learning that all learners should use: assess the task, evaluate strengths and weaknesses, plan, apply strategies and monitor performance, and reflect and adjust as needed (Ambrose et al., 2010). These cognitive processes comprise metacognition. Because metacognition is crucial to learning, it has been researched widely in educational settings.

Metacognition is a skill that can be taught, practiced, and improved. Students who have used metacognitive strategies while learning, such as metacognitive study guides that ask students to consider what they know and do not know, or metacognitive journals in which students write their reflections and reactions to course content and exams, exhibit increased academic achievement and report being able to plan, monitor, and adjust their learning more efficiently (Agarwal & Bain, 2019; Kuiper, 2004). In addition, coupling an experiential learning format with teaching metacognitive theory can help college students process information at deeper levels and can increase recall and recognition on assessments (Richmond et al., 2017). Furthermore, learners with more sophisticated metacognitive skills can more efficiently adjust their study strategies based on their expectations of task demands (Ross et al., 2006). Metacognitive skills are requisite for successful learning. These self-regulated learning techniques are also necessary for successful teaching.

Despite the abundance of research on metacognition in learning, metacognition in teaching has been relatively overlooked. Planning, monitoring, and adjusting teaching strategies is known as pedagogical metacognition, which closely parallels the idea of reflective and reflexive practice (Kohen & Kramarski, 2018). Reflectivity – looking back and considering what went well and what could have been executed better – combined with reflexivity – taking action based on reflection – are essential to the process of planning, monitoring, and adjusting teaching that comprises pedagogical metacognition (Ryan, 2015). Being reflective about one's teaching is important, as it allows instructors to consider lectures, activities, student questions, assessments, and student feedback. Adjusting one's teaching based on thoughts and ideas brought about during reflection is equally as fundamental to teaching, especially when just beginning the teaching journey. First-year instructors may benefit from practicing pedagogical metacognition by acknowledging areas for improvement and generating teaching adjustments to continuously refine their teaching. Beginning these reflective and reflexive practices early in one's teaching career will help to establish a path of ongoing professional development that first-year graduate instructors can build upon as they gain teaching experience.

First-year graduate student instructors can learn and practice pedagogical metacognition in learning community environments. Learning communities are groups of faculty or students brought together to achieve common goals of building university-wide community around teaching and learning, increasing interest in teaching and learning, increasing collaboration, and encouraging reflection (Cox, 2001). Brower and colleagues' (2007) learning community model of graduate student professional development intentionally brought together graduate students to accomplish shared learning objectives related to teaching and learning. The learning community program focused on four key elements: shared discovery and learning, functional and meaningful relationships among members, inclusive learning environments where diverse perspectives were welcomed, and

connections to other learning experiences outside the learning community (Brower et al., 2007). Metacognition has been implemented and researched in professional learning communities and results in faculty becoming more aware of their thinking and engaging in pedagogical metacognition before, during, and after participating (Prytula, 2012; Tocco, Jameson, McCartin, & Darling, 2021). However, including strategies for graduate students to practice pedagogical metacognition is a new idea. Tocco and colleagues' (2021) review of reflective and reflexive practices in education acknowledges that pedagogical metacognition is under-researched in the higher education literature. Their preliminary findings indicate the importance of planning, monitoring, and adjusting teaching methods for higher education instructors (Tocco et al., 2021). As such, first-year instructors can benefit from learning what pedagogical metacognition is and how to use it to improve their instruction.

A FIRST-YEAR INSTRUCTOR'S EXPERIENCE WITH PEDAGOGICAL METACOGNITION

As a first-year graduate instructor, I threw myself into teaching without much formal training. I was finishing up my master's program in educational psychology, about to transition to the PhD phase of my program. I had one year of training in how students learn under my belt. Still, I felt relatively confident that I would plan my course to the best of my ability, keep track of how well I was teaching and how well my students were learning (if at all), and make adjustments for the next class period, month, and semester. These reflective and reflexive practices that I used to help me think about pedagogy are my example of pedagogical metacognition.

My first year of teaching as a graduate instructor followed the steps of pedagogical metacognition at both the semester level and the individual class level. To plan the layout of my introductory psychology course, I decided which chapters I would be covering from the textbook that our group of graduate instructors chose together. Then, I read each chapter and created an outline of the key points that I thought would be important for students to know by the end of the semester. As I was creating these outlines, I would monitor my progress and ask myself if the content I had created was covering the most critical components of introductory psychology. Assessments and learning activities followed once the key takeaways and outlines were finished. I then evaluated my progress and adjusted many of the materials to make sure they were aligned with each other and with how students learn.

At the individual class level, I would also plan, monitor, and adjust my teaching. Lecture materials, plans for learning activities, and questions to ask my students would be planned ahead of time. The process of planning helped me feel more prepared to facilitate my students' learning. While I was teaching, I would monitor a few things. First, I monitored if I was on track to cover everything I had planned for that day. This aspect of monitoring involved tracking time during lecture and class activities. If students did not ask many questions and my lecture was moving more quickly than expected, I would work extra time into an activity. If an activity was taking longer than I had planned, I would curtail some of the time I had allotted for questions at the end of class. Second, I kept track of how engaged my students were. I achieved this by attending to their level of focus during activities or notetaking. Formative assessments such as "minute papers" (having students take a minute to write down a connection they could make between new material and old content) or online polling (multiple choice, word clouds, or free-response questions) also served as monitoring techniques. If students' responses were of adequate length and relevant to the content being discussed, they were

most always engaged. If I saw dazed looks and vague answers, I knew students were not as attentive. Third, I monitored how I felt the lesson was going. I would take stock of my own engagement with the content and how effectively I was conveying ideas by asking myself questions such as: *Are you excited about teaching this material? Do you need to demonstrate more enthusiasm? Do you need to pull back and let students share their ideas?*

These monitoring strategies allowed me to gauge the strengths and weaknesses of my instruction. After teaching, I would think about how I could adjust my pedagogy to help my students learn more effectively. This included taking quick notes about ideas I had during class or research-based teaching strategies I learned from one of my own courses and how I could implement them into the course. Reflecting on my teaching and making adjustments to my pedagogy helped me critically consider my teaching and contributed to instructional improvements during my first year as a graduate instructor.

Although these metacognitive practices took a considerable amount of time while I was planning my course, they were essential to my instruction. If I had not planned and evaluated my learning objectives, assessments, and learning activities before the semester began, I would not have been able to reflect on these plans and propose subsequent changes as effectively. While I was teaching, taking notes after class each day took approximately five minutes and was easily incorporated into my routine after a few weeks. Adopting reflective and reflexive practices may seem time consuming, but dedicating a few extra hours to pedagogical metacognition while planning your course and a few minutes following each class can make all the difference for your teaching.

A LEARNING COMMUNITY FOR GRADUATE STUDENT INSTRUCTORS

Pedagogical metacognition made such an impact on my teaching during my first year of instruction that I wanted to share the same experience with other graduate instructors. The Center for the Enhancement of Teaching and Learning (CETL) at my university had a robust learning community program for faculty, but did not have a learning community dedicated to graduate students. As part of an internship with CETL, I developed just that. The learning outcomes for graduate students participating in the learning community were as follows:

1. Identify foundational concepts related to pedagogical content knowledge.
2. Make decisions about best practices for teaching in their own classroom.
3. Identify the interaction between teaching and learning.
4. Feel confident in applying effective teaching and learning strategies in their classroom.
5. Evaluate best practices for teaching through reflection.

The first four goals aimed to provide graduate student instructors with a community environment in which to discuss teaching and learning with each other, which is something they might not have had access to in their academic departments. The fifth goal of the learning community specifically targeted the promotion and use of pedagogical metacognition.

The learning community met biweekly for 90 minutes over the course of one semester. Each meeting focused on a different topic related to teaching and learning. Some examples of meeting topics were current trends and issues in teaching and learning, backward design and alignment, educational

assessment, and creating an inclusive classroom climate. Meetings consisted of small and large group discussions and activities to help graduate students apply each topic to their own pedagogy. After each meeting, everyone reflected on their teaching according to metacognitive prompts (e.g., How do you think about your teaching plans before and after you teach? What teaching techniques have you used in the past that you might adapt based on what you learned this week and why?). These metacognitive prompts aimed to help graduate student instructors reflect on their teaching with each meeting's topic in mind, in addition to adjusting their pedagogy based on research-based teaching strategies and discussions brought up in the learning community.

IMPACT OF THE LEARNING COMMUNITY ON PEDAGOGICAL METACOGNITION

After facilitating the learning community for one semester, I discerned that graduate student instructors benefitted from the program. I was interested in digging deeper into graduate students' reflections and asking them about their perceptions of their pedagogical metacognition and their teaching. I worked with CETL to obtain approval from our university's institutional review board (IRB) so that I could collect, analyze, and report thoughts and ideas of graduate students' experiences with pedagogical metacognition.

My discussions with these graduate students took the form of individual semi-structured interviews in which I asked questions such as: *Why did you decide to participate in the graduate student learning community? How has participation in the graduate student learning community influenced your perceptions of your teaching and career preparation? Are there any specific topics we discussed that had a particularly strong influence?* Using Creswell and Poth's (2018) framework for conducting a thematic analysis, significant statements and clusters of meaning within interviews and metacognitive reflection responses were formed. This analysis revealed benefits of promoting reflective and reflexive practices, which included helping graduate instructors engage with new research on teaching and learning, adjusting their teaching to implement backward design in future classes, fostering reflection on why assessment is important for student learning, and promoting the exchange of ideas around pedagogy. Table 1 provides examples of each of these benefits and includes quotes to demonstrate graduate students' perspectives on these aspects of teaching along with their pedagogical metacognition.

Table 1. *Examples of Graduate Students' Experiences with Pedagogical Metacognition.*

Example of Pedagogical Metacognition or Teaching Strategy Related to Pedagogical Metacognition	Quote from Graduate Student
Engaging with and reflecting on research-based practices in teaching and learning	"All of the resources that we talk about each week, there's always something that I'm like, "Oh that's really interesting. Oh, I might try that!" Or even in our discussion, maybe it didn't come from the resources, maybe it just came from somebody saying, "Oh I tried this [strategy] in my class." And so that's been really helpful and really great about…sparking some ideas about what I'm going to do next semester in my teaching practicum."
Implementing backward design in future assignments	"It's been really useful especially the section on backward design. Just because I never thought about that, and you know I've done a few presentations and I've done what we're not supposed to do. So I've thought about the content. And then, *after* what I wanted people to learn, but that didn't work…But now that…I'm finding that out, I actually designed my class discussion…based on the backwards design. So I'm already using it."
Reflecting on the importance of assessment to student learning	"I know that when we were doing the assessment module that folks were talking about how they have multiple options for their students for assessment. And I thought that was really a great idea because I think that students should have multiple different opportunities to show their learning…A standardized test absolutely doesn't work for every student, like we know. So I thought there are a lot of great ideas about varied assessment."
Interacting with other graduate students and exchanging ideas	"…being with the group of people who've taught in some capacity at…different levels. Like, I've learned a lot from them too, stuff I wouldn't have thought of. I've been taking notes like "Oh that's a good idea, yeah I'm going to do that, or I'm going to go to that website or look into this."

STRATEGIES FOR IMPLEMENTING PEDAGOGICAL METACOGNITION INTO INSTRUCTION

Make Reflection a Habit

While you are planning your lessons, ask yourself questions such as, *Why am I presenting the content in this way? or How could I drive this idea home in a meaningful way? or How will students perceive this information?* While you are teaching, reflect by monitoring how your lesson is going. Evaluate things like student engagement, participation in activities, student questions, and your perceptions of your own teaching. After teaching, keep a journal to record what went well during each class and what could be improved. Figure 1 is an example of a teaching journal from my first semester of teaching Principles of Psychology. Write down key pieces of information students enjoyed, concepts students did not seem to understand, ideas students asked questions about, or activities that either kept students engaged or did not hold students' attention. Ask yourself questions such as, *What went well today?, What could I have done differently?, or How will I modify my instruction in the future?* (University of Northern Colorado CETL, 2021). These notes will help you improve your next class period and will help you plan for your next semester of teaching. Reflecting before, during, and after teaching can help you incorporate metacognition into your pedagogy and takes only a few minutes after each class.

Figure 1. *Teaching Journal Example.*

Module 3 - Neural and Hormonal Systems

- Started class with an interactive web poll
  - Type one part of the nervous system from last class
  - Answers were all on target. Students remembered or used notes. May need to connect opening activity with today's content more explicitly next time.
- Lecture on parts of a neuron, nervous system organization, nervous system components
  - students were attentive for about 10 min.
  - May need to break up lecture w/ more interactive questions or an activity in the future.
- Video - 2 min Neuroscience - Action potential
  - very quick → probably too fast
  - not enough to solidify concepts
  - next time walk through phases of action potential after video
  - Maybe have students draw graph together in groups.
- Did not get to final word association activity. Will need to add to next class.

What went well?

- interactive polls
- focus and engagement during 1st part of class

Next steps

- modify Module 4 powerpoint to include word association activity
- adjust this lecture to include an activity w/ action potential
  - will help boost understanding and engagement w/ challenging concept.

Image of hand written journal with reflections about teaching.

Make Changes in your Teaching Based on Your Reflection

If the adjustment (or reflexive) part of metacognition isn't happening, there will be little improvement in your teaching. Once you have reflected on your teaching, set goals for your future pedagogy that include specific adjustments you would like to make. For example, if you make a note after class that your small group activity did not engage students as much as you had hoped, revise the activity for next time by adding more information students can relate to or providing an example for students to view as they work through the activity. If you realize that more than half of your class missed a question on an exam, remove or revise that question to reduce the likelihood of that happening again. The actions that come after reflection are critical to becoming a more effective instructor, especially

in the first year. Going further than simply reflecting on your teaching by making changes to your instruction will establish a pattern of iterative planning, monitoring, and adjustment of your teaching. These strategies will help you identify aspects of your teaching that are effective in promoting student learning and which you may want to change. If you adopt these reflective and reflexive practices early in your teaching career, imagine how effective your instruction will be after teaching for a decade or two.

Survey your Students

Another strategy you can use to plan, monitor, and adjust your pedagogy is surveying your students. Do this after every unit, mid-semester, or at the end of the semester to have students tell you what they liked about the course and what they thought could be improved. Ask your students questions like, *What has been the most helpful for your learning so far?, What has caused you the most difficulty in this class so far?, or What suggestions can you make to enhance your learning in this class?* (University of Northern Colorado CETL, 2021). Reviewing the feedback from your students will allow you to monitor and modify your teaching strategies, along with planning ahead for your next class period or next semester. Drafting questions to collect feedback from students and reviewing their responses will be an hour well-spent and will provide you with valuable information to improve your instruction.

Build Relationships with other Graduate Student Instructors

Talk to other graduate student instructors in your program or across campus. Other graduate instructors are experiencing the same joys and challenges of teaching that you are. It is important for first-year graduate instructors to share how they are teaching and what strategies they are using. It might be intimidating to talk to advisors or other professors in your academic departments. However, graduate student instructors are in a similar position that you are, whether that entails learning the nuances of teaching a large class, facilitating a small seminar for upperclassmen, designing and grading assignments, or learning how to navigate keeping students engaged for the entire semester. Graduate students should be a support system for each other. Sharing teaching ideas with others creates professional and personal bonds and can stimulate your reflective and reflexive practice as a developing educator.

Join or Create a Learning Community

If your university has a learning community program, consider participating. If you think your program or university would benefit from a learning community dedicated to helping graduate students share their teaching experiences with each other, consider developing and implementing one by partnering with your center for teaching and learning. The learning community described in this chapter was focused on promoting discussion about research-based teaching and learning topics critical to promoting high quality student learning, while increasing community among graduate students and providing a space for the exchange of teaching ideas and improving pedagogical metacognition. Participating in a learning community is a greater time commitment than reflecting on your own, but exchanging ideas with colleagues and formalizing your pedagogical metacognition is worth the time and can help you establish habits that can be carried forward into your future instruction.

CONCLUSION

Using pedagogical metacognition to plan, monitor, and adjust one's teaching has many benefits, especially for first-year graduate instructors. Planning encompasses designing a course, assignments, and learning activities. Monitoring involves asking questions about the teaching process, student engagement, and student learning during and after teaching. Adjusting requires reflecting on one's pedagogy and making changes to better support student learning. Actively reflecting on one's teaching and making targeted changes based on reflection comprises reflective and reflexive practice and parallels pedagogical metacognition. Graduate student learning communities are spaces that have promoted pedagogical metacognition. Other ways to incorporate pedagogical metacognition into one's instruction are building relationships with other graduate student instructors, surveying students about benefits and drawbacks of a course, reflecting on teaching regularly, and making an effort to create change in teaching based on reflection. Starting this iterative process of planning, monitoring, and adjusting one's teaching while learning effective teaching strategies during the first year of graduate instruction is critical to establishing a foundation for continual pedagogical development.

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CHAPTER 14.

COMMUNITY-ENGAGED TEACHING: OPPORTUNITIES AND CHALLENGES FOR GRADUATE INSTRUCTORS

STACY BLUTH

KEY TAKEAWAYS

- Community-engaged teaching can help alleviate the lack of relevance and isolation many graduate students experience.
- Graduate instructors using community-engaged teaching need to be particularly mindful of how they can find mentors, build equitable partnerships, and transform their community-engaged teaching into scholarship.

Every spring, our department asks doctoral students to document our progress on a variety of milestones, including coursework, preliminary exams, dissertation research, conference presentations, and journal publications. I have always been disappointed that we are not asked to reflect on our teaching—an important responsibility that funds many of our assistantships, impacts the undergraduate students entrusted to our care, and often leads to increased employability in today's world of dwindling tenure-track faculty positions.

But, to be honest, the absence of a teaching-related question most likely saves me considerable frustration and further disappointment. If asked to discuss my teaching, I would have to explain that I made the decision to teach a community-engaged course that provides undergraduate students with "real-world experiences" by connecting the classroom to the community. Even though I am relatively new to the community-engaged teaching journey, I have had conversations with enough faculty, staff, and peers across disciplines and other universities to know that the phrase "community-engaged" typically elicits one of three discouraging responses.

At best, my mention of community engagement is met with tempered curiosity. Although individuals with this mindset may empathize with my desire to better connect universities and communities, they typically lack the engaged scholarship and pedagogical training and experience to provide mentorship, and are often unable to point me toward appropriate resources and support. They caution me about the challenges of going it alone, especially as a graduate student. A second group of individuals is less optimistic about community-engaged teaching's potential for positive impact. This group has heard horror stories, both anecdotally and in the literature, about community engagement's inadvertent role in the social reproduction of inequality. They worry that community-engaged courses place additional burdens on already strained and under-resourced nonprofit organizations, advancing students' personal development and resumes through the exploitation of those less privileged. The final, and most vocal, position is that community-engaged teaching will take too much of my time and distract me from progressing towards my degree and attaining the conventional pure science research experiences and publications that are the currency of careers in higher education.

Perhaps the most difficult aspect to accept of these different responses is that there is some truth in each of them. Extensive research clearly demonstrates that even the most seasoned faculty teaching community-engaged courses frequently unwittingly reinforce racial stereotypes and preserve race and social class inequality (Butin, 2007; Mitchell et al., 2012) and face numerous obstacles, including increased workloads, limited resources, and a lack of recognition and rewards in traditional tenure and promotion processes (Blanchard & Furco, 2021; Holtzman & Meaning, 2015; Morton et al., 2019).

Given the struggles that experienced faculty face when implementing community-engaged teaching, why should graduate students, who have far less experience, multiple demands like coursework and dissertations, and less powerful positions in the higher education landscape, even consider attempting to teach using this approach? The significance of this question, and its underlying contradictions, are the inspiration for this chapter. In the following pages, I reflect on my experiences as a graduate instructor teaching a community-engaged course at a large public research university. I begin with a brief overview of community-engaged teaching, highlighting the common principles of this approach. Then, I explore the opportunities for graduate instructors teaching community-engaged courses, describing how integrating community engagement into teaching can mitigate some of the common critiques of contemporary graduate education. Finally, I return to the concerns I mentioned previously, examining several challenges I grappled with and providing practical strategies and resources for graduate students who are teaching, or are considering teaching, community-engaged courses. While my experiences are singular, I hope this chapter will offer solidarity to those of us already teaching community-engaged courses and will encourage more graduate instructors to add community-engaged teaching to their developing toolkits.

WHAT IS COMMUNITY-ENGAGED TEACHING?

Community-engaged teaching gained momentum in the 1980s as a powerful strategy that could fulfill higher education's public mission and provide benefits to a wide variety of stakeholders including universities, faculty, students, and communities (Post et al., 2016; Welch & Plaxton-Moore, 2019). In the past several years, increasingly complex social problems (e.g. the COVID-19 pandemic, racial injustice, and the environment), the privatization of social welfare, and a languishing civil society have made it even more important for contemporary universities to rely on strategies like community-engaged teaching to demonstrate their value and relevance to society (Saltmarsh & Hartley, 2011).

As community-engaged teaching has increased in popularity across colleges and universities, academic disciplines, and communities, the terms, theories, and specific activities associated with this approach also have grown. The resulting anarchy of terms unfortunately creates considerable confusion, particularly for individuals new to community engagement. At its essence, community-engaged teaching is a pedagogy, or a method of teaching and learning, that provides students "real-world experiences" by connecting classrooms and communities (Berard & Ravelli, 2021). Instructors, students, and community partners utilizing community engagement face a continuum of choices ranging from the focus (e.g. civic, disciplinary, competency, or project) to the form (e.g. direct service, community-based research, policy/politics, philanthropy, activism, or social entrepreneurship)[1].

Although community-engaged teaching comes in many shapes and sizes, several common principles underpin this approach. By definition, community-engaged courses connect the classroom to local, regional/state, national, or global communities. Instructors and students in these courses often partner with neighborhoods, schools, nonprofit organizations, government agencies, and other external entities. And, unlike student volunteer and co-curricular experiences, community-engaged courses explicitly tie the formal learning objectives of the course to community involvement.

Community-engaged courses also disrupt traditional educational models of "banking" where students are viewed as recipients of expert knowledge (Freire, 1996) and instead emphasize the knowledge that students co-create with their instructors, peers, and community members (Eatman, 2012). Finally, in recent years, practitioners and scholars have increasingly emphasized that community-engaged teaching must involve mutually beneficial, reciprocal partnerships (Blanchard & Furco, 2021; Carnegie Foundation, n.d.). Community-engaged courses strive to escape the conventional perception of higher education institutions as ivory towers that provide a one-way flow of expertise to communities by instead prioritizing authentic relationships in which universities are no longer doing "to" but rather "with" communities.

GRADUATE INSTRUCTORS AND ENGAGED TEACHING

A growing body of research documents faculty members' experiences with community- engaged teaching (e.g., Blanchard & Furco, 2021; Jameson, et al., 2012) as well as graduate students' involvement as students in engaged courses (e.g., Levkoe et al., 2020; Ylitalo & Meyer, 2019); however, little is known about graduate instructors' lived experiences teaching community-engaged courses. Neither fully instructor nor fully student, graduate instructors occupy a unique, in-between position in the power dynamics and hierarchy of higher education (Hubrig et al., 2017; Lac & Fine, 2018). In addition, the structural features of graduate education, including lack of substantial pedagogical training, unpredictable teaching schedules, funding constraints, and multiple competing demands on time, further shape the opportunities and challenges facing graduate instructors interested in developing and teaching community-engaged courses. Before turning to an exploration of the opportunities and challenges I have encountered as a graduate instructor teaching a community-engaged course, I provide a brief overview of the perspective that informs my reflection.

1. See Welch & Plaxton-Moore (2019), especially chapter 3, and Blanchard & Furco (2021) for helpful overviews of the common foci, forms, and frameworks associated with community engagement.

Perspective of a Community-Engaged Graduate Instructor and Researcher

My community-engaged experience did not begin in higher education but rather in the community. Prior to pursuing my PhD, I taught at an under-resourced K-8 school and led two youth-serving nonprofit organizations. I launched into these experiences passionate about educational equity and the role that education can play in ending poverty. However, I quickly discovered even more curiosity and passion about something else—the intentions, motivations, actions, and impact of the many everyday citizens who volunteered their time and money to the schools and nonprofit organizations I worked with. In each of my community experiences, local university students and faculty were important sources of volunteers. Sometimes their support was helpful, but many times their involvement created headaches. I often lamented not having enough time, energy, or insight into higher education to build stronger, more reciprocal, and mutually beneficial partnerships. It struck me as a missed opportunity for everyone.

My desire to better understand what motivates universities and their students to "do good" and the organizational conditions that support more equitable partnerships that can lead to social change led me to pursue my PhD in sociology. The university I attend is a large public research university that is also a land grant institution, providing an interesting backdrop for exploring university-community relationships. As a current doctoral student, I am fortunate to have several opportunities to learn about and practice better ways to build bridges between universities and their communities.

The primary experience that I rely upon in this chapter is my role as a graduate instructor for an introductory-level sociology course. The course fulfills the university's general education diversity requirement and draws students from a wide range of academic disciplines and backgrounds. When I decided to embrace community-engaged teaching, my section became the first and only community-engaged section of the course. Students are notified of this pedagogical approach in the course description.

My students and I partner with a statewide nonprofit organization that supports young adults with histories in the substitute care system (e.g., foster care and kinship placements). The organization trains the young adults to advocate for changes in local and state policies that affect the resources and support available to teens and young adults in the foster care system. The organization also holds events and conferences to build the young peoples' life skills and support networks to help them successfully transition to adulthood.

Although I had a prior relationship and familiarity with the organization from my time working in the community, the university-community partnership we established was a new one. The organization's staff and youth leadership team asked my class to help evaluate the effectiveness of their events and conferences. As part of this evaluation project, we have worked with the organization to complete a number of tasks including designing a survey, analyzing survey results, conducting focus groups and observations, and presenting results. This experience allows my students—often first year students—to gain hands-on experience in sociological research methods and the type of work that an applied sociologist might do. In addition, the partnership allows students to apply the sociological principles they are learning in the classroom, specifically what sociology teaches us about using power and inequality as a lens to reflect critically on our own actions and experiences, in the community partnership.

In addition to teaching a community-engaged course, I also work with the university's outreach and engagement office. This role involves implementing a new software platform to collect information about faculty and staff engagement and provides the opportunity to listen to faculty, staff, and graduate students across many academic disciplines discuss the details of their engaged scholarship. A final experience that shapes my reflections in this chapter is my dissertation research, which focuses on evaluating a specific university-community partnership through the lens of the often-overlooked community partners.

Opportunities: Overcoming the Lack of Relevance and Isolation in Graduate Education

When scholars discuss the opportunities proffered by community-engaged teaching, they often focus on the welcome benefits that undergraduate students taking these courses enjoy. Extensive evidence confirms community-engaged teaching is a high-impact educational practice that improves academic learning (Astin et al., 2000; Jameson et al., 2013; Kilgo et al., 2015), boosts undergraduate graduation and retention rates (Astin & Sax, 1998; Roose et al., 1997), promotes civic engagement and social responsibility (Brownell & Swanar, 2010; Engberg & Fox, 2011; Hironimus-Wendt & Wallace, 2009; Kezar & Rhoads, 2001; Simons & Clearly 2006), and increases awareness of diversity and multicultural competence (Einfeld & Collins, 2008; Jones & Abes, 2004).

These positive student outcomes present a compelling reason for many of us who are passionate about teaching to consider community engagement. Yet, given the constraints and demands facing graduate instructors, more evidence and resources may be needed to encourage graduate students to design a community-engaged course. In this section, however, my goal is to generate a different type of conversation—one about the benefits of teaching a community-engaged course that are *unique* to the graduate students who teach them. Specifically, I reflect on how my community-engaged teaching has helped me overcome two of the most commonly cited critiques of contemporary graduate training: lack of relevance and isolation.

Relevance

My graduate school application essay began boldly with, "I do not want to be a tenure track faculty member." I knew that stating my intention for a less traditional career pathway from the onset was a risk. However, for me, it was a risk worth taking. I trusted that if the program accepted me with a clear understanding of my intentions, then they were willing, and hopefully well-equipped, to support me in this journey.

I quickly learned that my goals were not unique. Today's graduate students often have significant prior undergraduate and personal service experience and a desire to make the world a better place (Beckman & Brandenberger, 2009; Stanton & Wagner, 2006). Marginalized students, in particular, express strong interest in connecting their research to the communities and issues they care about (Colbeck & Wharton-Michael, 2006; Jaeger & Haley, 2016; O'Meara, 2008). In addition, for those graduate students who do not aspire to tenure track faculty positions, the odds are not good. Recent studies reveal that only 30% of doctoral graduates will secure tenure track positions, with most graduate students pursuing teaching faculty positions or nonacademic careers (Cassuto & Weisbuch, 2021; Social Sciences and Humanities Research Council of Canada, 2013). Graduates who do secure tenure track positions will likely still feel pressure to share their scholarship with wider external

audiences as universities encounter increasing pressure to demonstrate their value and relevance through broader impacts (Post et al., 2016).

Herein lies the disconnect. Today's graduate students either want, or will need, skills and experiences that prepare them to be successful in non-academic circles, but graduate programs continue to prepare students by emphasizing pure research that focuses on scientific theory and fundamental knowledge and elevating the tenure track faculty position as the only legitimate goal (Cassuto & Weisbuch, 2021). This disconnect in contemporary graduate education has important short- and long-term consequences, affecting everything from graduate students' economic outcomes to their mental health.

I learned firsthand about these competing dynamics when I entered graduate school. Within a few months, I became frustrated with how theoretical and disconnected my coursework was to the "real world." I began exploring different ways to make my graduate experience more relevant to both my personal and professional goals. When I discovered community-engaged teaching, I was immediately drawn to it as a method that promised an opportunity to bridge my nonprofit and higher education experiences. But, perhaps most importantly, I felt enabled to push forward because no one said "no." Since teaching is undervalued in graduate education and typically seen as a means to an end, I was able to take advantage of this institutional ambivalence to learn and hone my community engagement skills. As long as I stayed on the pure research pathway with my course assignments and dissertation, I felt I could use my teaching to integrate less conventional approaches.

Community-engaged teaching quickly became my conduit for integrating more relevance and meaning into my graduate education. I find tremendous personal fulfillment in knowing I am playing a role, even if it is a small one, in helping my students use sociology to be more thoughtful about how they want to make a difference in the world. I enjoy taking the complex, and often abstract, theories and methods I am learning in my graduate education and partnering with my students and our community partner to figure out how to apply these in ways that help real people, in real organizations, in real time. And, in navigating this precarious and often messy space between academia and community, I am learning new skills that strengthen my ability to build partnerships that honor the integrity of good scientific research while also respecting the needs of communities.

These new skills hopefully benefit my students and our community partner as well as foster opportunities for me to obtain a job that I actually want, and that exists, after finishing my dissertation. Through my community-engaged teaching, I have learned about and built strong connections with several nonprofit and government agencies. When I meet with the staff at these organizations, they never ask me about my dissertation research. Instead, they are curious about what I have learned working in and with communities. Like many graduate students, these individuals are eager to find ways to better connect their communities with universities. I also have used the skills I am gaining to pursue alternative career paths within high education. Through my community-engaged teaching, I discovered my university's outreach and engagement office. Working with this office has helped me supplement my assistantship and has taught me about the broader field of university-community engagement, unveiling a whole new set of careers within the domain of higher education as well as the external networks and organizations that support higher education engagement.

Isolation

In addition to more closely aligning my graduate education with my personal and professional goals, community-engaged teaching also helps me manage the isolation that many graduate students experience. The PhD journey is solitary, characterized by long hours reading, studying, and writing. Doctoral students must successfully navigate numerous rites of passage, often under constraints that bear little resemblance to the ones they will actually face in academic or non-academic careers, to prove they are an independent scholar. In many graduate programs, a pervading ethos of competitiveness and a lack of structured opportunities and time make it unlikely that graduate students will develop close peer relationships that alleviate the isolation, even without experiencing graduate school in a global pandemic. Unsurprisingly, research clearly documents the role this isolation plays in the mental health challenges and high drop-out rates that prevail in doctoral programs (Cassuto & Weisbuch, 2021).

Community-engaged teaching generates a valuable opportunity to overcome the solitary nature of graduate education because it emphasizes deep collaboration between instructors, students, and community members. In my experience, the relationships I have developed through community-engaged teaching have made graduate school much more enjoyable and less stressful. For example, at the beginning of the COVID-19 pandemic when I was teaching on Zoom, I felt particularly isolated. My students and I were wrestling, rather unsuccessfully, with a particularly messy methodological question for the survey we were designing for our community partner. We invited an individual from the community to attend class and help us better understand the organization's needs. After about five minutes on Zoom, our guest jokingly said, "Wow, you are way too serious in this class." She put on Bruno Mars 24K and started dancing. Before I knew it, all my students' Zoom squares were lighting up as they joined in the dancing and laughing. Experiences like this one, that happen because community-engaged teaching invites new people in and reframes our relationships with our students, have helped me break out of the academic bubble I find myself in far too frequently, leading to renewed energy and creativity as well as new friendships and support networks.

Community-engaged teaching also strengthens my own learning. While I have learned a lot from wonderful faculty teaching my graduate courses, I seem perpetually stuck at the bottom of Bloom's taxonomy in stages of "remembering" and "understanding." Community-engaged teaching requires me to continually "apply," "analyze," "evaluate," and "create," providing a deeper, more complex understanding of my academic discipline. In addition, community-engaged teaching strengthens my learning because it brings me into close and frequent contact with the lived experiences and knowledge of many voices that have been historically excluded and marginalized in higher education. These experiences ground me in a way that empirical studies and grand theory cannot, making me a better sociologist, engaged scholar, teacher, and community member.

Challenges: Mentorship, Equity, and Time to Degree

Community-engaged teaching provides graduate instructors with a powerful mechanism to mitigate the lack of relevance and isolation that prevails in many graduate programs, however, to realize these benefits, graduate instructors must successfully navigate numerous challenges. In this section, I focus on the three biggest obstacles I have encountered in my teaching and offer guidance on specific strategies and resources for others to overcome these challenges.

Mentorship

The lack of mentorship in community-engaged teaching for tenure track faculty is well documented (Blanchard & Furco, 2021; Welch & Plaxton-Moore, 2019). Graduate instructors, who are typically enrolled at universities that prioritize pure science and traditional career pathways, may be particularly disadvantaged when trying to identify potential community-engaged teaching mentors. The relatively short time frame of most graduate programs and competing demands, such as coursework and dissertations, create additional barriers for graduate instructors seeking community-engaged teaching mentors. However, mentors are critical for graduate students who are often new to teaching and community engagement and have limited institutional power. Mentors provide important emotional support, help graduate instructors learn the craft of community-engaged teaching, and offer valuable insight into how to successfully maneuver the institutional dynamics associated with teaching community-engaged courses.

My suggestion to overcome this challenge is simple—embrace your entrepreneurial spirit and start building a large support team now. Some graduate students may find themselves in a department, discipline, or university that champions community engagement. I did not. While people in my department were supportive, and sometimes even mildly encouraging of me teaching this way, no one else was teaching a community-engaged course. Fortunately, I had the valuable guidance of a tenured faculty member in the department who had taught community-engaged courses earlier in her career. She helped me figure out how to address the questions and concerns of other faculty and assisted me with the logistics of obtaining permission to teach the course and securing a cap on student enrollment.

While an ally within your department is incredibly helpful, you also will most likely need more people supporting you. My recommendation is to widen your circle. Does your university have a teaching center or, perhaps, an outreach and engagement office? These types of institutional resources can provide valuable tools such as professional development, grant opportunities, and community partner databases. In addition, you can search course catalogs, faculty profiles and websites, and university newsletters to identify other graduate students, faculty, and staff involved with community engagement. During your search, remember that community engagement comes in many different shapes and sizes. Often, the terms that other people use to describe their community engagement will not be the same as you use in your discipline.

Finally, I suggest looking outside of your university. Community-engaged teaching has evolved in the past several decades and a mature network of universities and networks supporting this approach now exists. I have relied heavily upon graduate student specific networks such as International Association for Research on Service-Learning & Community Engagement Graduate Student Network and groups like Campus Compact. These types of networks offer professional development, communities of practice, and other valuable resources. Most importantly, these networks will introduce you to a range of people across different disciplines and universities who are passionate about using their teaching and research to better connect universities and communities. Whether it is due to self-selection or socialization, my experience has been that because community-engaged professionals value relationships, they are quite welcoming and eager to serve as mentors for graduate students.

Equity

A number of practitioners and researchers have raised concerns about the potential role of community-engaged teaching in the reproduction of inequality. Studies document that community-engaged teaching can advance student personal development at the expense of those less privileged, as well as promote patronizing attitudes and actions, reinforce racial stereotypes, and encourage a deficits-based approach to community service that focuses on individual solutions instead of structural ones (Bocci, 2015; Becker & Paul, 2015; Butin, 2007; Mitchell, et al., 2012). Community-engaged teaching also may create additional burdens for marginalized students in these courses and already strained community organizations (da Cruz, 2017).

Over the past several decades, community engagement professionals have generated a robust dialogue about how to prevent these possible negative repercussions of community-engaged teaching. Best practices such as mutually beneficial, reciprocal relationships, shared decision making and resources, and long-term partnerships are now commonplace in universities' rhetoric about engagement (Blanchard & Furco, 2021). In addition, a smaller, but important, group of community engagement professionals advocate community-engaged teaching grounded in critical theory. Extending theories by bell hooks and other critical scholars, these professionals interpret community-engaged teaching as a revolutionary pedagogy that can promote critical consciousness and lead to social change when students are given opportunities to examine power and existing social inequalities (Mitchell, et al., 2012; Porfilio & Hickman, 2011).

As a sociologist with a background working in the community, I thought I could easily avoid many of the pitfalls that lead to the reproduction of inequality. I was wrong. The hardest part of my community-engaged teaching journey is struggling with issues related to inequality, power, and privilege. Developing the relationships and experiences that are necessary for truly equitable partnerships and positive transformational learning experiences for students takes time and skills that even the most accomplished faculty members often do not have. Graduate students, like myself, confront additional challenges because of our inexperience, competing demands, and unpredictable schedules. For many of us, basic best practices like a long-term relationship with a community organization are not even possible.

Looking back on my journey, I wish that someone had encouraged me to dip my toe into community-engaged teaching before jumping into the pool. I spent several semesters planning what I thought was going to be the "perfect" community-engaged course. I agonized over the details, scouring every community engagement journal and book for clues on how to build equitable partnerships and generate transformational learning experiences.

While these resources provided tremendous insight, they also were problematic. The case studies and theoretical frameworks intimidated me. Between my fear of failing to meet the best practices outlined in the literature, my training as a sociologist who theoretically should be particularly attune to inequality, and today's cancel culture, I was paralyzed. I did not realize that, like many other academic disciplines, community-engaged journals and books often exclude important, unpolished details and foiled attempts. In addition, I did not see terms like "transformational," "radical," and "critical" as the ideal types that they are. These terms provide us with important aspirational goals,

however, they often fall short of illuminating the complexities of the "real world" and the continuum of possibilities that actually exist.

Recognizing that what you read and hear about are often exemplars and ideal types—and that you often do not get to peek behind the curtain of published case studies—may help you gain the courage and confidence to try community-engaged teaching. Instead of waiting to design the perfect, immersive, integrated, transformational course for your students, you might consider starting with a single project or activity or perhaps connecting your course to a larger community-engaged campus initiative. You also might try new approaches and methods that better align with the demands you face as a graduate student as well as the specific context of your university, community, and students.

Undoubtedly, many of our efforts will fall short of equitable partnerships with truly transformational outcomes. However, it is important to see our community-engaged teaching as a craft that we improve over the course of our careers, and even lifetimes (Welch & Plaxton-Moore, 2019). Much of this learning comes from actually doing. By getting started with community-engaged teaching, we make our efforts public and invite important reflection among ourselves, our students, and our community partners. It is through this dialogue, and the practice of community-engaged teaching, that the real learning about how to create equitable university-community partnerships happens.

Time to Degree

If you are considering or already are teaching a community-engaged course, you may have heard some version of the following concern: community-engaged teaching will sidetrack you from progressing toward your degree and writing the peer reviewed articles that are the currency of higher education. Existing research corroborates this concern. Faculty teaching community-engaged courses encounter increased workloads due to the time demands associated with developing community partnerships and evaluating students' progress in less traditional ways (Watson-Thompson, 2015). Because graduate students face tight funding and an increasingly competitive job market, faculty often advise graduate students to focus their limited time and resources on their research (Cantor, 2006) and encourage graduate students interested in community-engaged teaching to wait until they are further along in their careers (Krabill, 2012). However, treating community engagement as an add-on may be particularly problematic, further devaluing engaged scholarship and teaching within academia and lowering the likelihood that the next generation of faculty and administrators have the skills and experience necessary to fulfill higher education's public responsibility (O'Meara & Jaeger, 2006).

While we cannot change the realities of higher education in the relatively short span of time we are in graduate school, we can find creative ways to increase the likelihood that what we care about, and invest considerable time in, counts toward important milestones like our dissertations and future jobs. One way you can turn your community-engaged teaching into something higher education values is by transforming it into scholarship with a written product that contributes to the creation of new knowledge and can be peer reviewed (Blanchard & Furco, 2021; Eatman, 2012). A growing number of community engagement resources outline how this process works—emphasizing an approach very similar to a traditional research project, including an initial grounding in the theories and conversations of the field you want to contribute to, a review of the relevant literature, and an identification of a gap in the knowledge that you want to address.

I resisted this advice my first semester teaching a community-engaged course. I worried that generating scholarship from my community-engaged teaching was self-serving and antithetical to the spirit of equity I wanted to create with my students and our community partner. However, I quickly realized that the warnings were accurate. If I want to graduate in a reasonable amount of time, obtain the credentials I need for the type of job I want, and continue to teach in this manner, I need to generate scholarly products from my community-engaged teaching. Community-engaged teaching opens up the potential to publish in a wide variety of fields including the scholarship of teaching and learning, the scholarship of engagement, and my academic discipline. In addition, and perhaps most importantly, I found that it is incredibly rewarding for me, my students, and our community partner to be a part of academic, as well as non-academic, conversations.

CONCLUSION

Community-engaged teaching is difficult under the best of circumstances. Graduate students, because of their inexperience, multiple demands on their time, and less powerful positions in the higher education landscape, must overcome additional hurdles. My experience teaching a community-engaged course at a large public research university highlights the challenges graduate instructors of community-engaged courses face, including finding mentors, developing equitable partnerships, and making progress toward their degree. However, my journey also illuminates the worthwhile benefits graduate instructors enjoy when they connect their classrooms to the community. Community-engaged teaching can play a meaningful role in overcoming the lack of relevance and isolation that characterize contemporary graduate education, and can open rewarding new career pathways that provide lasting benefits for the students in our classes, our universities, and the communities we care about.

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CHAPTER 15.

GRADUATE TEACHING COMMUNITIES OF PRACTICE: FOSTERING A SENSE OF BELONGING AND PROFESSIONAL DEVELOPMENT FOR GRADUATE STUDENTS, BY GRADUATE STUDENTS

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KEY TAKEAWAYS

- Communities of Practice provide explicit formal recognition for teaching work and serve as a network of pedagogical resources.
- Communities of Practice create a safe space and a strengthened sense of community.
- Communities of Practice can be formed anywhere to meet any set of needs but always thrive with members' agency and institutional support.

INTRODUCTION

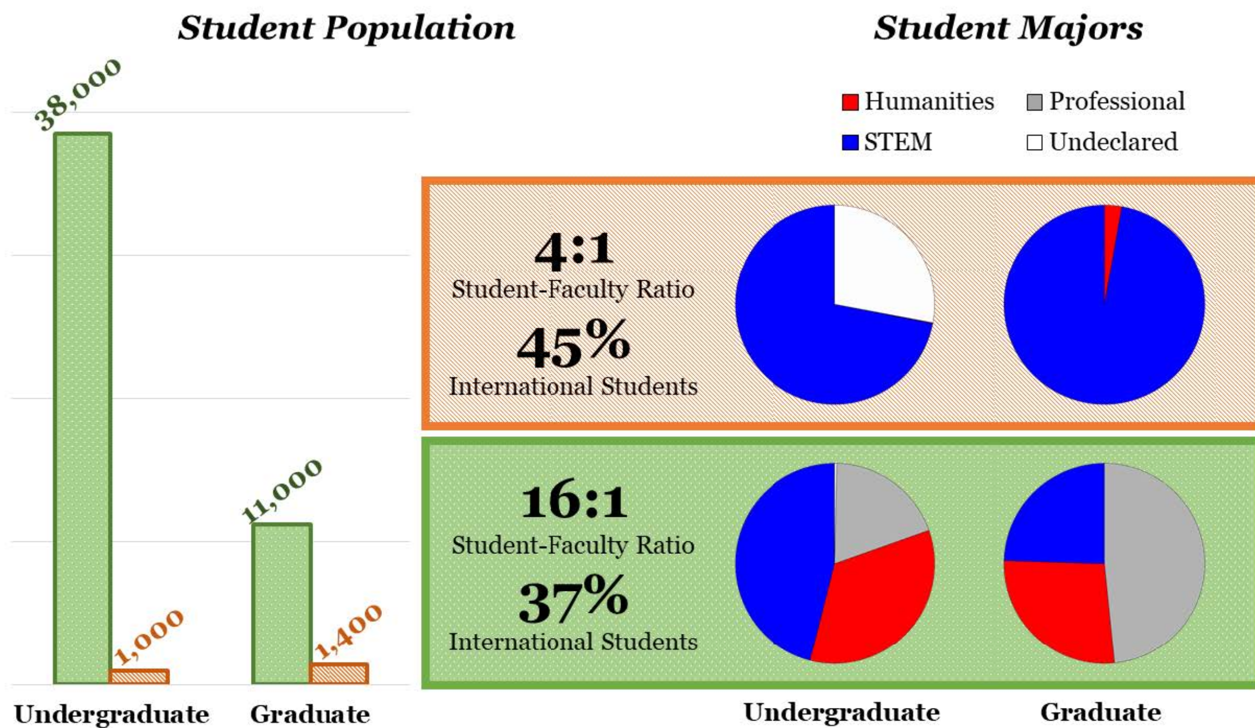
For many, the graduate school experience is defined by intense periods of coursework, research development, and first-time teaching responsibilities. While study groups and research teams are common community practices to collaborate and share workloads, graduate student instructors (GSIs) often operate more independently. Many graduate students discover a passion for teaching but lack access to a network of teaching professionals to learn from, or they encounter difficulty creating a structured plan toward their teaching goals. Moreover, graduate students may feel isolated in their interest in teaching, especially within research-intensive institutions that systematically value research output over teaching development.

In our experience, one way to overcome these challenges is through graduate student teaching and learning communities of practice. A Community of Practice (CoP) is a group of people who share a concern or passion for something they do and learn how to improve through regular interactions (Wenger & Wenger-Trayner, 2017). CoPs bring together graduate students in a collaborative, empathetic, and non-judgmental space (subsequently referred to as a 'safe space') within our universities to expose members to effective pedagogical practices, give explicit recognition for teaching work, and reflect on lived experiences as student-educators.

"By listening to what other people had to say about their experiences, and through multiple discussions, I was able to reflect on myslef as both a student and a teacher."
– Postdoc in Geophysics, Caltech

We hail from the California Institute of Technology (Caltech) and Michigan State University (MSU): two very different institutions, yet both of which host graduate student CoPs. To provide some context, Figure 1 summarizes the student population and distribution of majors at each of our schools. Caltech (striped orange) is a small private university with less than 2,500 students, more than half of which are graduate students. In contrast, MSU (dotted green) is a large public university with nearly 50,000 undergraduate and graduate students in total. As shown in the figure, both Caltech and MSU attract students and researchers from all over the globe, bringing together people from many backgrounds and with diverse interests. Caltech is divided into six academic divisions, five of which focus on science, technology, engineering, and math (STEM) fields, and undergraduates do not declare a major until the end of their freshmen year. MSU offers a broader spectrum of concentrations that encompass the arts and humanities, as well as professional degrees in business, law, and medicine. The pie charts visualize the distribution of students across these two distinct organizational structures by categorizing degrees under "STEM", "Humanities", or "Professional".

Figure 1. *Summary of the institutional differences between Caltech (striped orange) and MSU (dotted green). Student majors are defined and categorized differently across the two schools, so we use color to visualize the overall distribution of STEM, humanities, and professional schooling (medical, business, etc.). Sources: Caltech Registrar's Office, 2021; Michigan State University Office of the Registrar, 2021.*



In this chapter, we provide an overview of the theoretical underpinnings of CoPs to understand why they provide a viable model for supporting the development of GSIs. We share our experiences as members of two GSI CoPs by explaining the foundation of each group and characterizing the specific formal and informal benefits associated with our communities. At the end of this chapter, we offer our suggestions and encourage readers to consider starting a CoP at their own institutions.

COMMUNITIES OF PRACTICE AS A SOCIAL LEARNING THEORY-BASED APPROACH TO SUPPORTING GRADUATE STUDENT INSTRUCTORS

The concept of a Community of Practice (CoP) emerged as a way to understand how learning happens outside of direct instruction (Wenger & Wenger-Trayner, 2017) and can provide a useful framework for understanding how GSIs may learn about teaching in the absence of, or in addition to, traditional training. Graduate students often receive only limited formal training about effective instructional practices prior to becoming instructors (Brownell & Tanner, 2012). Additionally, since faculty at research-focused institutions are primarily engaged in research activities, graduate students may feel the need to seek out mentors other than their primary advisor to support their development as GSIs (Lechuga, 2011). A CoP fills these gaps in formal training and mentorship by providing a space for "apprentices and more experienced workers" to grow together as educators (Mercieca, 2017, p. 4). Therefore, we have chosen to use the CoP framework to make sense of our activities and how those activities relate to the development of GSIs as effective teachers.

There are three defining features that are foundational to the initiation and maintenance of a CoP (Mercieca, 2017; Wenger, 1998):

1. **a shared domain**, which captures the common interests or focal concerns that motivate

individuals to join the CoP (Wenger, 1998). In our CoPs, the domain is a mutual interest in learning how to effectively teach at the post-secondary level.

2. **a common practice**, or "a repertoire of resources the community has accumulated through its history of learning" (Wenger, 2010, p. 2). This shared repertoire can include experiences, tools, and ways of addressing recurring problems. In our CoPs, we often share the challenges we face in our courses to communally develop potential solutions.
3. **a sense of community**, fostered by allowing members to build relationships and interact informally on a regular basis (Wenger, 1998). In our CoPs, we leave ample time after events to connect with each other and share interests outside the realm of teaching.

These three defining features of CoPs help GSIs develop a professional identity and sense of competence (Wenger, 1998). When GSIs participate in a CoP, they learn new skills that lead to increased job performance and, in turn, a greater sense of identity as a professional. For example, if a GSI observes an experienced community member modeling an instructional strategy and then successfully replicates that strategy in their own practice, it will affirm their professional identity and sense of competence as an instructor. Therefore, participating in a CoP is one way that new graduate instructors can gain a sense of competence as educators—a key predictor of teaching quality and undergraduate student success (Fong et al., 2019). Furthermore, CoP membership facilitates a sense of belonging with other graduate student instructors because of the shared experiences of developing their teaching practice. Since belonging is associated with positive outcomes, including motivation, persistence, and achievement (Walton et al., 2012), CoPs may enhance the achievement of graduate student instructors as students themselves.

In the next section, we will highlight our **shared domains** by telling the origin stories of the two CoPs at our institutions. We also discuss how **common practices** confer formal benefits to our community members, and then describe how the **sense of community** built within our CoPs provides substantial informal benefits.

DIFFERENT LOCATIONS, SHARED DOMAINS: FOUNDATION OF THE COPS

As members of two distinct CoPs (Figure 1), we can identify many shared features of our respective communities despite the differences in their origins. To provide context for the benefits that are common across our CoPs, we describe the respective histories of each one below and provide characteristics in Table 1.

The Caltech Project for Effective Teaching (CPET)

CPET is a group of graduate students and postdoctoral scholars dedicated to improving our teaching skills and helping others do the same. CPET was founded in 2007 as a graduate student club to create a network of peers interested in teaching at an institution where STEM research productivity is widely considered the primary responsibility of graduate students. Our community fosters a strong sense of belonging for many who have a passion for teaching. Graduate students and postdoctoral scholars appreciate the opportunity to join a group like CPET that believes that teaching, mentoring, and public outreach are essential to the graduate student experience.

CPET joined the Caltech Center for Teaching, Learning & Outreach (CTLO) in August 2012 at

the time of CTLO's founding. This earned CPET institutional buy-in, administrative support, and pedagogical expertise. Even with this additional support, CPET retained its original mission of being a community driven *by* graduate students *for* graduate students. Currently, we are led by two graduate student co-directors and advised by the CTLO's Associate Director for University Teaching.

Our graduate co-directors work with CTLO staff and other campus offices to organize events, facilitate certificate programs, and curate a useful collection of pedagogical resources. Before the pandemic, we hosted in-person events such as small-group discussions, seminars with invited speakers, targeted workshops, and socials centered around evidence-based pedagogical topics. These events are intended to spread general awareness of pedagogical topics and aid current instructors. The topics of our events range from the concrete, like active learning techniques and building inclusive classrooms, to the abstract, like the ethical implications of different assessment methodologies.

Since 2020, in response to the urgent needs and concerns of our community members, we shifted event topics to focus on effective remote and asynchronous learning through the lens of teaching during difficult times. When Caltech returned to in-person instruction in Fall 2021, we led a discussion group on learning in a physically-distanced classroom and covered how to effectively incorporate tools and technologies from the virtual classroom into the physical one. By responding to the unique needs and evolving interests of our graduate student community, CPET provides a space that offers the benefits of community and pedagogical support for GSIs beyond the general support provided by their advisors or Caltech as a whole.

The MSU Graduate Teaching Assistants' Teaching and Learning Community (GTA TLC)

The GTA TLC grew out of concerns within MSU's Graduate School following the sudden transition to online instruction in March 2020. The Graduate Student and Postdoctoral Instructional Development Director in charge of GSI preparation, Dr. Stefanie Baier, initiated the program to support GSIs through the COVID-19 pandemic. She organized the first events that brought our community together—Zoom social hours, where we connected, shared our favorite coffee mugs, played virtual games, and talked about ongoing challenges. Given the success of these meetings, the social hours morphed into biweekly virtual lunch meetings where we addressed our online teaching concerns. These regular meetings further evolved into a community of GSIs, instructors, and staff from across campus, where members were able to identify common pedagogical needs and share best practices in teaching and learning.

The GTA TLC supports educator growth through moderated discussions, member-led seminars, and social events. The GTA TLC convenes bi-weekly throughout the year including summer. As of the end of 2021, we organized and facilitated roughly 40 events that attracted more than two hundred GSIs. We advertise our events through channels which include the Graduate School's GTA listserv, the Graduate School calendar, and Microsoft Teams messages. At the end of each event, we solicit feedback, suggestions, and needs from all participants. A core group of roughly 10-12 members, the GTA Preparation (GTAP) Advisory Group, meets biweekly to integrate feedback into future programming, steer the direction of the group, and plan upcoming events. Both the GTA TLC as a whole and the GTAP Advisory Group are managed in a grassroots collaborative fashion with consensus-based decision making. In the fall of 2020, MSU designated the GTA TLC as a Learning Community under the Office of Faculty and Academic Staff Development.

Our community has expanded its membership well beyond the individuals who joined during the COVID-19 pandemic. The GTA TLC continues to provide community-based learning in hybrid formats to accommodate MSU's community on campus, those working remotely, and those joining from abroad. Due to the restrictions of the COVID-19 pandemic, we have yet to host fully in-person events, however, we look forward to blending in-person, virtual, and hybrid events in the future.

Table 1. *Comparing qualitative features of the two CoPs featured in this chapter.*

	CPET	GTA TLC
Year Initiated	2007	2020
# Students Actively Involved	2 co-directors ~70 participants	2 co-facilitators & 10 core members ~200 participants
Hallmark Events	Discussion groups Invited speaker seminars Workshops Socials	Bi-weekly Lunch and Learn seminars Annual GTA Preparation Program
Certificate Programs	Certificate of Interest in University Teaching Certificate of Practice in University Teaching	Sessions count towards fulfillment of competencies for Certificate in Colle Teaching (CCT)
Website Link	https://ctlo.caltech.edu/universityteaching/programs/cpet	https://grad.msu.edu/GTATLC

COMMON PRACTICE: FORMAL BENEFITS OF OUR COPS

Both of our CoPs benefit members in formal and informal ways. Formal benefits are those with defined objectives and include organized events, teaching resources, and practical training; these formal benefits exemplify the common practice feature of CoPs (Wenger, 2010). In this section, we illustrate the formal benefits of both CoPs by providing concrete examples in three aspects: events, teaching resources, and practical training.

CPET provides pedagogy-focused events that are generally open to all Caltech scholars, often formatted as discussion groups, seminars, or workshops. Discussion groups are small, fishbowl-style conversations about pre-circulated materials on various practical or theoretical topics. These discussions are limited to graduate students and postdocs so these events can serve as a safe space for frank discussions. Seminars feature invited speakers, both internal and external to Caltech, who present on any pedagogical topic, ranging from the specific application of pedagogical theory to a larger scale examination of pedagogical research. Workshops, more than discussions or seminars, focus on tangible skill-building and practice. We are able to cater to the diverse needs and interests of our GSI community by participant polling and highly varying the specificity and amount of active participant engagement in our event programming.

All CPET events use and provide teaching resources for the Caltech GSI community. Discussion events are often centered around articles from publications such as *The Chronicle of Higher Education*.

Furthermore, our events incorporate active learning methodology, facilitate metacognition, and employ transparent techniques to model best practices within our CoP teaching resources. We also record the majority of our seminars to share our content with those who could not participate in real-time and create a repository of CPET content. In some events, participants have created communal living documents with crowd-sourced tips and strategies that can be sent to the community at large.

Many CPET event attendees leave seeking a deeper dive into pedagogical theory and practice. To facilitate this, CPET offers two certificate programs for professional development called the Certificate of Interest in University Teaching and the Certificate of Practice in University Teaching. The former is aimed at introducing participants to pedagogical theory through participation in seminars and reflective journal writing, while the latter focuses on developing teaching skills through the direct application of theory. The programs have different levels of commitment and requirements to accommodate participants in different stages of their career and various levels of overall interest.

The Certificate of Interest in University Teaching typically takes about a year to complete and provides an introduction to various facets of teaching and learning through our events. Throughout the program, participants build a cohesive base of pedagogical knowledge in a way that recognizes and acknowledges their own growth while receiving tailored, pertinent feedback from CPET co-directors. Participants engage in six approved events and write a reflective journal entry for each. The prompts for these journal entries are based on educational theorist David Kolb's model of experiential learning (Kolb, 2015), which requires participants to reflect on their prior knowledge and experiences related to the event topic, what they learned from the event, the strengths and weaknesses of the material, and how they may apply that material to their own teaching. CPET co-directors respond to the submissions with additional thoughts and supplemental materials relevant to the topics discussed in the reflective journal. The Certificate of Interest culminates in a final reflective summary. Upon successful completion of the Certificate of Interest, participants receive a letter of completion signed by the Dean of Graduate Studies and CTLO and recognition of participation during graduation.

The Certificate of Practice in University Teaching typically takes at least two years to complete and is designed to assist participants in their evolution as instructors by providing a framework for their professional development. It is administered by the Associate Director for University Teaching at the CTLO, as the time commitment is more than can be expected for administration by a student group. Participants in the Certificate of Practice program engage in three major areas: synthesis and application of effective methods for teaching and learning; assessment and implementation of a teaching philosophy; and refinement of pedagogy through feedback and self-evaluation. To achieve these outcomes, participants learn about pedagogy through formal coursework on evidence-based pedagogical practices and techniques. They then complete an iterative process of incorporating effective practices into their teaching and then reflecting on their application experiences. During each step, participants receive, reflect on, and respond to feedback from the Associate Director for University Teaching at the CTLO. Finally, participants prepare and submit a teaching statement and a portfolio of their work from the program, giving the participant deliverables that are applicable to their professional goals.

Participants also receive a notation on their transcript recognizing their completion of the Certificate of Practice, a letter of completion signed by the Dean of Graduate Studies and CTLO, and recognition of participation during graduation.

CPET community members can choose to complete either certificate program or both depending on their individual needs and interests. Furthermore, all community members can attend CPET events without joining a certificate program. By offering multiple ways to participate, CPET is able to meet the diverse needs of the community while also providing formal and institutional recognition for the teaching development work that participants undertake.

At MSU, GTA TLC offers two major types of events that support GSIs' pedagogical development, namely hosting the bi-weekly Lunch and Learn seminars and facilitating GTA Preparation Program. The Lunch and Learn seminars serve as opportunities for GTAs to gather and focus on a specific pedagogical topic, including best practices for engaging students in large classes, inclusivity and culturally responsive teaching strategies, trauma-informed teaching, apprenticing GTAs into the academy through participation and identity construction, and professional development tools such as crafting diversity statements and electronic teaching portfolios. The MSU Graduate School recognizes the value of these seminars and considers them professional development toward the graduate and postdoc Certificate in College Teaching (CCT) program. Additionally, the GTA TLC collaborates and partners with faculty and academic staff from various units on the MSU campus as well as experts from outside the university in planning and executing professional development workshops.

While Lunch and Learn sessions occur frequently throughout the semester, about a dozen of our members also help organize the GTAP Program, a three-day-long orientation event occurring each August. The GTAP Program consists of workshops for new and returning GTAs across all departments and focuses on a broad range of topics relevant to educators at MSU. Ahead of the August sessions, we reflect on our lived experiences and working knowledge of evidence-based pedagogical practices to determine which policy training, resources, and support are needed most to help GSIs foster diverse, equitable, and accessible classes. Prior to the program, content is available via the learning management system. During the program, we present program content, moderate live workshops, and participate in panel discussions. By providing mentorship and training to new GSIs, our members build a greater sense of competence and professional identity as educators.

Another formal benefit we gain from participating in the GTA TLC is access to teaching resources. Due to our different disciplines of study, we know first-hand how different the pedagogical norms,

“GTA TLC has acted as a great resource to explore the art of teaching…It really helps you to see what the approach is when it’s transferring across content fields.” – GS in Plant Biology, MSU

technologies, and assessment methods can be department to department. As such, we expose community participants to various course design, content development, and evaluation assistance resources on- and off-campus. This helps members identify the aspects of courses ripe for redevelopment, lets GSIs know where to look for evidence-based practices, and allows GSIs to retain and pass on the knowledge shared during events.

The GTA TLC also helps prepare future GSIs by blending education theory, evidence-based best practices, and timely applications for practical training. As GSIs, we are still learning and growing in our abilities as educators. We benefit from frequent, repeated exposure to best practices, especially when we are simultaneously teaching. As nascent educators from various backgrounds, many of us are encountering challenges for the first time while others have already confronted the same issues. The GTA TLC community is well-equipped to understand the struggles many GSIs face and provide functional approaches to surmounting them. This is done by providing practical training, often on topics that can be applied immediately in the classroom.

For both CoPs presented here, formal benefits also include opportunities for student leaders to disseminate their best instructional practices at national conferences as well as regional and campus-specific teaching conferences. Otherwise, the formal benefits of the GTA TLC and CPET are parallel in structure but vastly different in size and scope. Many of the differences are explained by the comparative sizes of our institutions (Figure 1) and the breadth or specificity of the pedagogical needs of our communities. Regardless, the CoP framework is adaptable to widely different institutions and we urge the reader to reflect on how it may be implemented by recognizing how their own institution compares with each of ours. In addition, despite all the ways in which our institutional communities and CoP organizations are different, we have observed similar informal benefits, including creating community and cultivating growth, which we outline in the next section.

“As [I constructed] my final teaching portfolio, I felt I had produced a body of work I was proud of and developed a valuable skillset!” – GS in Chemical Engineering, Caltech

SENSE OF COMMUNITY: INFORMAL BENEFITS OF OUR COPS

Informal benefits are positive spillovers generated through producing the formal benefits and include

safe spaces for GSIs, facilitating connections between educators, and fostering professional and personal growth. Taken together, the informal benefits generated within CPET and GTA TLC promote a sense of community, another defining feature of CoPs.

Space: Both our communities work to create a culture of care that responds to individual community needs. For CPET specifically, this manifests in collecting and responding to real-time feedback about the needs of Caltech community members. For example, during the transition to remote learning throughout the pandemic, CPET converted our discussion groups, seminars, and workshops to a virtual format. During this transition, the majority of event topics focused on remote instruction and work-life-teaching balance, such as a workshop on how to break the ice in remote and Zoom classes and a discussion on teaching during difficult times based on trauma-informed teaching resources (Imad, 2020; McMurtrie, 2020). Similarly, the GTA TLC engages in active community empathy by promoting self-care and teaching with care. The GTA TLC contributes to self-care by providing a safe and empathetic space for GSIs to talk about challenges and seek support from peers in different fields. Educators also learn how to integrate the pedagogy of care into their undergraduate classrooms by respecting students' lived experiences and recognizing mental health challenges of students through simulation tools, such as Kognito, which provide educators with language and tools to start conversations around mental health.

"Although I have plenty of specific takeaways from the [events] I attended, my main outcome is simply the recognition that I have a tremendous amount left to learn."
– GS in Geophysics, Caltech

Both CoPs also serve as safe spaces for conversations on diversity, equity, and inclusion topics. CPET frequently hosts discussion groups about topics such as "Remote Learning and Equity" and "Inclusive Classrooms Beyond the Classroom: A CPET Discussion about Inclusive Field Courses." CPET is also proactive by periodically revisiting issues using new resources or providing different perspectives. One of the most frequent topics discussed in the GTA TLC is the challenge of simultaneously teaching and troubleshooting in real-time. In particular, many of us struggle with how to navigate unexpected challenges, like breakdowns in communication or disruptive outbursts, with grace and composure in front of our students. The GTA TLC focuses on a process of navigating difficult situations by acknowledging the severity of the situation, being aware of implicit biases, and educating oneself of the phenomena and the resources available to instructors and their students. All these dialogues and practices around community, intention, and kindness in turn translate to how instructors teach their students. As a result, these CoPs have become safe and brave spaces with therapeutic experiences where participants' multilingual and multicultural assets are valued in an interdisciplinary setting and where empathy is shown and encouraged.

"Teaching online, asynchronously sometimes felt lonely and isolating, but by engaging with others a few times a month I felt like a community member, like my opinion and experience was valued, and like all my hard work was meaningful."
– GS in Agricultural Resource and Food Economics, MSU

Connections: As members of our CoPs gather in the CPET and GTA TLC spaces, they form important connections on professional and personal levels, both within and outside the respective institutions. Events hosted by both our CoPs expose graduate instructors to informal networks of institutional peers from multiple academic levels (undergraduate students, graduate students, postdoctoral scholars, professors, and academic staff), allowing them to form professional relationships that can extend beyond pedagogical topics. CPET participants' experiences are typically limited to small class sizes and STEM-focused fields, while speakers from institutions outside Caltech can draw from a breadth of pedagogical experiences, supplementing workshops and seminars given by the CTLO. Often, the approaches and theories shared by these visiting scholars serve as inspiration for novel ways to approach instruction or prove directly applicable to teaching at Caltech. In a similar vein, Lunch and Learn workshops provide opportunities for GTA TLC members to connect with practitioners at MSU and other schools. These interactions have provided members with in-class activities and assessment approaches that cut across disciplines. Even when a teaching tool is not immediately useful, GTA TLC participants gain familiarity and may find the tool useful in the future. Through this broad exposure, participants can understand and empathize with the universal parts of teaching while recognizing and appreciating the strengths of their unique teaching experiences.

Our CoPs also provide networking opportunities to help GSIs build social capital and establish professional connections that carry forward after graduate school. CPET works to make time and space for seminar speakers to network with GSIs. Workshop or seminar speakers, whether from on- or off-campus, often meet with participants after their talk. These follow-up events include CPET-organized lunches or happy hours where participants can further discuss workshop or seminar topics and receive more general support regarding pedagogy and career questions. Though GTA TLC has yet to sponsor in-person events, our workshops run notoriously long because it is so hard to stop the natural flow of conversation after Lunch and Learns. Usually, these interactions are followed by an open invitation to GSI participants from the speaker to connect with them in the future.

As CPET and GTA TLC members, we recognize the best in ourselves and each other. We communally support one another and share our experiences. Teaching can be really challenging, but we are often able to identify strengths in one another that we cannot readily recognize ourselves. One example of such an asset-based perspective is to encourage each other to apply for the teaching cohort fellowships, which provide funding and training to support scholarly work. GTA TLC members have recruited one another to apply for these fellowships, and helped each other construct and submit their successful applications. All these interpersonal connections are not limited to the CoP community. GTA TLC members are often tapped by leaders from different units across MSU to serve on student success steering committees and advisory boards; these interactions typically expand on discussions started during Lunch and Learn workshops.

Growth: CPET and GTA TLC community members often report finding it easier to conduct their research after learning pedagogical theories through CoP programming. Research shows teaching activities can improve graduate students' research skills (Feldon et al., 2011), so it makes sense that GSIs engaged in our communities learn concepts and language that help them navigate and communicate in the world of research. For example, experimental design can be improved by looking through the lens of learning outcomes and backwards lesson design. Understanding expert amnesia helps to bridge the communication gap between students and advisors. The concept of a growth

mindset gives students the ability to find comfort in not yet knowing information or concepts when interacting with their colleagues. As members of a CoP create new knowledge in their research, learning about how people learn and communicate can provide far-reaching, and often unintended, benefits.

In addition to growth as scholars, our members have reported increased confidence and self-awareness from networking and interacting at CoP events. For example, GTA TLC event participants shared notes of gratitude with speakers and facilitators expressing how event topics helped them adopt evidence-based practices of teaching and learning. Through self-reflection, participants have also worked to become more inclusive and culturally responsive in their teaching and professional roles. With a shared understanding and appreciation of the challenges learners and instructors face, CoP educators from multiple disciplines continue to co-construct pedagogical knowledge and practices.

My dual experiences as both a student with a disability and a TA are helpful when discussing accommodation and accessibility issues, but I have less experience with accessibility in terms of cultural issues, for which some international students in the GTA TLC have provided perspective."
– GS in Human Development & Family Studies, MSU

Members of both our CoPs benefit from connecting with others while serving as resources themselves (hooks, 1994) for fellow educators and GSIs. While both our CoPs have formal, expected outcomes, informal and unexpected spillovers from those formal elements have been critical in providing a community for graduate students in which they can grow and be supported as scholars and educators.

CONCLUSION

In this chapter, we share the two approaches our CoPs use to help graduate students develop as emerging scholar-educators in higher education. Though our two CoPs, CPET and the GTA TLC, operate on two campuses that are quite different in terms of size and research focus, it is clear that both groups generate and deliver formal and informal benefits to their participants. CoPs not only host events to introduce teaching resources to graduate students and discuss implementation through practical training, they also make room for graduate students to build scholarly, professional, and personal connections and to cultivate their own diverse teaching identities.

Strong graduate student agency and the institutional support from Caltech and MSU are the two driving forces underpinning the success of CPET and the GTA TLC. Graduate student members of both CoPs select, organize, and maintain pedagogical resources that are highly desired and best suited for their peers and themselves. For both CoPs, this work is done with support from faculty advisors and education specialists, including university centers of teaching and learning (CTL) and graduate studies offices. These institutional supports provide continuity for the CoPs. Moving forward, both CPET and the GTA TLC will continue our efforts with a special focus on teaching in the semi-post pandemic classroom while addressing topics related to fostering diverse and inclusive learning environments and trauma-informed pedagogical practices.

We encourage interested readers to investigate the extant resources at your institutions. There may be CoPs or closely aligned organizations operating at your college or university. These groups could serve as allies or partners for a graduate teaching CoP. If not, we encourage you to start a CoP at your school catered toward the specific teaching challenges, needs, and goals of your community. We presented our CoP experiences in this chapter to serve as examples of our most successful programs and resources, but your institution-specific needs and constraints may lead to you adopting alternative organizational structures, events, and foci. Significant differences exist in peer, institutional, and extra-institutional funding and support, but leveraging the energy and enthusiasm of GSI groups can help lead to successful CoPs.

We end by providing a brief list of low-barrier, actionable items to help you start the process of joining or starting a CoP at your institution. Are you ready to **TEACH**?

- **T**alk to colleagues: Organize an event to share the difficulties and challenges related to teaching at your specific institution.
- **E**xplore available resources: Contact your university's center for teaching and learning or related offices to discover existing opportunities for students to get involved. Connect with administrative and pedagogical experts available through the university.
- **A**pply for funding: Register as a student club or reach out to the CTL for support. The ability to provide refreshments at events, invite guest speakers, or purchase digital teaching tools is crucial to the long-term maintenance of the CoP.
- **C**ollect community feedback: Send out a short survey (e.g., to the graduate student/postdoc listservs) to gauge general interest.
- **H**ost focused discussions: Discuss a short article on any evidence-based pedagogy topic with other GSIs in your department. Some suggestions include effective grading strategies, active learning in recitations, and digital tools.

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CHAPTER 16.

DON'T FORGET TO BREATHE: ADVICE FOR COPING WITH GRADUATE TEACHING ANXIETY

RYAN CHEEK

KEY TAKEAWAYS

- Graduate teaching anxiety is a unique form of communication apprehension.
- Ignore your overactive amygdala. Teaching will not kill you.
- Teach with empath. Students are more afraid of you than you are of them.
- Don't forget to breathe. A hospitable atmosphere is key to successful teaching.
- Institutions should better support their graduate student instructors.

INTRODUCTION

What if I forget what I'm saying? What if my students think that I don't know what I'm talking about? What if I don't know how to answer their questions? What if they think I'm a fraud who has no business teaching them? These thoughts and others raced through my head as I woke up in a sweaty panic the night before the first class I taught as a graduate student. I had spoken in front of groups of people before—many times, in fact, as a debate and forensics student, so what had me so on tilt thinking about teaching public speaking to a room full of undergraduates? I wish I could tell you that these feelings subsided once class started, or even that I grew more comfortable over the course of the semester, but I would be lying.

The first time entering a classroom as the instructor of record can be frighteningly dysphoric. Anxiety is defined by the American Psychological Association (2019) as "persistent, excessive worries

that don't go away even in the absence of a stressor." Between precarious employment, demanding coursework, and figuring out this whole research thing, graduate students have plenty to stress about. Anxiety and stress can manifest with similar symptoms (e.g., increased heart rate, sweating, insomnia, extreme fear, etc.)—the difference is in the temporality of the stress experience (APA, 2019). Even today, a decade after I started teaching undergraduates, I still get butterflies in my stomach, a sweaty brow, and clammy hands in those awkward moments before a class session starts.

In this chapter, I synthesize research on graduate student anxiety and teaching anxiety to articulate the unique communication apprehension phenomenon of *graduate teaching anxiety.* Given that graduate students are about six times more likely to experience anxiety and depression than the general population (Evans, Bira, Gastelum, Weiss, & Vanderford, 2018), being a graduate student is an endemically stressful vocation. Compounding this problem is that "many graduate students are required to teach as part of their assistantship, forcing them to balance roles they may or may not even want" (Musgrove, 2020, p. 56). However, teaching is a core part of graduate education in many disciplines for good reason. Not only are graduate students more effective than full time faculty at convincing undergraduate students to major in a discipline, but graduate students who teach frequently are also more likely than their teaching-averse peers to graduate and find gainful employment (Bettinger, Long & Taylor, 2016). In other words, it behooves both departments and graduate students to find strategies for helping new teachers cope with anxiety.

To be clear, nothing written here is meant to let institutions off the hook by suggesting only individuals ought to be responsible for their own mental health. The rhetoric of well-being in academic institutions too often conceals the psychologically distressing demands of academia (Hurd & Singh, 2020). Institutions can and should design better processes for ameliorating the systemic stresses of graduate education (Bekkouche, Schmid, & Carliner, 2021) rather than laying that responsibility on their overburdened graduate workforce. An estimated 50% of all doctoral students in the United States do not finish their degree programs (Patterson, 2016), suggesting a widespread structural problem with graduate education that will require the sustained resource commitments of higher educational institutions to solve. In my experience in and observations of graduate programs, graduate students are often thrown into a classroom with little more preparation than a standardized syllabus and a four-day pedagogy seminar the week before classes start.

Without proper pedagogical training, graduate instructors may enter a classroom with subject knowledge but little to no confidence in their ability to communicate that knowledge to others. This is a problem because, as scholar Selami Aydin (2021) has argued, "teaching anxiety is one of the most considerable concerns in the teaching and learning processes that directly and negatively affect teaching effectiveness" (p. 747). These stakes are magnified by the fact that graduate students make up 28% and 22% of instructional faculty at R1 and R2 universities respectively (American Association of University Professors, 2018), meaning graduate teaching anxiety can significantly impact the quality of undergraduate education at an institution. Universities can and should do better when it comes to graduate student mental health and well-being. However, waiting for institutional change does little to help a panic-stricken graduate student the night before teaching their first class.

My goal in this chapter is to offer coping advice for graduate students suffering from teaching anxiety. To do this, I draw from personal experiences paired with lessons I've learned from teaching undergraduate public speaking students how to cope with presentational anxiety. A premise of the

narrative method employed in this text is that human beings are *homo narrans* (Fisher, 1985) who express, transmit, and retain knowledge through storytelling. By sharing my experiences with GTA, I hope for readers to finish the chapter with a better understanding of, and strategies to cope with, graduate teaching anxiety.

LESSON ONE: TEACHING WILL NOT KILL YOU.

The vertigo inducing shift from desk to lectern precipitates waves of self-doubt and feelings of imposter syndrome—even in otherwise gregarious graduate students. Science education researcher Miranda Musgrove (2020) defines teaching anxiety as "a feeling of concern that [one's] teaching will not go well because they do not have the teaching resources to meet the demands of the task" (p. 3). Perceived deficits may include a lack of knowledge, insufficient instructor support, poor presentational skills, as well as all manner of personal anxieties. Anticipatory concern is normal and from an evolutionary perspective, it is desirable because it motivates planning to overcome threats and survive. Being concerned about finding shelter before nightfall or anticipating the presence of predators at the local watering hole are critical parts of surviving sans civilization, and humans have been perfecting those anxiety-driven skills for much longer than they have been teaching in the paint-chipped halls of their underfunded state institutions of higher learning.

While we wait a few millennia longer for evolution to sort out the appropriate stress response mechanisms for lecturing to undergraduates, it is important to be conscious of the human tendency to catastrophize all threats as mortal threats. Obviously, staring down a hippo hoping it doesn't eat you while you gather enough water to stave off dehydration is not the same as staring down first-year students in your department's general education service course. However, both phenomena can elicit the same biochemical fight or flight responses that, in the case of the hippo, can keep you alive but, in the case of students, may betray the subject authority graduate students work so hard to achieve.

Over the last decade I have taught 32 sections of public speaking despite never having taken the course in my undergraduate program nor having ever been taught to teach the course in my graduate programs. The first time I taught public speaking was during my master's program. I taught at a community college down the street from my university. The assistantship I'd been awarded for my master's program was for coaching debate rather than teaching, so to get the teaching experience I would need on the job market, a mentor counselled me to apply for the adjunct pool at the local community college. Getting the call from the college's basic course director informing me I had been assigned to teach a section of public speaking was both exciting and terrifying.

I remember thinking they must be desperate to assign a second-year master's student with no teaching experience. Reflecting on that course now, I realize how awful it must have been for those students who endured my pedagogical growing pains. Every class session must have seemed like a joke as I dutifully, and unironically, exhibited some of the worst characteristics of public speaking behavior including overreliance on poorly designed slide decks, avoiding eye contact with my audience, talking too fast, and digressing into jargonish gibberish every time a student asked me a question. It was bad—I knew it, the students knew it, and as I was not asked to teach another course for that community college, I assume the basic course director eventually figured it out as well.

Although my students that semester may not have learned much from me, I learned two incredibly

valuable lessons from my miserable performance teaching them: bad teaching is survivable, and failure is acceptable. Properly framed, failing in the classroom is training for other graduate student endeavors. For example, trying out examples and explanations on undergraduate students can help a graduate student refine answers to questions they receive about their work from peers at conferences or from their committee members at their defenses. Such a statement may seem painfully obvious, but because of our anxiety-ridden, survival-focused, and evolutionarily-outdated human psychology, we must occasionally remind ourselves that death is an exceedingly unlikely outcome of encountering failure as a teacher. We may know that consciously, but research suggests speaking in front of an audience is a more common fear than the fear of dying (Speech Communication Association, 1973; Dwyer & Davidson, 2012), which—I might suggest—makes teaching an act of mortal courage.

Teaching will not kill you no matter how bad of a job you do. Lots of other things could kill you, such as sharks, bears, pumas, and falls from great heights, but teaching will not kill you, and it is important to take comfort in that. Relatedly, bad teaching will not kill your students either, which is important to keep in mind since graduate teaching anxiety is linked to concerns about one's impact on others (Musgrove et al., 2021). Despite the delusions of overactive amygdala, teaching failure is not life threatening, so no matter what goes wrong when you enter that classroom, you can take comfort in the fact that you will probably still be alive at the end of the day. A bad class will not break your teaching career either as demonstrating you are a teacher who can learn from prior experiences communicates that you are a teachable teacher committed to self-improvement.

LESSON TWO: STUDENTS ARE MORE AFRAID OF YOU THAN YOU ARE OF THEM.

When experiencing graduate teaching anxiety, it is good to keep in mind the old hiker adage about encountering predators in the wild (Pester, 2021): students are often more afraid of you than you are of them. Younger students in general education classes arrive to college after spending much of their lives being disciplined in the primary and secondary educational systems to be obedient and deferential to authority (Foucault, 1978; 2010). In my experience, a student's fear of their own failure occasionally manifests in the student lashing out at their instructor through heckling during lecture or expressing excessive displeasure at grading feedback, but more often is turned inward as students police their own behavior while seeking the approval of their instructors. By the time a student gets to college, they have likely experienced enough bad teaching to overlook many idiosyncratic tendencies of first-time graduate instructors. Consider that at the same time such students are transitioning to a new phase in their education, you too are transitioning into your role as a graduate instructor. There is solidarity to be found in that shared struggle to learn together in new ways.

I started my doctoral program about seven years after finishing my master's degree. In that space of time, I taught a lot as an instructor working for a dual-mission university (meaning the institution sustains baccalaureate programs alongside a community college mission). Returning as a doctoral graduate instructor after having taught for so many years as a non-tenure track instructor was humbling. I remember meeting the interim writing program administrator on the first day of pre-semester graduate instructor training and wondering who between us had more teaching experience—an exercise in hubris and ego protection more than utility. It was her first time being responsible for the pedagogical training of graduate instructors in the composition program, but to the extent she felt nervous or anxious about that fact, she rarely showed it while teaching.

However, my graduate student anxiety about my own competence as a writer, teacher, and scholar manifested in a few antagonistic interactions I had with the interim writing program administrator. Upon reflection, I suspect I felt threatened by learning from her how much I didn't know about teaching, even after having taught undergraduate courses for so long. In a few out-of-class conversations with her near the end of that semester, I came to understand that she likely did feel a good deal of anxiety and students like me didn't make it any better. That realization arrived too late because I was absorbed in experiencing my own learning anxiety and fear of judgement. In other words, I was more afraid of her than she had any reason to be of me.

Power dynamics make all this understandable. Teachers have more power over students than students have over teachers. The asymmetry is not always apparent to the graduate instructor who plays both the role of teacher and student, nor is it apparent to the students of graduate instructors. For many of our undergraduate students, a full professor and a graduate instructor are both just teachers. Whether or not you feel like an expert in your content area, you may be the only disciplinary expert some undergraduate students will ever encounter. When they think of biology, foreign languages, writing, chemistry, or anthropology, it is your face that may come to represent your discipline in their limited experience. That is a lot of pressure, but it is also a lot of power.

Invoking the Peter Parker Principle (Nagel & Pierre, 2020), such power entails significant responsibilities as well. In recognizing the imbalance of power between teachers and students, I suggest part of quelling graduate teaching anxiety is attending to the anxiety students experience in the learning environments you construct. Do your best to recognize that many students face obstacles to their learning that graduate instructors can help to ameliorate. In helping anxious students find solace in education, a graduate instructor may also be aiding themselves in a myriad of ways. For example, reducing student workloads implicitly reduces assessment burdens; this entails assigning fewer, higher-quality tasks for students to demonstrate mastery and can serve as a mutual kindness to your students and your future grading self. Being flexible with students about deadlines means most students will be flexible with you if, for example, you forget to grade an assignment because you were up all night trying to beat a conference submission deadline. Reflecting on the fact that students are often more afraid of you than you are of them can help you recognize the opportunity for cultivating empathy on both sides of the lectern. An excellent way to reduce graduate teaching anxiety is by creating more empathetic environments to learn and teach in.

LESSON THREE: DON'T FORGET TO BREATHE.

Reading through student course evaluations can sometimes feel a bit like sifting through the rubble of a self-produced disaster searching for evidence that at least something went well. Over the years, I've found some real gems of advice from my students on how to improve my teaching. Putting aside the occasional garbage comment (i.e., racist, transphobic, sexist, ableist, imperialist, fascist, etc.), student evaluations can reveal useful insights about user experiences in our courses. Consider approaching such evaluations from a design perspective (Rose, 2016), which means being curious about how user experiences may inform more engaging course designs. Reducing friction between teaching and learning can help create a more comfortable atmosphere in the classroom.

Metaphorically speaking of atmosphere, one evaluation comment that has stuck with me for many years simply read "don't forget to breathe" as a singular piece of qualitative feedback. The brevity of

the comment belied the value of its insight. Likely, the student was referencing the fast pace with which I spoke as I anxiously sped read through text heavy slide decks about ancient rhetoric and public delivery. However, the comment resonated with me at a much deeper level. When I read that comment, I had just quit smoking and had finished up a summer of hiking in the foothills above the university. On the elevated trails, my lungs felt the benefits of my smoking cessation efforts as I inhaled the fresh mountain air above the city, held it in for just a moment, and exhaled it back into the atmosphere. As some feminist researchers have noted, there is a trans-corporeal quality to breathing (Górska, 2016; Neimanis & Walker, 2014). To breathe is to enter an exchange between human and more-than-human bodies. Such exchanges make life possible but also, as the COVID era has painfully taught us, may put life at risk.

What does it mean to not forget to breathe as a graduate instructor coping with teaching anxiety? For me, it means slowing down and remembering that teaching is a social action that makes for a better conversation than it does a diatribe. Atmosphere connects us to one another. In the classroom, we breathe the same air whether we are in a desk or at a teaching station operating the projector. Breath helps circulate molecules through perceptually deceiving spaces of nothingness. Matter is between us, connecting us through the material wanderings of breath passing back and forth in dialectical engagement—surrounding and carrying our words. Breathing deeply is an act of muscular desensitization that relaxes us, preparing our lungs and minds for more efficient operation while teaching and learning.

A commitment to breathing as a tactic to reduce graduate teaching anxiety is also pragmatically helpful as a teaching tool. Stressful in-class moments may be countered with instructor-led breathing exercises. Heated discussions are to be expected, but sometimes a cooling-off period of breathing practice can help deescalate bubbling conflicts. Exam reviews can be panic-laden events where a few moments of breathing at the start of a class session can reduce tension and open space for learning. Trans-corporeal (Alaimo, 2018) connection through breath is an opportunity for reflection on the privilege of teaching in air-conditioned spaces, where atmosphere is purified, and breathing is taken for granted. For some students, graduate and undergraduate alike, the university is a respite from an increasingly toxic and unbreathable world. Grappling with our breathing privilege is humbling, as teaching and learning often is and ought to be.

CONCLUSION

I have taught over a hundred courses since that first time I stepped into the local community college classroom. Teaching did not get better during that semester, but over the years, practice and patience have made me a better teacher and a better scholar. Learning to teach has been a long process of learning how to fail with humility, grace, and dignity. Undergraduate students are surprisingly empathetic, especially when you make it clear that you, like them, are still learning your vocation.

In sharing my experiences, I've articulated three lessons I've learned about teaching that have helped me cope with graduate teaching anxiety. First, teaching will not kill you. We are biochemically wired to make a big deal out of nothing. That combination of instinct and physiology was great when we were competing with lions, tigers, and bears for food, but less great when performing at the front of a lecture hall.

Second, students are more afraid of you than you are of them. Don't let that get to your head, but it should be a relieving insight to know power dynamics being what they are, most students are much more concerned with your impression of them as learners than they are of their impression of you as an inexperienced teacher. Some students will even ignore academic hierarchy altogether in their communications by inappropriately referring to you as a "Dr." or "Professor"—a telltale indicator of the point I am making, but also a wonderful ego boost if you need one.

Third, don't forget to breathe. Go slow, take your time to teach at a pace that includes everyone. Use the interconnected nature of breath to your advantage by creating hospitable atmospheres for teaching and learning. Remembering to breathe is as much about being kind to yourself as it is about being kind to your students. Mutual interdependence is demonstrated by the need to breathe and, taken seriously as a pedagogical framing, can help create symbiotic pathways of support between graduate instructors and their students.

Finally, institutions can and should do more to help graduate instructors learn their craft. This means investing in them as whole persons and not treating teaching struggles as individual failure. Being a graduate student instructor is full time work and should be paid as such. Graduate students should receive better healthcare and earn retirement benefits. They should be given dedicated professional development funds, have a say in their schedules, and be represented in faculty meetings. More spaces for self-care and well-being (Hurd & Singh, 2021) should be carved out in physical and virtual locations for graduate students to meet, vent, and organize. Mentors of graduate student instructors should also be better supported and trained. Such training should include how to recognize teaching anxiety and burnout in graduate instructors. Going forward, institutions who profess to care about the well-being of their graduate instructors should put their money where their rhetoric is and do more to help.

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