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Delta Internship Summative Report
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Fostering resilience and community for underrepresented graduate students

INTRODUCTION

Due to the historical and present dominance of white supremacist culture in academic science (see Jones & Okun 2001), scholars from marginalized backgrounds must commonly withstand deeply harmful work environments in order to achieve their professional goals in academia. For example, among Black, Latinx, and Indigenous graduate students in science, technology, engineering, and mathematics (STEM), feelings of isolation often arise from working within overwhelmingly white departments or labs where faculty devalue or erase contributions from their communities (Sowell et al. 2015). Furthermore, women in STEM report repulsive day-to-day interactions at work such as unwanted sexual advances and unfair requests to perform clerical or cleaning tasks outside of their job descriptions (Cabay et al. 2018). Experiences such as these not only turn students from a variety of backgrounds away from careers in STEM, but they can degrade our sense of belonging in the workplace and require us to donate excessive amounts of unpaid time towards educating our coworkers and improving the work climate (e.g., Jimenez et al. 2019).

In response to this problem, it is tempting for leadership within academia to focus on improving the recruitment and retention of marginalized employees in service of increasing their numbers on campus. However, it is vital that universities not bring more diverse individuals into STEM if the environments they will encounter there are not nurturing. One avenue for genuinely improving the experiences of underrepresented graduate students is to provide inclusive campus communities such as affinity spaces (Sowell et al. 2015). Such social spaces can help students escape stressful work environments, give them a community for support when facing cultural insensitivities or violence at work, provide grounding social connections across departments, and boost students' sense of belonging (Bell 2015). Many physical spaces and programs of this nature exist in universities for undergraduate students, but there is great need for communities which support graduate student wellbeing as well.

As an educator concerned with justice in academia, I addressed this gap in programming by designing a seminar for underrepresented graduate students in STEM to receive course credit as they developed a community of support with one another. In this course, students discussed issues of identity as they relate to graduate life in STEM, learned vocabulary for naming their experiences as minoritized individuals on campus, and built a toolkit for remaining resilient in environments that fail to embrace their voices and needs. Topics drew from a variety of social justice movements, scholarship on diversity and inclusion, and students' own interests. We followed a discussion-based format in which students took turns to choose readings and facilitate discussion. The

tools we developed together, often understood as “survival” or “coping” strategies, were framed as “practices of resilience” in reference to Z. Nicolazzo’s scholarship on the powerful care that trans students are able to cultivate for themselves in cisheteronomative college environments (Nicolazzo, 2016). As a culminating project, the class compiled their practices of resilience (e.g., seeking out role models early, finding culturally-competent mental health services) into a guide for other graduate students.

Within this course, I employed teaching-as-research methods to explore several questions about the efficacy of the class content and the community discussion models used. First, I asked whether seminar participation could provide students with a stronger sense of belonging compared to their typical classroom or work environments. Second, I explored the instructional practices and content that may have been important for students’ sense of belonging and their understanding of resiliency skills. I found that my seminar did foster a strong classroom community and I identified several effective teaching practices that contributed to this goal.

TEACHING METHODS

Overview. I offered my weekly ninety-minute seminar in the fall semester of 2019 under the umbrella of Community, a campus organization for and by underrepresented graduate students in STEM. The course was advertised through several other campus organizations as well, and ultimately four women enrolled. In my role as course facilitator, I generated topics for each session of the seminar but allowed student discussion leaders to modify the weekly plan according to their interests. Once per month, class was replaced by a large group workshop open to all members of Community. Gabe Javier, vice chancellor of student affairs and former director of the Multicultural Student Center, served as the faculty partner and met with me once per month to review content and offer teaching suggestions. Associate professor Claudio Gratton served as the course sponsor and assisted in having the seminar listed in the course catalog. See Appendix for syllabus and curriculum details.

Students worked towards several course- and session-level learning outcomes in the seminar (see Appendix for all learning outcomes). In this report, I focus on the community connection learning outcome, wherein I wanted students to claim a sense of community within the seminar classroom or another space associated with UW-Madison after completing the community module of the seminar. All learning outcomes for the course were centered on improving students’ experiences by creating space for a social support network and providing tools for students to cope with the identity-based challenges they encountered during their programs. Below is an overview of several of the classroom practices I employed to make my course as effective as possible at achieving these outcomes.

Equitable Class Norms. In the first session of the seminar, I asked students to introduce themselves and share why they had enrolled in the course. After grounding ourselves in a shared understanding and motivation, we collaboratively wrote group norms which provided guidelines for interacting in a manner that would allow students

to participate equitably and foster each others' goals. When forming these guidelines, we asked how some common class norms may actually exacerbate power imbalances, and did our best to adapt our guidelines accordingly. We based our shared document on Özlem & DiAngelo's work which offers examples of justice-centered class norms (2014). See Appendix for our class norm document.

Diverse Discussion Formats. When working with student discussion leaders in advance of their week's session, I offered a list of discussion protocols for them to choose from and modify according to their session goals (Teaching and Learning Lab, Harvard University). This ensured that we used a variety of modes for learning, from quiet self-reflection and writing to group-based verbal and somatic activities. Facilitating structured discussion through a variety of formats was intended to help students from diverse backgrounds interpret content based on their own lived experiences and ensure that multiple learning styles were accommodated in the classroom (Next Generation Learning Challenges).

Flexibility in Course Content. Content for the seminar was drawn from a wide range of disciplines, movements, and perspectives including trans liberation, feminism, racial justice, disability literature, scholarship on first generation students' experiences, and more. This is in part because I seeded the course with suggested readings, but primarily because students were free to choose weekly materials and shape the content based on their own challenges and needs. My goal was for students to have as many resources for understanding and describing their experiences as possible. For instance, one discussion leader may choose a reading on gender justice whereas another may choose an interview clip about the perspectives of disabled students. By drawing on a range of disciplines, students had the opportunity to choose material that was relevant to their backgrounds but also encounter material that expanded their perspective.

Peer Support Opportunities. During the first ten to twenty minutes of every seminar, students were given unstructured time for "classroom consultations". In this slot, they could share challenges or successes from their week and identify the types of feedback they might like from peers. Others were asked to listen empathetically and troubleshoot any problems as a team. This was intended to help students develop trust, invest in one another, and respect each other's experiences. Classroom consultations are a practice I adopted from Gabe Javier's "Inclusive Teaching in the College Classroom" course, which I took during my second year of graduate school.

Positive Interdependence and Collaboration. At the end of each module of this class, students added new vocabulary and practices they found useful to a shared document. At the end of the semester, this document was turned in the final class project, a guide to practices of resilience for future graduate students. The format of the guide allowed each student to contribute material on a topic that resonated most with them during the semester. By fostering positive interdependence in this way, I aimed to create social bonds within the classroom as students collaborated towards a shared goal that was more rich in resources and perspectives than anything we could have created independently (Jones & Jones 2008).

Early and Consistent Feedback Mechanisms. In order to make sure that my class remained relevant to students' learning goals, I offered mechanisms for course feedback early and often. At the start of the course, I took an entry inventory about what students' main struggles, challenges, and anxieties were about being underrepresented graduate students and then tailored the class modules to give support around those worries. In addition, I gave periodic opportunities for students to contribute both anonymous and discussion-based feedback about what was and wasn't working for them in the classroom. This allowed me to reinforce class discussion norms when needed and adjust my facilitation practices in real time

EVALUATION

I measured the community connection learning outcome by having students complete a modified "Connected Classroom Climate Inventory" which scores learning spaces based on how much social cohesion students feel there (Dwyer et al. 2004; see Appendix for modified inventory). These data were taken after the seminar module about cultivating community. In addition, I contextualized the findings with responses from the entry survey (see "Early and Consistent Feedback Mechanisms" in the methods section) which asked students about their feelings of belonging on campus and the resources they already used for support. In addition, I asked which classroom practices were most valuable to students throughout the seminar. To do this, I offered a mid-semester feedback form where students were asked to rate each topic module and class activity type on a Likert scale of one to five, with one being "not at all valuable" and five being "extremely valuable" in terms of learning to navigate challenges in graduate school (https://researchbasics.education.uconn.edu/likert_scales/#). For a given topic or activity, student ratings were summed and divided by the total possible rating sum for a percentage score. This survey allowed me to identify the interventions that were effective in promoting community connectedness and learning. For all feedback collected in writing or digitally, students used ID numbers rather than their names so that responses could be kept anonymous.

RESULTS

Baseline Data. According to students' entry surveys, three out of four seminar members experienced barriers to feeling they belonged at UW-Madison prior to joining the course (Table 1). Free response submissions on the entry survey revealed several factors which contributed to students feeling isolated on campus, including the ethnic or racial tension of being among predominantly white coworkers (three students), uncomfortable gender dynamics (one student), and the high achievement pressure of academic culture (one student). For example, one student wrote, "Identity is definitely something that keeps me from feeling like I belong here. I identify as [__], and even though I've been in Madison for [several] years now, the lack of diversity on campus can still be frustrating. I feel like I have to make extra time to seek out spaces where I can see other people of color, and sometimes that can be hard to justify given work/familial

responsibilities." This information is consistent with literature documenting the difficulty underrepresented students face in finding community on university and college campuses, as well as my personal experience feeling isolated during graduate school.

Despite the challenges of finding connection on campus, students came into the class with a well-developed toolkit for caring for themselves. When asked on the entry survey what resources they turned to or recommended for others in light of challenges during school, they cited mental health services (four students), support from family (four students), help from an advisor or alternative mentor (three students), advice from work peers (three students), community with friends (two students) and partners (two students), and rest breaks from work (one student). This provided important context for the class, affirming that my students already had strategies they would be able to share and build upon during the seminar.

Community Connection. Our resilience seminar scored higher in community connectedness for all students compared to their typical graduate classes at UW-Madison (96.7% versus 60.0% average score) (Fig 1). Compared to students' workspaces at UW-Madison, our seminar scored either higher or the same in community connectedness (96.7% versus 85.4% average score) (Fig 1). Reflecting on the course culture every few weeks, I noticed that our classroom environment felt remarkably open to personal storytelling and that seminar members (myself included) seemed eager to hear each others' advice and follow up on each others' challenges from previous sessions. Students regularly brought snacks to share with the group and continued chatting long after the official seminar time slot had ended. As the seminar facilitator, I felt the community learning outcome was achieved. As a participant in the seminar and a graduate student myself, I benefited greatly from the community, respect, and understanding I found when gathering with the other members of the class.

Content and Activities. On the mid-semester course evaluations, all seminar topics and activities received scores of 85% or higher, indicating that they were relatively to highly valuable for students (Table 2, Table 3). When given the chance to suggest topics that students would like to focus more time on moving forward, two students reiterated looking forward to the topics already scheduled and two students had no further feedback. When asked whether they had any feedback regarding the course activities or protocols, students wrote particularly effusively about the opportunity to process their experiences together during classroom consultations (four students), learn about a wide variety of others' experiences and perspectives through the rotating leader format (four students), and practice lesson planning and presentation skills when it was their turn to lead discussion (two students).

In both my observations and in student survey feedback, community consultations consistently stood out as a meaningful classroom practice. One student wrote, "I look forward to this class every week as a way to process what's happening to me in grad school…" and another noted, "My favorite part of the week is coming to class and having the space to sit and talk through positive/negative experiences and feelings regarding grad school." Students emphasized in their feedback that community consultations allowed people to speak their truths and experiences, and appreciated the

room to be as expressive or quiet as was comfortable in a supportive environment. I observed students applying practices of resilience from class to each others' struggles, elevating particular lessons to include personal examples and concrete steps for how we might employ certain practices. In addition to reinforcing the class material, I felt that collaborating with classmates during community consultations allowed students to feel mutually invested in each other and more free to participate in discussion during the rest of the session.

I also found that the early and consistent feedback opportunities were valuable for students in shaping the class to their needs and preferences. Based on the mid-semester course evaluation, I was able to adjust the class in several ways before it ended. For example, one student shared that she was concerned about a few classmates dominating conversation, which allowed me to remind students of our group norms and brainstorm with the class about methods for promoting equitable participation. I also adjusted the seating arrangements every few weeks after hearing that students were interested in having more variety in who they paired with for two-person activities. Finally, several students shared ideas about how to format and present the final project which made their way into our work at the end of the semester.

REFLECTION

Through teaching this course, I learned a lot about mutual care and community. My students and I developed a greater bank of tools for surviving hostile graduate environments as well as a more holistic understanding of how oppression functions within academia. This is evident in the final project we created, which contains nine key practices of resilience, eighteen vocabulary terms, and twenty references to important texts and resources (see Appendix for the final project booklet). However, beyond this achievement I believe we were able to heal and grow as a result of bonding over shared struggles and being validated by peers who believed our experiences. My community connectedness survey was able to assess and affirm this on one level, but it can feel as difficult to quantify soft learning goals like this as it is to encapsulate the experience of being a marginalized graduate student at a university like UW-Madison. I am thankful for the challenge of using education research tools (e.g., Likert surveys) to gauge student progress towards affective learning outcomes and remain curious about how to take meaningful data from students without being reductive or extractive.

As students responded positively to all of the teaching practices and topic modules in the course, I conclude that it would be worthwhile to offer the course again with a similar structure and curriculum. Moving forward, I would again provide a suggested topic list and readings, this time including the additions made by students in the fall 2019 course, and work with the class to modify the plan according to their needs. I anticipate that if this seminar were offered again it could attract a larger number of students, dramatically changing the group dynamics of our all-women, five-person class. To maintain the intimate and trusting environment of the initial seminar, I would consider dividing the class into smaller discussion groups that are maintained

throughout the semester during group work. Finally, because we already created a guide booklet for other graduate students, the final project in future iterations of the class may build further on this guide, identify a different format in which to present the content, or choose another type of group activity completely.

Although designing and facilitating this seminar was a meaningful experience for me, it is essential to state that programming like this is not a liberatory solution for the lack of diversity in academia or the hostile environments that underrepresented students from all backgrounds face in STEM. This is because a resilience seminar for graduate students cannot address the root causes of these problems, which include the white supremacist foundations of American academia and STEM leadership's contemporary devotion to the comfort and success of those who hold dominant identities. The premise that five underrepresented students were compelled to take an entire course on resilience is disturbing in itself, as we should be spending our time on our ambitions and hobbies rather than learning how not to be broken by the workplaces that hired us. Thus, I am passionate about offering this course as a method of providing care towards those navigating higher education, but I propose it only as a holdover. Meanwhile, institutions and departments must do the essential work of moving resources (e.g., salaries, funds, speaking and writing platforms, and other professional opportunities) more meaningfully towards scholars who have been marginalized in academia so that we are not teaching resilience to one another in perpetuity.

FIGURES AND TABLES

Table 1. Entry Survey on Student Belonging. Students were asked to respond “yes” or “no” to a series of five statements related to their sense of belonging on campus.

Statement	Student			
	A	B	C	D
There is a group on campus (e.g., a UW organization, lab group, etc.) where I know I belong.	YES	YES	YES	NO
I feel that I belong in most social/academic situations I find myself in during graduate school.	YES	YES	YES	NO
I can name at least one group or space on campus where I can be myself.	YES	YES	NO	YES
When I am struggling with graduate school life, I know where to turn for help.	YES	YES	YES	YES
My workplace accepts ALL of who I am.	NO	YES	YES	NO
I have a clear plan for coping when I feel isolated or disconnected from others during my degree program.	YES	YES	YES	YES

Figure 1. Community Connectedness Results. Students completed a "Connected Classroom Climate Inventory" designed to score the strength of community connection within an educational space. Higher scores indicate higher community connectedness; each color represents one student.

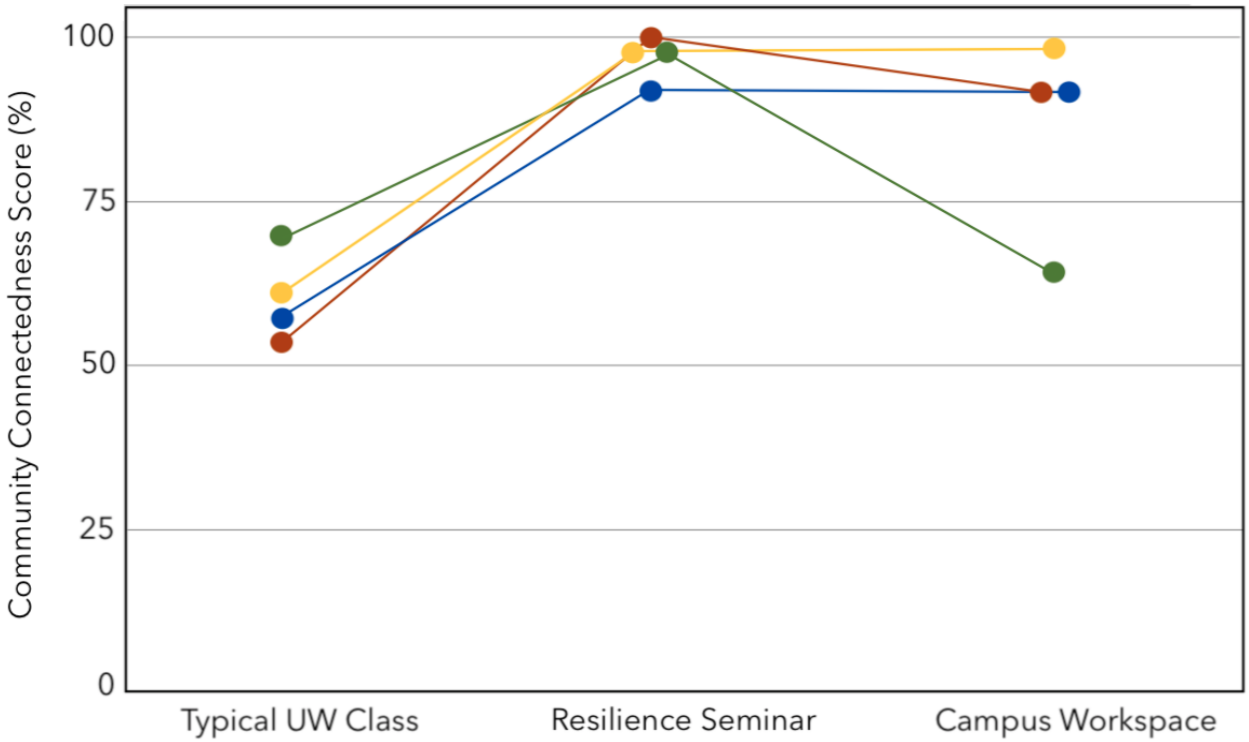

Table 2. Mid-Semester Survey on Course Content. Students ranked each course topic according to how valuable it was for them in learning to navigate identity-based challenges in school. Each topic's score was calculated by summing student rankings and dividing by the maximum possible total. Higher scores indicate greater value.

Topic	Student				Score (%)
	A	B	C	D	
Defining community	5	5	5	4	95
Cultivating community on and off campus	4	5	5	4	90
Self care and healthy stress management	3	4	5	5	85
Impostor syndrome in academia	4	5	5	4	95
Seeking out mentors and role models	5	5	5	5	100
Conflict resolution and power dynamics	5	5	5	4	95

Table 3. Mid-Semester Survey on Course Activities. Students ranked each course activity according to how valuable it was for them in learning to navigate identity-based challenges in school. Each topic's score was calculated by summing student rankings and dividing by the maximum possible total. Higher scores indicate greater value.

Activity	Student				Score (%)
	A	B	C	D	
Discussing course assignments with classmates	3	5	5	4	85
Readings from the primary literature (e.g., scientific journals)	4	5	4	4	85
Self-reflection (e.g., quiet writing time in class)	3	5	5	5	90
Readings from popular articles (e.g., NY Times)	5	5	4	4	90
Establishing group discussion norms together	4	5	5	5	95
Classroom consultations at the start of each class	5	5	5	5	100
Discussing personal experiences with classmates	5	5	5	5	100
Learning new vocabulary to describe experiences	5	5	5	5	100
Rotating who leads class each week	5	5	5	5	100
Working collaboratively on the final project	5	5	5	5	100

REFERENCES

Bell, M.K. 2015. Making Space: Affinity groups offer a platform for voices often relegated to the margins. Learning for Justice Magazine. Retrieved from https://www.learningforjustice.org/magazine/summer-2015/making-space

Cabay, M., Bernstein, B.L., Rivers, M., Fabert, N. 2018. Chilly Climates, Balancing Acts, and Shifting Pathways: What Happens to Women in STEM Doctoral Programs. *Soc. Sci., 7*:23.

Duckworth, A., Peterson, C., Matthews, M., & Kelly, D. 2007. Grit: Perseverance and Passion for Long-Term Goals. Journal of Personality and Social Psychology. 92:6, 1087–1101.

Dwyer, K. K., Bingham, S. G., Carlson, R. E., Prisbell, M., Cruz, A. M., & Fus, D. A. 2004. Communication and connectedness in the classroom: Development of the connected classroom climate inventory. Communication Research Reports, 21:3, 264–272.

Fuglei, M. 2015. Radical Empathy: Teaching Students to Walk in Others' Shoes. Retrieved from https://education.cu-portland.edu.

Gafoor, K. & Ashraf, M. 2006. Academic Self Efficacy Scale (Technical Report).

Harvard Teaching & Learning Lab. Discussion Protocols. Retrieved from https://www.gse.harvard.edu/sites/default/files//Protocols_Handout.pdf

Jimenez, M.F., Laverty, T.M., Bombaci, S.P. *et al.* 2019. Underrepresented faculty play a disproportionate role in advancing diversity and inclusion. *Nat Ecol Evol* 3, 1030–1033. Retrieved from https://doi.org/10.1038/s41559-019-0911-5

Jones, K.A. & Jones, J.L. 2008. Making Cooperative Learning Work in the Classroom: An Application of the 'Five Pillars' of Cooperative Learning to Post-Secondary Instructions. The Journal of Effective Teaching, 8:2, 61-76. Retrieved from https://files.eric.ed.gov/fulltext/EJ1055588.pdf

National Research Council. 2013. Seeking Solutions: Maximizing American Talent by Advancing Women of Color in Academia: Summary of a Conference. Washington, DC: The National Academies Press.

Next Generation Learning Challenges. Discussion Protocols: Designing for Empathy. Retrieved from https://www.nextgenlearning.org.

Nicolazzo, Z. 2016. Trans* in College: Transgender Students' Strategies for Navigating Campus Life and the Institutional Politics of Inclusion. Sterling, VA: Stylus Publishing.

Okun, T. 2001. White Supremacy Culture. Retrieved from http://www.dismantlingracism.org/uploads/4/3/5/7/43579015/okun_-_white_sup_culture.pdf.

Özlem, S. & DiAngelo, R. 2014. Respect Differences? Challenging the Common Guidelines in Social Justice Education. *Democracy & Education,* 22:2.

Sowell, R., Allum, J., & Okahana, H. 2015. Doctoral initiative on minority attrition and completion. Washington, DC: Council of Graduate Schools.