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Teaching, Learning, and Praxis: A Critical Inquiry on Graduate Student Research Apprenticeship Opportunities in Qualitative Research

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Abstract
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Keywords
Graduate Students, Research Apprenticeship, Qualitative Research, Critical Inquiry, Multiply Minoritized Students, Nested Design

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Teaching, Learning, and Praxis: A Critical Inquiry on Graduate Student Research Apprenticeship Opportunities in Qualitative Research

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This study employed a critical inquiry paradigm to explore the significance of equity and social justice in teaching qualitative methodologies and methods to graduate students. Graduate students of multiple minoritized identities and a faculty member conducted a two-year inquiry into the research apprenticeship experience, including the stages of student-led conceptualization, data collection, analysis, international conference presentation, and publication. The study investigated the experiences of the faculty and students as well as the responsibilities of the institution against the backdrop of historical and contemporary pandemics. Consequently, we problematized hidden curriculum and unconscious assumptions to suggest research course design sequencing improvements. The findings emphasize the impact of these experiences on qualitative research teaching and learning practices and institutional responsibility to graduate student research apprenticeships. The Graduate Research Apprenticeship Nested Design Pathway is presented as a tool that institutions worldwide can adapt and implement to serve the complex needs of their students.

INTRODUCTION
Culturally responsive approaches to research design are essential to employ as we solve the world’s problems and work toward equity and social justice (Pasque & Alexander, 2023). It is also paramount to teach such approaches in learning environments crafted with purpose and thought related to students’ culture and educational experiences (Howard, 2003; Ladson-Billings, 1995; McCarty & Lee, 2014). Nevertheless, a purposeful and cultured experience is not always the reality for racially minoritized graduate students on college campuses (Gildersleeve et al., 2011; Gonzales, 2018; Gonzales et al., 2024; Phelps-Ward, 2020). Specifically, we know that racialized minoritized graduate students in higher education are “less likely to receive adequate support for their research, be taken seriously as academic scholars, and be included in collaborative projects with faculty and even their white peers” (Brunsma et al., 2017, p. 8).

The current study focused on a teaching and learning research apprenticeship experience with graduate students, specifically thinking more deeply about what it means to conduct qualitative research toward equity and justice. As such, we argue that graduate programs must establish and support research opportunities and experiences that invite graduate students from diverse backgrounds to collaborate on research that is meaningful to them — and the communities they represent — based on their funds of knowledge (Moll et al., 1992). Specifically, funds of knowledge are “historically accumulated and culturally developed bodies of knowledge and skills” beneficial for daily function and well-being (p. 133). In sum, Moll et al. (1992) have argued that mixing funds of knowledge into academic activities produces deeper learning and a higher quality experience for students. We argue that these principles are essential for purposeful graduate education teaching and learning regarding how to conduct research poised to make actual change.

The current study’s graduate research apprenticeship has been under investigation since 2020 and was found to be grounded in vulnerability, compassionate listening, and working toward shared, mutual goals (Combs et al., 2021). It explores a two-year research apprenticeship opportunity using critical advocacy inquiry (Pasque & Carducci, 2015, in press; Shields, 2012) from both the faculty instructor and graduate student perspectives. Research questions include:

What happens when faculty address racially minoritized graduate students’ call for more research team experiences?
What were the graduate students’ experiences when engaged in the teaching and learning co-constructed research apprenticeship process?
What was the one faculty member’s experiences of the co-constructed teaching and learning research process?

REVIEW OF LITERATURE
Graduate students from minoritized communities, in particular, face barriers to their success in the form of unwritten rules, microaggressions, isolation, and a lack of effective mentorship (Gildersleeve et al., 2011; Gonzales, 2018; Gonzales et al., 2024; Phelps-Ward, 2020). These challenges have been exacerbated due to multiple pandemics (Combs et al., 2021). Too often, graduate student socialization processes exclude minoritized students, particularly international students, racially minoritized students, queer students, and first-generation students, who express concern about the hidden curriculum of research teams, conference presentations, and journal publications (Gay, 2004). The hidden curriculum refers to a vague assembly of implied academic, social, and cultural expectations that are often unwritten and unspoken (Alsubaie, 2015). The hidden curriculum is often created by the dominant culture where all teaching and learning is positioned in relation to these pervasive ideals. As such, it is especially critical that institutions create space for minoritized graduate student research, teaching, and learning, given higher education’s
The spread of COVID-19 increased the mental health needs of Gonzales et al., 2020; Harper, 2020; Son et al., 2020). Additionally, the perennial impact of racial unrest on the stress levels of graduate students is demonstrated in the form of anti-Black and anti-Asian violence during this time (Combs et al., 2021; Pasque et al., 2022). This stress is additive — on top of the endemic challenges students from minoritized communities have historically faced in their college and university studies (Gildersleeve et al., 2011; Steward, 2020). As Steward (2020) argued, it is not enough to include more students from minoritized backgrounds in higher education spaces; instead, these spaces need to be remade and re-focused to ask questions connected to minoritized graduate students' lived realities and needs.

This argument coincides with best practices in training early career researchers on conducting research. For instance, Gonzales and Terosky (2020) found that new scholars should not be encouraged to separate their work and personal lives. Notably, rejecting this dualism can lead to robust knowledge production by graduate students. Further, it is crucial higher education facilitate graduate student connections with one another.

The current study put into practice and empirically investigated how these changes in a research apprenticeship program might rectify the issues minoritized graduate students across race, sexual orientation, and nationality face as they transition to faculty and scholar-practitioners. This redirection of acceptable academic inquiry may be further developed by encouraging burgeoning scholars of color to pursue research that is personal to them, bridging the gap between their lived experiences within their communities and their programs (Gonzales & Terosky, 2020).
This critical advocacy inquiry takes up this challenge and offers implications for institutional change in the form of teaching and learning research apprenticeships in qualitative research.

**RESEARCH DESIGN**

Critical advocacy inquiry is a “multi-faceted research paradigm comprising a diverse collection of critical ontologies (being), epistemologies (knowing), methodologies (research design), axiologies (ethics), and praxiologies (doing) which share a commitment to documenting, describing and overturning injustice” (Pasque & Carducci, in press, p. 6; also see Pasque & Carducci, 2015). This approach was fitting for this study as we aimed to address multiple issues simultaneously: 1) the teaching and learning of qualitative research, 2) the conducting of qualitative research, and 3) the experiencing of racial justice in the context of multiple pandemics in a purposeful way. The study focused on how these aspects may be integrated into the research apprenticeships of multiply minoritized graduate students and the institutions that purport to educate them.

In addition, teacher inquiry (Cochran-Smith & Lytle, 1993; Goswami et al., 2009) was used to examine data from the instructional layer. Specifically, teacher inquiry is a methodological approach that allows teachers, in this case, a faculty member, to look at their own teaching and instructional process from the inside out (Goswami et al., 2009). Thus, teacher inquiry is a tool that encourages practitioners to survey their own beliefs about education to move toward a more socially just way of engaging in teaching and learning, especially with historically minoritized student populations. This often involves 1) developing alternative ways to understand, assess, and improve teaching and learning and 2) using inquiry to ensure educational access and equity for all students (Cochran-Smith & Donnell, 2006). In this section, we discuss the participants/graduate students and faculty, the backwards design of the apprenticeship, and the analysis process that led to the emergent Graduate Research Apprenticeship Nested Design Pathway.

**Participants and Recruitment**

The original research apprenticeship team recruited eight students and a faculty member with diverse social identities (e.g., race, nationality, gender), cultural backgrounds, and representing multidisciplinary fields (Combs et al., 2021). These were students interested in research who were recruited to QualLab (https://u.osu.edu/quallab/) Graduate Student Board (GSB), which was founded in the summer of 2020 by the director, also a professor. QualLab GSB was created to engage graduate students in more research opportunities, as several minoritized graduate students and post-doctoral researchers had urged the dean the previous summer.1 There were no selection criteria other than graduate student interest in participating in a qualitative research team during the start of the COVID-19 pandemic and within the historical presence of multiple racial pandemics (e.g., Black Lives Matter, Stop-Asian Hate).

Electronic recruitment marketing materials were sent out to the graduate students throughout the college. While the original intent was to provide research opportunities for students of color, all were invited. Any interested graduate student could participate, and no interviews took place. See Table 1 for the timeline of the GSB’s two-year teaching and learning progression, including what was faculty-led, student-led, and co-led.

Employing Scholarly Personal Narrative (Nash, 2004), “a style of public intellectual writing based in storytelling and self-disclosure” (p. 39), this team collected and analyzed narratives about our (graduate students) experiences during the pandemic in the course of a collaborative research apprenticeship for one year, and published a publication (Combs et al., 2021). As a follow-up study and a way to examine deeply the teaching and learning approaches utilized in this apprenticeship, the current research team moved forward with the new research questions. The team comprises a sub-group of four graduate students and the same faculty member, the authors of this manuscript. The one woman faculty identifies as white, and two women graduate students are Asian. One of the men identifies as Black, the other as white. The two Asian women are international students, and the three remaining research team members (the co-authors of the first publication) are from the U.S. Imperative to critical advocacy inquiry, we continued to reflect on our identities, power structures, dominant discourses, and hegemonic power structures throughout the study — including those within and beyond our teaching and learning context.

**Backwards Instructional Design with the Research Apprenticeship**

The GSB meetings, the research apprenticeship course, and our grant experiences were “backwards designed” (Bowen, 2017; Hall, 2020; McTighe & Wiggins, 2004). Backwards design is a planning method in which course organization is arranged around consideration for the final learning outcomes. In other words, the course instructor structured the course by considering the target knowledge and skills students should attain before leaving the class.

In this process, we wanted to clarify and reflect our needs, interests, and experiences as graduate students as much as possible. At the beginning of the course, we discussed identifying what learning outcomes we would have liked to achieve, what sort of research experience we wanted, and how to incorporate them into the curriculum. The course instructor systematized and suggested the process and resources toward the outcome, as an experienced researcher familiar with the process. As such, the GSB graduate students determined their interest and commitment to the course and project (i.e., it was not required), the methodology (Scholarly Personal Narrative for the first publication), and methods for collection, analysis, and trustworthiness, as the faculty member guided them.

During the data collection process in Spring 2021, graduate students reflected on their personal experiences with the multiple pandemics of COVID-19, institutionalized racism, and white supremacy. Specifically, we held bi-weekly meetings, collected students’ online journals, read and re-read them, co-wrote, designed, and conducted two two-hour culturally relevant focus groups (Hall, 2020) via Zoom, utilized and revised the AI transcription of the focus groups and wrote researcher memos. The faculty member kept the audit trail of research steps and went over it with the students during classes. In smaller unit research teams, the entire research team analyzed the data, including our own, following the tenets of SPN (Nash, 2004) and qualitative inquiry (Bhattacharya, 2017). See Table 1 for data collected for the study’s first phase that led to publication.

In this current manuscript and second research stage, we focused on teacher inquiry for the analysis. We employed the data from the previous stage of the research project. Additionally, we added (1) the international conference presentation experience,
We started by re-reading the collected data and our published manuscript (Combs et al., 2021) and extracted any quotes addressing our feelings of success and our experience related to those feelings. Based on the knowledge and experiences described in the findings of (Combs et al., 2021) we began to conceptualize a model for explaining the multi-layered learning that had taken place for students and instructors. During an early second stage team meeting, the group created an initial image and revised it multiple times, eventually becoming the Graduate Research Apprenticeship Nested Design Pathway described in the findings section.

The student layer was analyzed using a recursive coding process, informed by the cycle coding process described in Saldaña (2016). The process started with each graduate student member of the research team working individually with a particular piece of data, either a focus group transcript or a set of journal entries. In re-reading their data set, each member uncovered emergent themes and posted them in a shared document space to be presented and discussed at our next research team meeting. As a group, we deliberated over the themes, going back and forth in dialogue until we could come to a consensus on the codifying and categorizing of the themes (Saldaña, 2016); this would become our coding manual. Because we had such a large number of codes in our manual, it was decided that we needed to engage in additional analysis to identify only the most salient ideas put forth by the data. This second cycle of coding was done as a team, and we

### Table 1. Reductive Temporal Experience of the Co-constructed Research Apprenticeship

<table>
<thead>
<tr>
<th>Summer '20</th>
<th>Autumn '20</th>
<th>Winter Break '20-'21</th>
<th>Spring '21</th>
<th>May '21</th>
<th>Summer '21</th>
<th>Fall '21</th>
<th>Spring '21</th>
</tr>
</thead>
<tbody>
<tr>
<td>QualLab Graduate Student Board (GSB) recruitment across the College of Education &amp; Human Ecology – open to all who were interested</td>
<td>5 GSB meetings to discuss qualitative research</td>
<td>Faculty designed the initial syllabus for the RAC based on the autumn discussion</td>
<td>Bi-weekly meeting for course meetings &amp; collaboration for research project</td>
<td>Presentet paper at the ICQI (virtual conference) (Combs et al., 2021)</td>
<td>RAC students &amp; faculty submitted the paper to a scholarly journal for publication</td>
<td>RAC meetings &amp; faculty submitted the paper to a scholarly journal for publication</td>
<td>Meetings with a mentor, Dr. Leslie Gonzales – organized &amp; attended by all (grant funded)</td>
</tr>
<tr>
<td>Identified our interests in participating in a research apprenticeship experience</td>
<td>Determined interest in &amp; student need for an in-depth, research apprenticeship course (RAC), 3 credits [taught 'out of load' for the faculty]</td>
<td>Drafted &amp; submitted a proposal to the International Congress of Qualitative Inquiry (ICQI), an interdisciplinary international conference</td>
<td>Faculty facilitated research meetings, provided readings &amp; guidance toward the next steps, &amp; created/tracked the audit trail for the team</td>
<td>Accepted to present at ICQI - January 22, 2021</td>
<td>Editor suggested a different journal within their purview</td>
<td>Meeting with a mentor, Dr. Leslie Gonzales – organized &amp; attended by all (grant funded)</td>
<td>Final Grant Report</td>
</tr>
<tr>
<td>Determined the topic of research: Graduate student experiences during multiple pandemics</td>
<td>Brainstormed research methodologies, sample articles to follow (e.g., narrative, ethnography, content analysis, discourse analysis, case study)</td>
<td>Worked through all the pieces analyzed by the sub-groups &amp; the large group to come up with a draft tentatively reflecting a final paper</td>
<td>RAC student sub-group searched for grants to fund their participation in the ICQI presentation &amp; submitted application with faculty as PI &amp; students as co-PI</td>
<td>Accepted at present at ICQI - January 22, 2021</td>
<td>Revised &amp; resubmitted the manuscript until accepted &amp; published (Combs et al., 2021)</td>
<td>Drafted &amp; submitted a proposal to the International Congress of Qualitative Inquiry (ICQI), an interdisciplinary international conference</td>
<td>Meetings with a mentor, Dr. Leslie Gonzales, continued</td>
</tr>
<tr>
<td>Reached consensus on a scholarly personal narrative (SPN) (Nash, 2004)</td>
<td>Identified ‘auto’ approach as our preference (e.g., auto-ethnography, auto-narrative, SNP)</td>
<td>ICQI presentation creation &amp; preparation (including mock presentation)</td>
<td>RAC students participated in data collection (i.e., SPN focus groups, topic-specific journaling, re-writing narratives)</td>
<td>Set up and tracked the audit trail for the team</td>
<td>Drafted &amp; submitted a proposal to the International Congress of Qualitative Inquiry (ICQI), an interdisciplinary international conference</td>
<td>Completed IRB process for the current manuscript, faculty PI, &amp; student's co-PIs</td>
<td>Writing &amp; revision, including Dr. Leslie Gonzales' feedback on current manuscript</td>
</tr>
<tr>
<td>Continued our exploration &amp; analysis of the student layer</td>
<td>Developed &amp; featured research methodologies, sample articles to follow (e.g., narrative, ethnography, content analysis, discourse analysis, case study)</td>
<td>Sub-groups iteratively wrote &amp; re-wrote paper</td>
<td>RAC students broke up into sub-groups to analyze auto-data &amp; took researcher memos</td>
<td>Worked through all the pieces analyzed by the sub-groups &amp; the large group to come up with a draft tentatively reflecting a final paper</td>
<td>Revised &amp; resubmitted the manuscript until accepted &amp; published (Combs et al., 2021)</td>
<td>Worked through all the pieces analyzed by the sub-groups &amp; the large group to come up with a draft tentatively reflecting a final paper</td>
<td>Submission of current manuscript; work toward revision with editorial board comments &amp; publication (in progress)</td>
</tr>
<tr>
<td>Final Grant Report</td>
<td>Faculty facilitated research meetings, provided readings &amp; guidance toward the next steps, &amp; created/tracked the audit trail for the team</td>
<td>Final Grant Report</td>
<td>RAC students participated in data collection (i.e., SPN focus groups, topic-specific journaling, re-writing narratives)</td>
<td>Accepted at present at ICQI - January 22, 2021</td>
<td>Revised &amp; resubmitted the manuscript until accepted &amp; published (Combs et al., 2021)</td>
<td>Final Grant Report</td>
<td></td>
</tr>
</tbody>
</table>

Notes: * = student-driven work; ** = student-faculty equal work; * = faculty-only or faculty-led work

DATA ANALYSIS

The analysis for this inquiry was an iterative process designed to shed light on the students’ experiences as they learned about and analyze data. Following Saldaña’s (2016) coding cycle, we revisited the data multiple times. During this cycle coding process, we found outstanding topics in the data we collected (e.g., student journals, transcripts of each meeting, meeting notes, shared pictures, or articles) and reconstructed related notes. Charmaz (2001) has described this process as a critical link between data collection and interpretation of meaning.

We started by re-reading the collected data and our published manuscript (Combs et al., 2021) and extracted any quotes addressing our feelings of success and our experience related to those feelings. Based on the knowledge and experiences described in the findings of (Combs et al., 2021) we began to conceptualize a model for explaining the multi-layered learning that had taken place for students and instructors. During an early second stage team meeting, the group created an initial image and revised it multiple times, eventually becoming the Graduate Research Apprenticeship Nested Design Pathway described in the findings section.

The student layer was analyzed using a recursive coding process, informed by the cycle coding process described in Saldaña (2016). The process started with each graduate student member of the research team working individually with a particular piece of data, either a focus group transcript or a set of journal entries. In re-reading their data set, each member uncovered emergent themes and posted them in a shared document space to be presented and discussed at our next research team meeting. As a group, we deliberated over the themes, going back and forth in dialogue until we could come to a consensus on the codifying and categorizing of the themes (Saldaña, 2016); this would become our coding manual. Because we had such a large number of codes in our manual, it was decided that we needed to engage in additional analysis to identify only the most salient ideas put forth by the data. This second cycle of coding was done as a team, and we...
determined the more prominent themes. We created codes and sub-codes to ‘title’ and ‘define’ each theme.

With the coding manual and structure set, we engaged in a third and final coding cycle, which involved going back through the transcripts and journals to code all data individually again, this time based on the group-generated coding manual. We also revisited our initial paper (Combs et al., 2021) that examined our roles as graduate students and connected our real life as allies of each other: students of color, international students, queer students, and a trans student. However, this time we read solely through the lens guided by our new research questions and methodological processes. Three major themes emerged from this final coding cycle, and from there, our findings were established.

**FINDINGS: THE GRADUATE RESEARCH APPRENTICESHIP NESTED DESIGN PATHWAY**

The study produced a dynamic academic model that calls attention to the experiences of individual graduate students, interactions between students and faculty, and the achievement of both short- and long-term goals. See Figure 1 for the model demonstrating this work’s distinguished and interrelated components titled ‘The Graduate Research Apprenticeship Nested Design Pathway.’

The crafting of the Graduate Research Apprenticeship Nested Design Pathway was a collective and iterative process. In conceptualizing the model, we drew inspiration from Nested Design (ND),2 in which one data set took a secondary supportive role to another (Creswell & Clark, 2010). Drawing on ND allowed us to visualize a model that appropriately articulated this work’s nuanced and layered components.

Centered in the model is the academic pathway, which makes sense considering the group’s genesis stems from an educational setting. The academic pathway shows both the research apprenticeship course’s short and long-term objectives, which students and faculty discussed and agreed upon at the onset. Situated outside of the academic pathway is the social and cultural context. This area is intentionally separated with a dotted line rather than a solid line to show that our individual funds of knowledge and lived experiences inform our academic pursuits and are valued within this research (cultural context). Furthermore, the political climate and current racial tension (social context) also informed the research questions we asked, along with the theoretical and methodological considerations we engaged in pursuing answers. It is worth noting that we all use critical approaches in our individual work, and most of the student participants held intersecting historically underrepresented identities within the academy. Nest I, the smaller of the two circles within the academic pathway, focuses on student and faculty experiences interacting. In this nest, we used Scholarly Personal Narrative (Nash, 2004) to collect our stories and experiences. Within Nest I, the solid black dots represent the students and the faculty member, which are drawn with several squiggly arrows that signify how we learned with and from each other throughout the process. Nest II is focused on the instructor level, highlighting the experiences and growth of a committed faculty member. Teacher Inquiry (Goswami et al., 2009) has been useful to understand and examine this Nest. Separating Nest I and II is a dotted line; again, this is to show how this boundary is fluid and permeable, not fixed. In other words, data collected separately within each nest is interconnected and informs one another.

The findings highlight the positive and meaningful experiences of the apprenticeship program. We also explore recommendations for faculty and department chairs interested in replicating this experience, emphasizing the need for institutional support for this type of work, which is often not rewarded as part of a faculty member’s workload.

**Graduate Students: Fostering Community, Safety, and Belonging with Compassionate Listening**

Perhaps the most crucial benefit to the graduate students via this work was establishing or advancing a sense of community and belonging as graduate researchers. We start here because,
given the violent and isolating nature of the multiple pandemics in which our initial research took place, there would have been minimal potential for personal and academic growth without first establishing real and meaningful connections with the other student participants. Prior to ever discussing any qualitative research content, we spent much of our early virtual GSB sessions just getting to know one another. We checked in on each other’s wellbeing during the multiple pandemics of BLM and Stop Asian Hate incidents; and we discussed which of our social identities were most salient to us, where we call home, our research interests, and our goals and aspirations as scholars. In this way, we connected our personal selves with our academic selves as we learned about — and conducted — qualitative research, which has been shown to be a key link for minoritized graduate students (Gonzales & Terosky, 2020).

Although the GSB was academic in nature, the group was established with extreme care, patience, and thoughtfulness. Our group organically came to adopt the core values of vulnerability, compassionate listening, and working toward shared mutual goals. For example, Riley, a mixed-race woman, highlights this point beautifully when she wrote, “In this space, I felt opportunities to build kinship and networks that were rooted in love, empathy, and vulnerability.” Focusing on our needs related to our cultural and social experiences, needs not typically centered in traditional research groups/courses, deepened the level of commitment to the group, ultimately producing richer data and moving us closer to our goals.

The model represents this dynamic by the dashed lines separating the two pathways, demonstrating the need to allow cultural knowledge to inform academic knowledge; this is particularly of the essence for scholars who hold historically marginalized identities (Gonzales & Terosky, 2020). As such, many scholars who study whiteness in education discuss the inner work that white educators must do as they fight for justice in solidarity with racially minoritized people (Lyiscott, 2019). To that end, Spencer one of the co-authors was the only white, straight, cis-gender man in the group and wrote in reflecting on the benefits of this group that “This expectation was importantly tied to my privilege as a white male graduate student. My colleagues’ vulnerability challenged me in important ways. Most important of these challenges was the broadening of my view of the problem of white supremacy.” This comment demonstrates the inner work that continues to take place aided by this project.

In creating the GSB group, the initial goal was largely academic in nature: provide students with marginalized identities the opportunity to work collaboratively with experienced faculty, hence the central focus of the model being the academic pathway. However, our minoritized identities were crucial in allowing our group to become such a unique and welcoming space for the students involved; this is exemplified in the following quote from the only trans student who was also the only masters student group organically came to adopt the core values of vulnerability. Compassionate listening may help alleviate suffering because the listener is understood, which may lead to further feelings of isolation. This was not the case in this space, as our feelings, experiences, and identities were heard and affirmed on a personal and academic level, evidenced by the faculty member encouraging us to utilize an ‘auto’ approach to capture our individual and collective voices. Group members demonstrated compassionate listening not only in our Zoom sessions but also through reading and commenting on our journal entries. Taken together, this resulted in feelings of safety, solidarity, and pain relief, as described here by a queer woman as she writes, “I felt engaged in the work, humbled by my teammates’ vulnerability, and seen in my guilt, joy, pain, and identities.”

The focus on listening and seeking to understand our groupmates benefited the speaker/writer and the listener/reader. By compassionately listening to the stories and experiences of others and then taking time to reflect on those stories, we began to see growth in our identity development both personally and as emerging researchers and scholars.

Again, drawing attention to The Graduate Research Apprenticeship Nested Design Pathway; by working to establish feelings of community, safety, and belonging among graduate students on the front end (Nest 1), it allowed us to optimize academic learning and growth on the back end (Nest II), both of which (Nest I and II) were vital in moving us all along our academic pathways. The findings within Nest II underscore the research opportunity being meaningful to us as minoritized students and engaging in learning about qualitative research while doing qualitative research as researcher participants. These two elements worked together to produce deeper learning of academic content and the unearthing of hidden curriculum.

Faculty Member: Critical Advocacy Inquiry in Teaching and Learning

Graduate students interested in conducting qualitative research must engage in various apprenticeship experiences; however, minoritized students have fewer chances to participate in a research team than their white peers (Brunsma et al., 2017). In her first month as director of qualitative methods, the senior associate dean and chief of staff for the dean invited Penny/me to a meeting where Black and Brown graduate students shared their pilot study findings from talking with other racially minoritized students about their graduate school experience. What the students shared was painful, exclusionary, oppressive, and — not okay — very common in graduate school (Gildersleeve et al., 2011; Gonzales, 2018; Phelps-Ward, 2020). To the credit of the college and a desire to make a change, the dean and associate deans created a position to elevate faculty and graduate student experiences with qualitative research. In this case, it was about hiring faculty who could create time and space to center minoritized graduate students’ teaching and learning of qualitative research.

We turn to the students’ voices to explain more about the importance of this intentional and co-conducted teaching and learning opportunity. These few examples represent the many
findings reflect three principles from Lang (2016) on ethics. These principles include: experience dissonance, and determine resolutions through the iterative process of qualitative research. The experience was useful for bolstering graduate student curriculum vitae, but more importantly, it provided an experiential learning opportunity that helped them understand the material in greater detail.

In this qualitative research content knowledge example, Riley, a mixed-race woman, shared what she learned through this participatory teaching and learning experience.

On a research and skills-based level, this group has made me think critically about qualitative research and what it means to be congruent throughout the research design. This project has also opened up my eyes to the world of postmodern paradigms and what it means to feel affirmed in my “beyond ways of knowing” which often fall beyond the rigidity of structures within the academy and society more broadly. I also learned how it is crucial to be intentional, compassionate, and ethical with data collection and analysis in order to tell a story that accurately portrays what is happening within a study.

The graduate student reflected on the “research and skills-based level” of her content knowledge. The structure and content of the course was affirming as it introduced students to foundational qualitative content but also pushed her to go beyond the rigidity of existing structures. For new qualitative scholars, it is imperative to understand the introductory content but also tend to in-depth concepts of trustworthiness, rapport, humanity, and ethics.

In a second example about qualitative research content knowledge, Maretha, an author who is an international student and mother, shared,

as a researcher, my contribution to the research can bring a space to participants to voice their story. Thus, I have to be aware about how to respect their feeling and emotion while also making sure that I validate the data.

This is a central example of how students learn what is on the pages of our qualitative textbooks, but also have the opportunity to operationalize these concepts within a research study providing a more in-depth understanding of research. These examples demonstrate how short-term objectives are met while building the skills needed to obtain loftier long-term goals. Additionally, these student quotes give further credence to visualizing the academic pathway with the model as fluid and needing to be informed by the social and cultural context of the students.

Gentle Mentorship and Connections
The apprenticeship provided students with what they determined as gentle mentorship and guidance by the faculty member/me. In this representative example of research mentorship and research team collaboration, a queer woman, a first-year graduate student, shared,

I feel so fortunate to have had the opportunity to explore scholarly writing outside the established norms of the academy. I am grateful especially to [faculty] for her gentle guidance and mentorship as we all muddled through this process that felt new and perhaps even intimidating for many of us, myself included. I am confident that my future scholarship will be more honest, more personal, and more creative as a result.

The reflections of the study reminded the faculty-member what it was like to be a first-year PhD student with so much to learn. Gentle guidance and mentorship through the messy research processes are indispensable in learning how to take up qualitative inquiry. This same student who reflected on the faculty mentorship and guidance also reflected on the connections with the research team.

Finally, I am deeply appreciative of the team that we collectively formed. This project is my first formal research team experience, and helped me to feel a sense of kinship and solidarity that I have been missing during this solitary (and at times, isolating) first year of doctoral study.

In addition to a sense of kinship and belonging with her peers (as discussed earlier in the manuscript), the student mentions how confident she is that her future scholarship will become more honest, personal, and creative because of this research experience. As such, faculty need to create space and time for graduate students to experience a research team so they may build on their learning in graduate school and their future roles as faculty or scholar-practitioners. The foundational core that the gentle mentoring relationship was built upon was first established and nurtured in Nest I and then came to inform my (the faculty member’s) reflections and teaching within Nest II.

Online Spaces that Foster Community
In this final takeaway from the teaching and learning journey, the students and faculty member learned more about what makes for meaningful online teaching and learning spaces. For example, one of the co-authors, Alexander, who is a Black man and was at the end of his first year as a PhD student when he wrote this, shared:

Examining my thinking, privilege, and bias as it relates to race, culture, and class is difficult but rewarding work. I say all that to say, my journey has been much more fruitful due to my interactions in the GSB group. Each member of the GSB has personally taught me something and/or challenged my assumptions, just by their willingness to share their authentic voice in being vulnerable. I am so thankful for the candor in which you all shared your stories and experiences, particularly in the journal post, reading those post was truly a life changing experience. I know that may sound hyperbolic, but it really isn’t. There is nowhere else I would have heard the diverse and eye-opening perspectives on these pandemics if not for this space.

To be sure, taking up race, culture, and class issues during a pandemic, and while teaching and learning about qualitative methodologies and methods is not easy. However, for Alexander, it was undoubtedly rewarding as it tended to his sense of humanity – for
himself and with his peers. Alexander went on to reflect on the online teaching and learning space. He shared,

The members of this group are by far the closest friends I’ve developed in an online space. I usually tried to avoid online communities (I guess I didn’t see them as a space where the genuine connections would take place). Prior to joining this group, I never saw online communities as more than an academic or professional space, where we log in, discuss the readings or do the assignment, and we log out. With the GSB group I feel more than that, I feel friendship, I feel compassion, I feel connectivity, and to be honest I’m a bit surprised because that’s not the norm for me in virtual spaces. I am not a big social media guy, I don’t have Snapchat, TikTok, Twitter, or Instagram. This group has helped me realize the power and usefulness of a strong and supportive online community, and I am thankful for that.

Alexander’s reflection echoed that of a couple of students on our team. I want to acknowledge how burned-out faculty and graduate students are during the historical presence of multiple pandemics and online learning. That said, covid or not, many graduate students want to learn how to conduct qualitative research that works toward social change. Faculty must work to create a sense of trust and community where students may bring their whole selves—with and beyond the understanding of concepts of researcher positionality (Milner, 2007). As the world changes and we permanently incorporate more online spaces into our lives, our understanding and flexibility in engaging in deep and meaningful online communities will become necessary. In this work, students engaged in and created an online community space, making it genuine and humane. These skills will undoubtedly be called upon in their future roles as teachers, leaders, and mentors, continuing along their academic pathways.

**DISCUSSION**

In this manuscript, we endeavored to provide a detailed and thoughtful reflection upon our experiences in a qualitative research apprenticeship program by employing critical advocacy inquiry with teacher inquiry to thoroughly analyze and offer implications for institutional change. We started by discussing the reality that racially minoritized students in higher education often struggle to receive support in their research related to their inequitable experiences within educational spaces and are less likely to be invited to participate in collaborative projects with faculty and even white peers (Brunsma et al., 2017). It is vital to create teaching and learning experiences about qualitative research with minoritized students and to explicitly provide all graduate students with meaningful experiences in scholarly writing.

Due to the Nested Design conceptualization of our dynamic academic model, we consider the implications from two separate but related perspectives: Nest I implications for graduate students and Nest II implications for faculty.

**Nest I: Implications for Graduate Students Interested in Research**

Nest I implications focus on the student layer, our needs, and our experiences as graduate students navigating academic spaces while holding multiple minoritized identities. This work is an example to be replicated and built upon regarding how graduate programs should create online and offline spaces for graduate students with minoritized identities to connect and offer support. Additionally, this work demonstrates the value of having minoritized students engage in research and coursework that reflects their lived experiences and is impactful to the community they represent.

As highlighted throughout the literature review, higher education has historically been and continues to be exclusionary toward voices that challenge dominant narratives and ways of knowing (Patel, 2016). With that in mind, the fact that every aspect of this qualitative research project was co-constructed, including research question development, methodological decisions, analysis, and manuscript drafting becomes deliberately more important to the work. This work centered our interests, our experiences, and our voices. Understanding that our group comprises students with diverse backgrounds, we respected each other’s stories by providing constructive feedback as we learned in the research apprenticeship together. There was no humiliation when challenging concepts were difficult to follow, only patience and opportunity for growth. Thus, the participants together built the foundation for multi-layered learning. In other words, we were able to learn about research as we conducted research because we were deeply invested in the conceptualization of the research.

Furthermore, the work presented in this article can serve as a model for graduate programs globally that are contemplating how to improve the research apprenticeship experience for diverse student populations. However, it is worth remarking that those closest to the problem are often closest to the solution. What is meant by that is that minoritized graduate students’ voices must be welcomed and listened to as possible changes are considered. The GSB group that eventually evolved into the research apprenticeship course started with an individual faculty member listening to the concerns of racially minoritized graduate students. Then, rather than ignoring or rationalizing those concerns, she reflected. The faculty leaned into the fact that there is no way to support graduate students of color without interrogating systems of power within higher education. A willingness to interrogate one’s positionality within higher education, and critique a system they are part of and have a privileged role within is an essential first step when thinking about making research experiences more equitable. This highlights the need for institutions to create teaching and learning experiences that are inclusive and significant to the graduate student’s research experiences. As Gonzales et al. (2024) echo, graduate students across natural sciences, social sciences, and humanities must be recognized by faculty as knowers otherwise it may contribute to epistemic injustice, a condition where knowers and knowledge claims are unduly dismissed.

Lastly, the open call for graduate students to participate regardless of experience, citizenship, or expertise, and without screenings or prerequisites used by the GSB and apprenticeship course, invited greater coalition building across multiple student identities. Without this open call, we may not have had the level of student diversity that we did, which informed the group dynamics and ultimately improved the quality of work we were able to produce due to the multiple perspectives involved. To be sure, 1) student diversity, 2) classroom diversity via course content, and 3) interactional diversity between students have all been proven to strengthen teaching and learning in college (Adams et al., 2010; Gurin et al., 2002; Gurin et al., 2013). Further, the US military, Fortune 500 companies, and multiple others have argued for the importance of diversity in college before the US Supreme Court via amicus briefs, noting the various benefits of diversity and its decades-long implications (O’Connor, 2002).
Nest II: Implications Faculty Teaching Research Apprenticeships

Nest II implications are related to and build from Nest I within the Graduate Research Apprenticeship Nested Design Pathway in that most traditional research apprenticeship courses are focused primarily on enhancing knowledge and skills and position relationship building as secondary (if a focus at all). Contrarily, this work flipped that notion, focusing firstly and mainly on relationship building, particularly an understanding and awareness of one another’s social identities and how that contributes to the group. Focusing on student needs early on allowed for more significant academic growth on the back end regarding the knowledge and skills needed to succeed in the research apprenticeship course.

As graduate students with diverse and minoritized identities, we entered the group looking for academic knowledge and professional experience, but we committed to and stuck with the group and the subsequent research apprenticeship course because of the sense of community and comradery that we all experienced as a result of the initial work.

Specific to instructional staff or faculty implications, institutional support matters (Gonzales et al., 2024). Academic faculty control the curriculum, and we encourage re-designing the qualitative research sequences to create research apprenticeship courses that ‘count’ for students. In our case, the credits were required for some students in this class and electives for others. Further, we encourage deans and department chairs to provide these opportunities as ones ‘in load’ for faculty.

Discussion for Deans, Department Heads, and Graduate Schools – Institutional Efforts Matter

In the historical present of anti-Blackness, Asian hate, gender oppression, xenophobia, and health pandemics in which we are losing hundreds of thousands of people, our need for – and the meaning of – online space is changing (Combs et al., 2021). Colleges and universities need to change as well – for not just the health and well-being of students, but the survival of minoritized students in navigating their struggles, outlined in the literature review and bolstered in our findings. Through this work, we believe that we have offered a significant research apprenticeship model that might inspire other institutions to better support marginalized students. Given that universities are core locations of whiteness as property (Patel, 2016), minoritized students across race, gender, and nationality face the real possibilities of intellectual silencing, microaggressions, and physical and verbal abuse every time we set foot in a classroom. Although those threats are still possible in a virtual space (except physical violence), the anxiety associated with these threats is significantly reduced in an online space. Thus, our study demonstrates how this space advances learning environments for vulnerable students.

Furthermore, as was the case in our group, many minoritized graduate students face obstacles in balancing their graduate student coursework and other life responsibilities such as full-time employment and parenting (Sallee & Yates, 2023). Virtual spaces provide greater flexibility to commit to research opportunities without sacrificing their family and employment responsibilities to do so. As universities consider how they can better serve graduate students with minoritized identities, they must first get to know those students intimately to know their responsibilities and limitations outside of school. Then, meaningful opportunities to participate can be established in conjunction with their circumstances. The ongoing multiple pandemics are no excuse for not getting to know the university’s graduate students; if anything, it is a cause for greater personal relationships. Our work exemplifies how an online space can foster deep relationships and produce meaningful work if care and attention to student needs are front and center.

CONCLUDING THOUGHTS

Designing collaborative research experiences and course opportunities will benefit graduate students for future generations. Our research offers the useful Graduate Research Apprenticeship Nested Design Pathway. It aims to reflect and improve upon the research apprenticeship course experience, especially for minoritized graduate students, as we journey through our pathways together.

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