**From Student to Teacher?: Doctoral Students' Learning about
Instruction in their First Teaching Experiences**

by

Jandi Lynne Kelly

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Doctoral Committee:

       Professor Lisa R. Lattuca, Chair
       Professor Kim S. Cameron
       Professor Cynthia J. Finelli
       Professor Patricia M. King

Jandi L. Kelly

jandi@umich.edu

ORCID iD: 0000-0002-5319-1272

Dedication

This dissertation is dedicated to my parents, Maddie and Mike Kelly, for their deep love and

unwavering support each day and every year. I love you so much. "And then…"

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Abstract

The delivery of undergraduate instruction at research universities is highly dependent on graduate teaching assistants (GTAs). The GTA position provides critical instructional support, as well as the pedagogical training and first-hand teaching experiences for future faculty. To date, most research on graduate student instruction pertains to evaluations of GTA teacher training programs. A small body of research documents self-reported changes in elements of GTAs' teaching practices (e.g., pedagogical approaches and beliefs) and teacher identities (e.g., instructional skills and style). These studies offer some insight on experiences that shape, as well as shifts that may occur within, GTAs' practices and conceptions of themselves as teachers. However, this research does little to clarify *how* GTAs learn to do the actual work of teaching or *why* evolutions to their instructional practices and identities occur.

In this study, I depart from this earlier research to examine *how* and *why* GTAs' instructional experience shape their practices and identities as postsecondary instructors. This study was guided broadly by sociocultural learning theory and later included sociopolitical concepts. A primary focus of this research is how the contexts in which GTAs teach shape their evolving insights, practices, and identities as teachers. A secondary focus is the salience of GTAs' social identities and student experiences in their learning as teachers.

Drawing on 27 semi-structured interviews, 18 audio journals, and 18 classroom observations, this exploratory, qualitative study takes an emic approach to understanding GTAs' learning and identity construction as first-time university instructors. The study sample consists of nine doctoral students, each new to the practice of university instruction and teaching in the social sciences at a research university. I chose to study GTAs without prior teaching experience to better understand how doctoral students new to the practice of postsecondary instruction learn about and begin to see themselves in relation to this work. Data collection for this study took place during and immediately after the semester in which GTAs were teaching.

This study offers new insight on what GTAs learn, as well as how this learning occurs, through their instructional experiences. GTAs' insights about teaching pertained to their instructional environments and preparations; student learning, engagement, and conduct; and evaluation and assessment. GTAs' insights about themselves as teachers concerned their instructional qualifications, teaching style, and affinities towards teaching. I also discovered that GTAs' social identities and student experiences informed what they learned, the agency that they enacted, and how they perceived themselves as teachers.

In addition, my analysis of the study data yielded a conceptual model, which offers a detailed visual of the potential mechanisms by which GTAs may learn, exercise agency, and form their own practices and identities as teachers. I present a set of theoretical propositions, based on this model and grounded in my data and the relevant literatures, to guide future research on GTAs' teaching-related learning and identity construction. I also outline several recommendations to support doctoral students' professional development as university instructors.

Chapter 1: Introduction

Doctoral students teach large numbers of college undergraduates, both as graduate teaching assistants (GTAs) and as instructors of record (Reeves et al., 2016; Young & Bippus, 2008). Indeed, the Bureau of Labor Statistics (2021) reports that colleges and universities employed over 138,000 GTAs in 2020.[1] GTAs are most often employed at larger colleges and universities (Austin & McDaniels, 2006), which educate a significant portion of our nation's forthcoming graduates (Association of American Universities, 2021).[2] Illustrating this point, GTAs instruct over 20% of undergraduate classes at Purdue University, University of South Florida, the University of Georgia, University of Iowa, and the University of North Carolina (Friedman, 2017). Hence, thorough preparation of GTAs for their work as teachers is critical to sustaining universities' missions to advance student learning (Bowen & McPherson, 2016; Connolly et al., 2016).

The sheer number of undergraduates taught by GTAs is a compelling reason to contemplate how these doctoral students learn the practice of teaching and develop as teachers. Graduate school is also a site and time of personal, intellectual, and professional growth. For those graduate students who seek to cultivate identities as academics, the doctoral experience entails the "growth of the personality, character, habits of heart and mind, and the role that a given discipline is capable of and meant to play in academe and society at large" (Walker, Golde,

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[1] The U.S. Department of Labor (2021) defines "Graduate Teaching Assistants" as graduate students who "Assist faculty or other instructional staff in postsecondary institutions by performing instructional support activities, such as developing teaching materials, leading discussion groups, preparing and giving examinations, and grading examinations or papers."

[2] The 62 research universities in the Association of American Universities alone enrolled over 1.2 million undergraduates and 613,000 graduate students in 2017 (Association of American Universities, 2021).

Jones, Bueschel, & Hutchings, 2009, p. 8). Thus, the pursuit of the doctorate extends beyond fostering subject-matter expertise to developing the whole self in relation to and as an outcome of one's educational aims and passions (Gardner, 2009).

Thus, the doctoral years are a formative period in which many graduate students cultivate and test their knowledge and skills as instructors — and universities are increasingly responding to this opportunity with substantial investments in graduate student teaching preparation programs (Connolly et al., 2016; Reeves et al., 2016). Speaking to this point, 85% of the 3,060 doctoral candidates across three research universities in Connolly et al.'s study completed at least one form of teaching preparation programming throughout their doctoral studies. Participants engaged in this programming at an average of 33 hours throughout their doctoral studies and were eager to experiment with the pedagogical knowledge and tactics shared in these trainings in their personal instruction. Other studies similarly report that GTAs view teaching as a valuable opportunity to strengthen their instructional skills and credentials for the future job market (Barr & Wright, 2018; Muzaka, 2009).

To better prepare GTAs for their instructional roles and responsibilities, many research universities offer teaching preparation programs for their graduate students. One such program is the Preparing Future Faculty (PFF) initiative, described as "a national movement to transform the way aspiring faculty members are prepared for their careers" (Preparing Future Faculty [PFF], n.d.).[3] The University that served as the study site in this research is one of 300 U.S. PFF member institutions and offers the PFF program annually as a way to provide advanced PhD

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[3] The Preparing Future Faculty (PFF) initiative began in 1993 through a partnership between the Council of Graduate Schools and the Association of American Colleges and Universities. The PFF has received support from the Pew Charitable Trusts, the National Science Foundation, and The Atlantic Philanthropies (Preparing Future Faculty [PFF], n.d.).

students a dedicated series of opportunities to learn about multiple facets of faculty life (e.g., teaching, governance, expectations of faculty by institution type).

As these points demonstrate, graduate school is a key period for learning the craft of postsecondary instruction, and universities invest substantial resources into preparing their current GTAs and the future professoriate. However, we know little about the process by which GTAs learn about the craft of university instruction or begin to construct identities as university instructors. One barrier to establishing this understanding is that existing studies of graduate instruction tend to focus on specific teaching preparation programs by examining GTAs' evaluations of pedagogy courses and workshops and/or self-reported applications of pedagogical tools and strategies presented in these programs (e.g. Connolly et al., 2016; Reeves et al., 2018; Zehnder, 2016). The findings of these studies offer some insight on the extent to which GTAs perceive various pedagogy programs as helpful preparation for their instructional responsibilities, but they do not address how GTAs *learn* to the do the actual work of teaching. The few studies that have explored aspects of the GTA experience beyond self-reported outcomes as a result of involvements in teaching preparation programming tend to examine factors that shape graduate students' perceptions of teaching in postsecondary contexts, such as the structure of their teaching assistantships and relationships with faculty members (e.g., Barr & Wright, 2018; Kajfez, 2013; Winstone & Moore, 2017). Though valuable in highlighting factors that may contribute to GTAs' perceptions of university teaching and their experiences as instructors, this research does little to clarify *what and how GTAs learn about teaching and themselves as teachers* as they engage in this work.

The Practice of Teaching

Lampert's (2010) review of the K-12 teacher identity and professional development literatures suggests that teaching-related learning occurs *as* individuals participate in the social practice of teaching. Lampert first makes this point by differentiating learning "to teach" from learning "the work of teaching" (p. 21). Specifically, she contends that unlike learning "to teach," which implies that action will take place after something is learned, learning "the work of teaching" signifies that learning happens as one engages in the act of teaching. Lampert further explains that these literatures portray the work of teaching as a socially and intellectually complex practice in that it is conducted through interactions with students and in association with a particular subject matter.

Lampert's (2010) work illustrates the social nature of teaching by observing that scholars conceptualize "practice" in relation to the work of teaching in four ways, each of which emphasizes teaching as a communal practice that manifests through activity. The first conceptualization, "practice as that which contrasts with theory" (p. 23), implies that individuals develop their teaching practices by "doing" rather than "theorizing about" the work of teaching. This perspective further implies that developing one's teaching practice is relational work that requires "learning *with* students and *with* subject matter" (p. 24, emphasis in original). This suggests that studies that seek to understand GTAs' learning as teachers should attend to how and what they learn by engaging with students and course content as they teach in college and university settings.

The second notion of practice as "teaching as a collection of practices" (Lampert, 2010, p. 25) speaks to the multifaceted nature of teaching practices. Specifically, this perspective contends that learning the work of teaching should be structured around a foundational set of

instructional practices that experienced professionals (e.g., faculty, faculty developers) use and that novice instructors (e.g., GTAs) cultivate as part of their professional development. This view further portrays practice as consisting of habitual norms, customs, tools, and languages that "belong to a collective rather than to an individual" (p. 23). Thus, learning teaching also entails organizing oneself in accord with the routine elements of teaching within one's disciplinary and institutional contexts (e.g., how and where classes are conducted, instructional roles and expectations, available pedagogical tools). When applied to graduate student instruction, this assumption implies that GTAs learn the work of teaching through experiences in which they appropriate and assign meaning to the language, tools, and beliefs that comprise their teaching practices.

The third conception of "practice for future performance" (Lampert, 2010, p. 27) reinforces the idea that individuals hone their teaching crafts with time and experience by stipulating that "the more one teaches, the more proficient one becomes" (p. 27). Here, Lampert conceptualizes "practice" in terms of continually repeating or rehearsing discrete practices in one's teaching, as well as learning the practice of teaching through experience. This notion of practice therein implies that as GTAs practice "in the sense of repeated efforts to do the same thing" (Lampert, 2010, p. 27), the more effective they become in those specific areas of their teaching (e.g., pedagogical approaches, skills).

The fourth and final conception of practice that Lampert (2010) identified through her review is "the practice of teaching" (p. 29), which pertains to "what teachers do" as members of a profession, much like doctors or lawyers. This notion of practice extends beyond cultivating pedagogical skills and best practices to:

adopting the identity of a teacher, being accepted as a teacher, and taking on the

common values, language, and tools of teaching . . . learning the practice of teaching is

not only about learning to do what teachers do but learning to call oneself a teacher and

to believe in what teachers believe in. (Lampert 2010, p. 29)

From this standpoint, novice teachers *construct identities* as instructors *as they learn* the practice

of teaching. This view of practice also asserts that communities socialize newcomers (like

GTAs) in different ways to "the practice of teaching" based on their members' collective beliefs

around, approaches to, and resources used in teaching. In accord with this perspective, GTAs

begin to form occupational identities as teachers by learning and adopting teaching "practices"

valued and enacted by existing members of the "community of practice" of postsecondary

instruction (i.e., faculty).

Collectively, this scholarship indicates that learning the work of teaching as a graduate

student is a sociocultural activity that occurs as GTAs participate in the teaching practices of

their respective academic departments, disciplines, and institutions. As a relational practice,

learning teaching entails interacting with fellow members of this professional practice (e.g.,

faculty members, students, fellow GTAs). These members in turn socialize GTAs to the

professional practice of teaching in accord with their respective communities' pedagogical

assumptions, activities, and tools.

This research also suggests that the more GTAs "practice" teaching, the more they come

to understand "the practice of teaching" and themselves as teachers. Thus, GTAs *become*

teachers *with* practice. In turn, learning the work of teaching transcends obtaining pedagogical

skills and knowledge to beginning to see oneself as a teacher, that is, acquiring a teacher identity.

This scholarship further suggests that one's identity as a teacher is intimately intertwined with

the communities in which one teaches. As a result, a necessary component of understanding how

GTAs learn and form identities as teachers is clarifying the influence of their academic environments on this learning and identity construction.

Academic Socialization

Researchers have written extensively about professional socialization in the context of faculty work in higher education (e.g., Cawyer et al., 2002; Jackson, 2004; Tierney & Bensimon, 1996). Prominent among this research is the work of Tierney and Bensimon, who describe socialization as "a highly charged process through which different individuals and groups come together to determine organizational beliefs and attitudes" (p. 37). Scholars have comparably characterized the doctoral experience as a process of socializing "prospective faculty in thinking about the roles and responsibilities they will assume, and the traditions in which they will participate" (Austin & McDaniels, 2006, p. 415). Thus, socialization processes have a substantial influence on how faculty and graduate students develop beliefs about academic life, as well as their personal involvements in scholarly work.

Tierney and Bensimon (1996) state further that faculty are socialized by their academic disciplines and institutions, and this process heavily shapes how they come to understand their respective roles and responsibilities for research, teaching, and service as members of the professoriate. Academic contexts also play an integral role in the socialization of GTAs, who belong to various institutional, disciplinary, and departmental communities as well.

The faculty socialization literature suggests that GTAs are similarly socialized by factors and experiences within their academic communities and that careful consideration of such influences is critical to understanding how they learn to do academic work. Yet limiting studies of doctoral students' learning and development solely to the processes by which they are *socialized into academe* neglects to consider how doctoral students *form the necessary*

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knowledge and skills to engage in research and teaching (Baker & Lattuca, 2010). As a result, research on academic socialization speaks more to *factors that may shape* doctoral students' views of and approaches toward teaching than *how they cultivate* the required pedagogical beliefs and knowledge to conduct this work.

At the center of understanding how GTAs act, learn, and develop as teachers are questions regarding *who they are and are becoming as teachers*; thus, this raises questions that speak directly to issues of teacher identity. As Gallagher (2016) explains, understanding the process by which GTAs cultivate teacher identities is necessary to enhance the overall quality of their instruction most effectively. Yet, to date, we have little understanding of how doctoral students learn the work of teaching, let alone the role of identity in this process. In the following section, I explain how framing doctoral students' professional development as a learning process — rather than merely a product of socialization — can better position researchers to consider linkages between learning the work of teaching and forming a teacher identity and, subsequently, how these learning and identity construction processes unfold during the doctoral experience.

Learning the Work of Teaching

Higher education scholars have historically viewed the process by which faculty form professional practices and identities from a socialization perspective, but more recent research frames this development as a learning process (e.g., Neumann, 2009; O'Meara et al., 2008). Baker and Lattuca (2010) broadened this discussion to include future faculty by illustrating how sociocultural learning frameworks can help clarify how doctoral students develop academic professional identities.

Baker and Lattuca (2010) observed that most studies of doctoral education focus more on how doctoral students are socialized into the professoriate than on how they learn to do scholarly

work. They note further that researchers (e.g., Antony, 2002; Bess, 1978) have tended to examine doctoral students' learning and socialization processes separately, both conceptually and empirically. Baker and Lattuca point out, however, that this bifurcated approach presumes that the "knowledge associated with a field of study is separable from the values, norms, standards and expectations of that field" (p. 809). Such an assumption, they contend, contradicts the notion that individuals cultivate scholarly knowledge through ongoing discourse with members of that academic community. Baker and Lattuca note further that this conceptualization neglects to acknowledge how the epistemological decisions of researchers within academic disciplines inform the production of this knowledge as well.

Baker and Lattuca (2010) also questioned the related supposition that doctoral students develop scholarly knowledge and identities separately. Rather, according to Baker and Lattuca, doctoral students' learning and identity formation occur in tandem as they engage in the activities of their respective academic communities:

> it is through participation in the intellectual community in the field and the home
> institution that doctoral students build the knowledge and skills required for scholarship
> in their field of study, and make choices about the roles and values associated with a
> career in the academy. In this sense, students' judgments of their knowledge and skills
> become self-assessments as a scholarly identity emerges during the PhD experience
> (p. 809).

Baker and Lattuca (2010) explain that sociocultural perspectives can help illuminate this linkage between learning and identity development by emphasizing environmental and relational factors that inform how doctoral students come to perceive the value of different academic roles as a member of their disciplinary community.

These insights have important implications for how one might study the process by which GTAs learn teaching. Specifically, Baker and Lattuca's (2010) work suggests that as GTAs learn about teaching, they also learn about themselves as teachers — a perspective that echoes Lampert's (2010) assertion that individuals "become" teachers as they learn this work. Furthermore, in order to understand the relationship between GTAs' learning and identity formation as teachers, one must consider how sociocultural influences inform GTAs' knowledge about teaching (e.g., disciplinary norms and expectations around teaching), as well as how they view themselves as teachers (e.g., the extent to which they aspire to identify as a teacher based on the extent to which they perceive teaching is valued as an academic activity at their institution).

A Focus on Instructional Experiences

As Lampert's (2010) review demonstrates, teaching practices are multifaceted and complex in that they are shaped by various factors and layered with multiple sub-components. Such complexity raises questions regarding *which* practices should be the focus of how graduate teaching assistants (GTAs) learn the work of teaching and what that practice entails. However, Lampert further observed that scholars also find the construct "practice" useful in "decomposing and naming aspects of teaching while maintaining its complexity" (p. 21). This caveat implies that one approach to clarifying how GTAs learn the work of teaching is by exploring how this learning occurs within distinct "sub-practices" (e.g., classroom instruction, grading, professional development activities, broader departmental and institutional teaching practices) that collectively constitute GTAs' overarching teaching practices.

Current research suggests that GTAs' instructional experiences may offer rich insight on synergies between "what" GTAs learn about various sub-practices of teaching and changes to

their teaching practices and identities. For example, studies have identified linkages between shifts in GTAs' pedagogical approaches, beliefs and concerns and their time in the classroom (e.g., Gallagher, 2016; Gormally, 2016). Researchers also report that GTAs view their instructional experiences as key determinants of their interest in future academic careers that entail teaching (Connolly et al., 2016; Winstone & Moore, 2017).

Such findings indicate that through their instructional experiences, GTAs learn what teaching in postsecondary contexts entails and about themselves as teachers. Yet the question remains as to *how* these experiences might motivate changes in GTAs' teaching practices or their conceptions of themselves as university instructors. For example, what did GTAs in these studies take away from various instructional experiences that resulted in these behaviors and perceptions? What about these teaching experiences resonated with them and why? Furthermore, how did this learning and subsequent shifts in GTAs' instructional practices and identities unfold and what did it entail?

Next Steps in Examining Learning About Teaching as a Graduate Teaching Assistant

Despite GTAs' invaluable contributions to colleges and universities, their roles and experiences tend to go unnoticed and are understudied (Barr & Wright, 2018; Gormally, 2016). As a result, we have limited understanding of the nature of the GTA experience or its effects on doctoral students' learning and identity construction as teachers. A point of consensus that exists across multiple literatures, however, is that teachers' learning and identity development happen within and are shaped by the contexts in which they teach. In turn, a conceptual framework that acknowledges the "situatedness" of learning about teaching and oneself as a teacher is particularly well-suited to studying how these processes occur within GTA populations.

For these reasons, I frame my examination of how GTAs' teaching experiences shape what they learn about teaching and who they are as teachers using situative learning perspectives. A foundational assumption of situated learning theory is that individuals learn social practices (like teaching) and develop professional identities (such teacher identities) through their participation in communities of practice (such as academic disciplines) (Wenger, 1998). Another guiding premise of a situative perspective is that it is in the creation and negotiation of *meaning* through such participation that "makes people and things what they are" (Wenger, 1998, p. 70). A situative perspective thus argues that GTAs' teaching experiences and the meanings they make of those experiences play an integral role in their learning about teaching and construction of identities and practices as teachers. For these reasons, a situative perspective was an especially fitting framework to examine the overarching research question of this study: *What do GTAs learn about the work of postsecondary instruction through their instructional experiences in the course that they are currently teaching?*

Situative learning theorists would argue that the meaning that GTAs make of their teaching experiences shapes not only what they learn about the practice of teaching but also who they see themselves to be as teachers. As a result, I inquired about what could be learned about GTAs' teaching-related learning and through their instructional experiences that resonated or remained with them and, in turn, prompted them to further contemplate their work as university instructors. My intent was to then use GTAs' interpretations of these experiences as an entree to understand what they were learning about teaching and themselves as teachers through such experiences. Given the multidimensionality of teaching practice, I envisioned that such instructional experiences would occur in response to a host of circumstances (e.g., GTAs' efforts

to facilitate classroom discussions and present course topics, reactions to controversial comments, experiences grading students' work).

Empirical work on faculty and graduate instruction acknowledge that individuals' multiple social identities and life experiences intersect in practice and can shape their learning about emerging social identities — such as teacher identities — and the practices associated with those identities and experiences. In particular, study findings indicate that faculty members' and GTAs' social identities (e.g., Chesler & Young, 2007; Connolly et al., 2016; Turner, Gonzalez, & Wood, 2008) and prior educational experiences as students (e.g., Austin & McDaniels, 2006; Oleson & Hora, 2014; Weidman & Stein, 2003) shape what they learn about teaching. Hence, a related but secondary consideration pertains to how GTAs' social identities and educational experiences might affect what they learn about teaching through their instructional experiences. The key constructs under examination in this study include and are defined as:

- Teaching practice: Observable or detectable elements of GTAs' instructional practice. These include a) disciplinary elements, such as roles, policies, norms, symbols, tools, language, beliefs, relationships, and b) GTAs' personal pedagogical beliefs, knowledge, and behaviors.

- Teacher identity: GTAs' emerging sense of themselves, as well as who they aspire to be, as teachers.

- Instructional experiences: Instructional experiences that GTAs identified as notable or significant in their work as university instructors in that these experiences prompted them to further contemplate their teaching and themselves as teachers.

- Social identity: GTAs' sense of who they are based on their memberships in various social identity groups (e.g., in terms of race/ethnicity, gender, age).

- Student experiences: GTAs' current and previous learning experiences as students in K-12 settings, postsecondary contexts, etc.

My conceptual framing is grounded in the assumption that the learning that occurs through GTAs' instructional experiences leads them to further contemplate teaching and themselves as teachers. This learning through participation in practice subsequently functions as the mechanism that will produce changes in GTAs' teaching practices and identities. Inherent in this assumption is the belief that "thinking about" one's teaching *is* the meaning-making activity that occurs as GTAs reflect upon, question, and arrive at new insights (i.e., learn) about teaching and themselves as teachers.

This assumption focused my data collection and analysis as well. I employed methods that would enable me to build a deep understanding of what GTAs learn about teaching and themselves as teachers by concentrating on part of their learning process as it occurs. Research from the K-12 literature underscores the role of "meaning" in the stories teachers create and tell about their teaching to their learning and identity development as teachers (e.g., Beauchamp & Thomas, 2009; Beijaard, Meijer, & Verloop, 2004; Rodgers & Scott, 2008). The notion that individuals learn about teaching as they participate in and assign meaning to elements of their instructional practice aligns with a situative perspective of learning as well. In conjunction, this scholarship suggests that eliciting the stories that graduate students construct about teaching experiences that made some impression upon them is critical to uncovering potential synergies between their learning, identities, practices, and instructional contexts as postsecondary instructors.

Consequently, an essential element of understanding what GTAs learn through their instructional experiences is examining how they experience and interpret this work. I anticipated

that findings from this research would offer a more nuanced perspective of how GTAs' teaching experiences influenced their learning and, subsequently, identities and practices as teachers. This deeper level of understanding could subsequently contribute to theory development and, potentially, propositions to guide future research on this topic.

In the chapter that follows, I review the empirical literature on faculty and graduate student instruction. Through doing so, I demonstrate that this collective body of research signals that learning the work of university instruction occurs as instructors participate in the social practice of teaching. Study findings also suggest that *what* GTAs learn about teaching through such participation informs their identities and practices and postsecondary instructors and may be shaped by GTAs' social identities and learning experiences as students. Higher education scholars (e.g., Baker & Lattuca, 2010; O'Meara & Terosky, 2010) further point out that although university instructors are socialized to various pedagogical norms, values, and customs of their academic disciplines, they also have agency to choose whether or not to align themselves with specific instructional practices and identities. I accordingly argue that it is important to consider how "what" GTAs learn about teaching as they participate in this practice informs how they *decide* to adopt or reject specific teaching practices and identities associated with these practices.

I combine these insights with a situative perspective on learning to provide a conceptual framework for the study, which I argue will lead to a clearer understanding of the dynamic between GTAs' participation in teaching practice and their teaching-related learning, practices, and identities in several ways. First, the framework emphasizes "what" GTAs learn about teaching through their current instructional experiences. Second, the framework provides a helpful lens to empirically examine "teaching practice" as detectable or documentable activity. Third, the framework conceptualizes the construct "teacher identity" in a way that reflects

GTAs' emerging conceptions of themselves as teachers as they participate in the practice of

university instruction.

Chapter 2: Literature Review

When applied to the study of graduate student instruction, Lampert's (2010) portrayal of teaching as a practice offers several insights into how individuals learn the practice of postsecondary instruction. First, Lampert's work suggests that graduate teaching assistants GTAs) learn about teaching *as* they participate in the teaching practices of their respective academic disciplines and institutions. Such participation refers to learning teaching by "doing" this work, rather than through "theorizing about" this work. In accord with this view, the more GTAs "practice" the work of teaching, the more they will learn as instructors and the greater pedagogical expertise they will cultivate. In addition to ongoing "practice," the literature on faculty instruction in higher education suggests that fostering such expertise necessitates familiarizing oneself with how the practice of teaching is understood and enacted within one's departmental, disciplinary, and institutional communities.

The Influence of Academic Disciplines on Instruction

Research on faculty instruction underscores the importance of considering the impact of disciplinary contexts when studying how GTAs learn teaching. In their summary of this literature, Lattuca and Stark (2009) assert that there is significant empirical evidence that academic fields[4] have a strong influence on faculty members' pedagogical decisions and beliefs

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[4] Lattuca and Stark (2009) use "academic fields" as a more encompassing term to represent pure academic disciplines (i.e., the liberal arts and sciences), undergraduate professional study (e.g., business, engineering), and occupational study (e.g., educational programs in two-year colleges and for-profit institutions). They explain that academic fields can be roughly classified into the following four areas: the humanities, social sciences, sciences, and professional fields.

and that the unique attributes of these fields yield differences across professors' pedagogical orientations.

Illustrating such distinctions, Lattuca and Stark (2010) explain that scholars (e.g., Bell, 1966; Harvard Committee, 1945) have portrayed "sciences as hierarchical and tightly knit knowledge structures; the social sciences as more loosely connected structures of concepts, principles, and relationships; the humanities as relatively free-form disciplines with little apparent structure" (p. 91). In turn, these distinguishing features yield teaching approaches, curricula, beliefs around student learning, and course structures unique to each academic field.

Scholars have identified a number of differences in faculty teaching practices across high- and low-consensus fields (HC, LC). The most comprehensive summary of such variations to date may be Braxton and Hargens' (1996) systemic review, in which they identified several patterns of differences in teaching preferences and goals, classroom teaching practices, and student ratings of teaching performance between HC and LC fields (see a summary of these differences in Table 2.1).

Table 2.1.

Differences in Teaching Practices Across High and Low Consensus Fields

Element of Teaching Practice	High Consensus (HC) Fields (e.g., natural and physical sciences)	Low Consensus (LC) Fields (e.g., social sciences, humanities)
Teaching Preferences and Goals	Faculty were more oriented to research than teaching and more likely to prioritize career preparation.	Faculty were more oriented to teaching than research and more likely to prioritize a broad, general education.
Classroom Teaching Practices	Faculty were more likely to use teaching assistants and to assess student learning with exam questions requiring memorization.	Faculty were less likely to use teaching assistants and more prone to assess student learning with exam questions requiring critical thinking.
Student Ratings of Teaching Performance	Students were more likely to give lower ratings to instructors, courses, and course cognitive content.	Students were more likely to give higher ratings to instructors, courses, and course cognitive content.

Note: Table is based on Braxton and Hargens' (1996) review of faculty teaching practices across high- and low-consensus fields.

Braxton and Hargens' (1996) review of scholars' work suggests that disciplines differ in levels of consensus based on the degree to which their members reach agreement on matters regarding suitable theoretical orientations, research methods, and questions of inquiry. For example, Braxton and Hargens found that HC faculty were more likely to construct exam questions that assessed memorization of course content. In contrast, LC professors evaluated student learning with questions designed to promote "analysis and synthesis" (p. 34).

Other studies link faculty members' disciplinary backgrounds to their instructional practices as well. In their book-length study of the role of disciplines in faculty work, Smart, Feldman, and Ethington (2000) argued that studies revealed a conceptual consensus that academic discipline was the single greatest influence on faculty members' teaching (and

research) behaviors and attitudes. Donald's (2002) qualitative study of faulty in eight basic and applied disciplines similarly detected disciplinary variations in faculty members' class preparations and expectations for student learning.

More recently, Hora (2014) found that cognitive, experiential, and contextual factors (i.e., in the form of personal beliefs, prior teaching experience, and disciplinary and institutional affiliation, respectively) influenced faculty course planning and instruction. Based on his results, Hora hypothesized that teaching beliefs function as a framework through which faculty organize and assign meaning to instructional tasks, issues, and content, and that such beliefs had a substantial but not exclusive or unidirectional effect on their course preparation or instruction. He argued further that a particularly important direction for future research is clarifying *which* elements of faculty cognition and contextual factors have *substantial* influences on their teaching practice. Thus, Hora's study design and findings support the use of a situative perspective to understand how interactions between GTAs' personal beliefs, teaching-related experiences, and disciplinary contexts inform their pedagogical beliefs, knowledge, and behaviors.

Oleson and Hora's (2014) research underscores the importance of considering how GTAs' educational experiences might inform their teaching-related learning as well.[5] In particular, faculty in their study reported that their teaching approaches and beliefs were informed by a variety of personal and environmental influences, of which they most frequently cited their prior teaching and educational experiences. Furthermore, these faculty shared that they often modeled their personal instruction after that used by former professors.

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[5] The study samples in Hora and Oleson's (2014) as Hora's (2014) research are extracted from a larger sample population. Both studies took place around the same period and conducted interviews and classroom observations with faculty at three research universities. Oleson and Hora's sample consisted of 53 science, technology, engineering, and mathematics faculty, whereas at Hora's sample was comprised of 56 math and science faculty.

Oleson and Hora (2014) liken these findings to Lortie's (1975) "apprenticeship of observation," which stipulates that teachers begin forming their pedagogical knowledge and belief systems as students when observing their own teachers. Austin and McDaniels (2006) make connections to Lortie's work as well when discussing how graduate students are socialized to the work of postsecondary instruction through their educational experiences and disciplines. Weidman and Stein (2003) take a similar position in their theory of doctoral student socialization, arguing that "the core socialization experience resides in the graduate program under the academic control of faculty within the institutional culture" (p. 643). Elaborating, Weidman and Stein assert that academic and peer cultures embedded within disciplinary environments are central socializing agents for doctoral students — particularly through the mechanisms of interpersonal interactions, sense of fit with faculty and peer expectations, and acquisition of knowledge and skills for effective professional practice. Thus, according to Weidman and Stein, doctoral students' academic departments have a significant influence on their cognitive and affective socialization through formal (departmental goals, requirements, course policies) and informal (student and faculty interactions) factors.

As a whole, this literature makes a strong case that academic disciplines are a critical context for graduate students' learning and conceptions of teaching. However, there is little research that examines the implications of these academic environments on what GTAs learn about teaching and themselves as teachers. The limited evaluation research on graduate student instruction assesses the outcomes of teaching preparation programs rather than clarifying how graduate students learn the work of and become postsecondary instructors. Analyzing studies that focus on GTAs' perceptions of the effectiveness of teaching preparation programs would offer minimal insight on the learning that GTAs experience through the actual practice of

teaching, let alone how this learning implicates their emerging understandings of this work and themselves as postsecondary instructors. Accordingly, it is necessary to closely examine research that explicitly addresses the interactions among GTAs' teaching practices, teaching identities, and their participation in the practices of their academic communities. In the section that follows, I review findings from a select subset of studies on the GTA experience that shed further light on these relationships.

Learning Teaching Practice

Robinson, Kearns, Gresalfi, Sievert, and Christensen's (2015) research on the efforts of a learning community to support GTAs in learning to "teach on purpose" or "intentionally prepare for and create learning opportunities" (p. 81) reinforces the notion that learning the work of teaching occurs as individuals actively participate in the social practices of their academic communities. The sample for Robinson et al.'s study consisted of three cohorts ($n = 11$-12 GTAs/cohort) from different disciplines over a three year period (amounting to a total of 35 GTAs). Each GTA participated in the learning community for one academic year, during which they also worked as lab instructors, section leaders, lecture assistants, and instructors of record for a variety of undergraduate courses at different academic levels and with a range of class sizes. As members of the learning community, GTAs were provided myriad opportunities to experiment with and integrate pedagogical strategies discussed in course readings and group discussions in their personal instruction.

The largest component of GTAs' participation in this community was their design and implementation of a teaching intervention (e.g., instructional strategy, course exercise or project, assessment technique) to address a learning challenge specific to students in the course they were teaching that term. GTAs then gathered evidence of the effectiveness of their interventions the

following semester by collecting and analyzing various forms of student learning outcomes. They included these data, along with reflections of their personal learning outcomes, in a portfolio that they shared with the learning community as they developed plans to improve and re-administer the intervention in future courses. Observations of GTAs' discussions and portfolios led Robinson et al. (2015) to conclude that through their participation in the learning community, GTAs enhanced their abilities to teach with purpose. In particular, Robinson et al. report that students believed that they particularly benefited from multiple opportunities to practice aligning student learning objectives with specific teaching methods and assessments.

The extent to which GTAs' participation in these activities improved their knowledge and skills associated with "teaching on purpose" is speculative, as Robinson et al. (2016) do not present evidence to adequately support this claim. However, their conclusion lends some support to the possibility that GTAs learned how to teach with greater intentionality by continually participating in practices associated with this objective (e.g., engaging in inquiry-based activities, applying pedagogical techniques in the classroom, assessing student learning). Furthermore, the study findings offer little insights as to *what* GTAs learned about teaching with greater intentionality through their teaching experiences associated with such participation.

Research on graduate student teaching also indicates that GTAs develop beliefs about teaching and themselves as teachers as they participate in the teaching practices of their academic communities. Beisiegel and Simmt's (2012) examination of the development of the identity of a *"mathematician as teacher"* or "the person that emerges when the individual encounters the teaching situation" (p. 34, emphasis in original) illustrates this point.

Beisiegel and Simmt (2012) conducted individual interviews and two focus groups with six GTAs in the mathematics department at a comprehensive research university in Canada over

the course of an academic year. The GTAs were at varying points of their graduate studies and worked in a variety of capacities as teaching assistants, including tutors, graders, and leads for weekly discussion sections. GTAs reported in the interviews that the structure of their teaching assistantship prevented them from having meaningful engagement with their students. Specifically, students' positions required them to meet with large numbers of students in short increments, which prevented them from observing students' growing understanding of course content. GTAs also came to understand "how mathematics should be taught" (p. 36) through the presentation of mathematical concepts in course texts and college instruction. Specifically, they developed the belief that the subject of mathematics was absolute, rigid, and inflexible; that their teaching in mathematics should be "*anything but personal*" (p. 38, emphasis in original); and that the role of the instructor is solely to deliver course concepts to students. Based on these participant responses, Beisiegel and Simmt (2012) pose the following questions:

> If mathematics is absolute trust, if it is fixed, if the curriculum represents what is best, then what can a professor give to the classroom or leave with students? What influence can he or she have over what is and how it presented to students? What place can their identities have in this situation? (p. 38)

Their collective observations led Beisiegel and Simmt (2012) to conclude that the participants in their study were encouraged to cultivate identities as mathematicians but not as mathematics *teachers*. They deduced further that the structures of these participants' teaching assistantships and mathematical texts played key roles in how they came to perceive themselves as teachers of mathematics.

Broadly speaking, Beisiegel and Simmt's (2012) findings illustrate various ways that GTAs' disciplinary contexts can convey expectations around teaching, such as the "right way" to

teach mathematics. These findings also recall Lampert's (2010) argument that the learning

individuals do around teaching takes place withing a communal context and should be grounded

in "best practices" curated by experts and taught to rising professionals within that community.

Participants' interview responses further emphasized how the relational nature of teaching,

particularly with respect to interactions with people and subject matter within one's discipline,

can inform what GTAs learn about the work of teaching and the consequence of this learning for

their own practices and identities as teachers.

Arguably, the most robust findings that exemplify how GTAs might cultivate practices

and identities as teachers through participation in communal teaching practices are derived from

Connolly, Savoy, Lee, and Hill's (2016) examination of short- and long-term outcomes of 3,060

early-career academics who participated in 77 teaching preparation programs. These university-

wide and departmental programs varied in time and content and ranged from single-day,

mandatory workshops to more intensive, formal courses over an entire semester or as part of

larger course sequence. Each participant was a doctoral candidate in a science, technology,

engineering, or mathematics (STEM) discipline at one of three research universities at the onset

of the study. Using a mixed methods design of surveys and interviews, Connolly et al. (2016)

tracked the relationship between 1) participants' involvements in teacher training programs, and

2) their self-perceived formation of four faculty competencies and self-efficacy in six

pedagogical knowledge and skills areas over a five-year period. The faculty competency areas

included instruction, research, career preparation and decision-making, general professional

skills. The six pedagogical knowledge and skills areas included Course Design, Classroom

Instruction, Assessment, Diversity in Learning, Teacher-student Relationships, and Teaching in

General.

Results from three wave of data collection — collected at years one, three, and five of the study — emphasized the importance of "practice" to developing a "teaching practice" as a graduate student and future faculty member. Interviews revealed that GTAs viewed teaching assistantships that provided opportunities to "practice" their instructional skills and apply insights from their involvements in teacher preparation programs as more valuable to their development as teachers than those that offered limited opportunities for hands-on experience teaching in the classroom (e.g., assistantships limited to preparing course materials, grading, office hours, running lab sessions).

Regression analyses of the survey data further indicated that active participation in various elements of their teaching practices fostered GTAs' pedagogical knowledge, skills, and behaviors in the short- and long-term. As doctoral candidates, GTAs who participated in teacher development programming with greater frequency reported more substantial gains in instruction competence[6] and self-efficacy in all six pedagogical knowledge and skills areas. These outcomes were also associated with GTAs' participation in formal (e.g., credit bearing courses or a sequence of programming) versus informal teacher training programming (e.g., workshops or presentations).

Although the analysis is not causal, one possible explanation for these associations is that higher levels of involvement in teacher preparation programming, particularly those offered over a longer period, provided GTAs the most opportunities to practice and receive feedback on their teaching. Interviews with GTAs reinforced this possibility, during which they credited their participation in teacher development programming as bolstering their confidence to pursue more

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[6] Connolly et al. (2016) describe instruction competence as a person's self-efficacy in instructing college courses, pedagogical knowledge and skills, and commitment to diversity in learning and teaching.

autonomous teaching roles (e.g., instructor of record versus lab assistant) and experiment with different teaching techniques.

In the last administration of the survey, Connolly et al. (2016) re-administered the survey to participants who were working in post-graduate academic roles that entailed teaching. In this latter round of data collection, the researchers also asked that participants indicate how often they performed each task when teaching (using a five-point Likert scale ranging from "never" to "very often"). In doing so, they obtained data from 1,414 former GTAs[7] on their self-efficacy and self-reported teaching behaviors in relation to the six pedagogical knowledge and skills areas. Recalling earlier findings, higher amounts of participation in teacher preparation programming as doctoral students were associated with greater self-efficacy in teaching methods and assessment of students learning. Furthermore, high levels of participation in teacher development programming in graduate school predicted self-reported improvements to one's teaching practice in the areas of course design, teaching methods, creation of classroom environments, and assessment of student learning five years later. Thus, in addition to having a significant influence on teacher-efficacy in the short-term, participation in teacher development programming was associated with greater teacher-efficacy *and* use of evidence-based teaching practices over an extended period of time.

In addition, Connolly et al. (2016) found that prior teaching experience had the greatest effect on long-term teaching efficacy and behaviors. Specifically, prior teaching experience emerged as a significant and positive predictor for each pedagogical knowledge and skill area under both categories. Connolly et al. concluded that these results reinforced research that "has long shown that a person's mastery experiences — that is, their opportunities to practice the

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[7] Connolly et al.'s Year 5 (2013) survey followed 2,146 Year 1 participants and collected data from 1,414 participants (65.9%).

tasks in a given content area — are the strongest influence on their self-efficacy beliefs" (p. 51).

Notably, Connolly et al. reference earlier scholarship (i.e., from Bandura, 1986, 1997; Lent, Hackett, and Brown, 1994; and Lent, Brown, and Hackett, 2002) when making this assertion.

Connolly et al. state further that "more than 30 years of research has shown [that] self-efficacy beliefs are one of the most reliable predictors of a person's performance" (p. 37). They also highlight various contextual, personal, and relational factors to consider in future research on how GTAs may develop their teacher efficacy. Drawing on existing scholarship (e.g., Bandura, 1986, 1997; Lent, Hackett, & Brown, 1994, 2002) they suggest that doctoral students' teaching self-efficacy beliefs are influenced by the following five factors: prior teaching experience, how they perceive individuals whose views matter to them (e.g., advisors, peers, faculty) see them as teachers, observations of others' teaching, anxiety associated with teaching, and involvement in teaching preparation programs.

Though no causal claims can be made, these findings indicate that the relationships among "practicing" one's teaching, sense of teacher-efficacy, and learning as a GTA warrant further exploration. A particularly important consideration for future research is how the learning gleaned from various instructional experiences GTAs perceive as significant to their work as teachers in some way might inform their teacher efficacy and, in turn, teaching practices and identities.

Studies that have detected associations between faculty members' sense of confidence in teaching and their instructional practices lend credence to this recommendation. For example, Considine et al. (2014) found that faculty members often struggle to implement inclusive teaching practices due to issues related to self-concept, such as limited confidence in using new instructional methods; minimal experience evaluating personal biases, assumptions, and

knowledge gaps; and difficulties navigating emotional reactions. Relatedly, Meanwell and Kleiner (2014) found that GTAs link personal emotions to specific instructional practices (e.g., course preparations, classroom interactions, grading, pedagogical approaches). As these researchers explain, the emotions GTAs experience in relation to various aspects of their instructional work may have significant influences on their motivations to teach, retention, and instructional practices.

Yet it is unclear why, when, and how the level of teacher-efficacy GTAs experience through their teaching practice might shape their subsequent pedagogical approaches, beliefs, and decisions. For instance, instructional experiences that could foster self-efficacy (e.g., a rewarding teaching experience, dedicated mentorship, dynamic interactions with students) might renew one's commitment to experimenting with new teaching tactics. Yet occurrences that might undermine one's confidence in teaching (e.g., forgetting a course concept, an upsetting interaction with a student, negative teaching evaluations) could also motivate GTAs to seek opportunities to further develop skills in these areas.

Learning about Self as Teacher

In addition to one's teaching practices, Lampert (2010) contends that "practicing" the act of teaching has implications for forming one's identity as a teacher. She explains that as teachers engage in the work of teaching, they increasingly understand the nature of the profession and come to see themselves as professionals who conduct this work. Connolly et al.'s (2016) findings provide one example of this shift among graduate teaching assistants (GTAs). Specifically, their research found that PhD students who worked in teaching assistantships throughout their doctoral studies had a greater interest in a career that entailed teaching undergraduates at the end (56%) than at the beginning of their graduate programs (44%). Lampert advises further that

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because individuals develop teacher identities by "practicing" their teaching, their perceptions of themselves in this role form within and in turn are shaped by the contexts in which they teach (much like their teaching practices).

Empirical findings illuminate various ways that GTAs may construct their identities as teachers as they learn the craft of teaching. These studies further suggest that as GTAs form these identities through this participation, they also experience shifts in their teaching practices. Thus, GTAs' teaching practices and identities seemingly form in conjunction as they participate in and learn about the teaching practices of their academic communities.

Gormally's (2016) examination of shifts from more teacher- to learner-centered teacher identities among 22 GTAs at a large public university speaks to the possibility that GTAs experience changes in their teaching practices and identities in tandem. Gormally specifically examined these shifts as result of GTAs' participation in a learning community focused on teaching science as inquiry. Importantly, GTAs also taught undergraduate biology laboratory sections over the course of the same semester in which they were enrolled in the learning community. As a result, Gormally's findings speak to the ways GTAs' teaching practices and identities might develop through their participation in teaching experiences, such as professional development offerings and classroom instruction.

Gormally (2016) collected the following four sources of data to assess GTAs' lived experiences teaching biology using inquiry-based pedagogy: 1) pre- and post-semester written reflections in response to prompts about teaching and learning, 2) pre- and post-semester, self-guided and videotaped interviews using Luft and Roehrig's (2007) Teacher-Centered to Learner-Centered Typology to assess shifts in GTAs' teacher identities, 3) a semi-structured interview at

the end of GTAs' teaching semester that explored GTAs' beliefs and experiences around science teaching, and 4) a researcher reflective journal.

Interview data revealed that all GTAs began the semester with traditional teacher-centered mindsets, as evidenced by their emphasis on their own experiences as teachers (i.e., more so than the experiences of their students) and views that teaching responsibilities rest solely with the instructor (i.e., as opposed to both instructor and student). Yet by the end of the term, all but one GTA had progressed toward more learner-centered teacher identities. This transition was evidenced by GTAs' tendencies to place greater emphasis on students' experiences as learners (rather than their experiences as instructors) and tactics to co-construct optimal learning experiences and conditions with their students (rather than viewing themselves as the sole provider of students' learning). Gormally (2016) attributed this shift to GTAs' engagement in reflective exercises, in which they examined their pedagogical beliefs as part of a larger teaching community. She speculated that participating in this reflexive practice positioned GTAs to develop complex understandings of "good teaching" as cultivating optimal learning environments in contrast to effectively transferring information. These GTAs also increasingly enacted the belief of a "shared responsibility for learning" between teacher and students by focusing their efforts on facilitating class discussions and groups dynamics rather than lecturing. Furthermore, Gormally reported that GTAs who made the most progress toward learner-centered teacher identities began to create more authentic lab experiences for their students by drawing upon their personal learning and research experiences.

Collectively, Gormally's (2016) findings demonstrate how "practicing" various pedagogical strategies (e.g., reflexivity, facilitating class discussions) may accompany shifts in teachers' identities that reflect elements of these practices (e.g., learner-centered teacher

identities). However, as Gormally concedes, the mechanism(s) underlying these shifts is unknown. Furthermore, what factors may have informed the extent to which GTAs adopted such beliefs as a result of their instructional contexts? For example, Gormally's sample consisted of both undergraduate and graduate students teaching laboratory sections of two introductory courses in biology and participating in 1.5-2 hour laboratory preparation meetings as part of their teaching appointments. It is highly plausible that members of these groups assign different meaning to their teaching experiences because of variations in their educational experiences, perceived level of authority with students, professional aims, academic socialization experiences, etc. How might the personal characteristics and educational experiences that accompany GTAs to their instructor roles inform how they experience this role? What implications might these intersections have on what GTA learn about teaching science as inquiry (i.e., learning about teaching), as well as the extent to which they are motivated to adopt and enact such beliefs (i.e., teaching practice) and see themselves as teachers who embody this mindset (i.e., teacher identity)?

Gallagher's (2016) findings reinforce the possibility that GTAs' teaching practices and identities develop simultaneously as they learn the work of teaching. In her dissertation, Gallagher investigated the development of mathematician and teacher identities among four first-year graduate mathematics students at Clemson University. The study took place over three consecutive semesters, the first of which GTAs participated in a semester-long teaching seminar and assisted with the classroom instruction of a precalculus course. GTAs taught again the second semester but in different courses from one another. By the third semester, three of the GTAs served as instructors of record for different undergraduate courses.

Gallagher (2016) used several tactics to assess shifts in GTAs' teacher identities. One method entailed observing and recording GTAs' responses in group discussions around teaching cases presented throughout the seminar. Gallagher found that the nature of GTAs' concerns shifted over the course of the semester (during which they were both teaching and participating in the seminar). Prior to assuming their instructional roles, GTAs voiced concerns related to pedagogical and subject matter issues. Yet once they began teaching, GTAs focused almost exclusively on didactical issues. As GTAs gained teaching experience over the course of the term, they placed greater emphasis on pedagogical issues. Gallagher interprets these results as a promising indication that engaging in teaching seminars that provide ongoing support over an extended period can help GTAs cultivate more balanced teacher identities. However, these results are not necessarily indicative of a more "balanced" teacher identity, and they raise questions regarding what experiences in GTAs' teaching practice — whether through their personal instruction or participation in the seminar — prompted these shifts or resulted in changes to GTAs' actual classroom instruction.

Gallagher's (2016) analyses of survey and artifact data offered slightly more insight regarding these shifts to GTAs' pedagogical concerns and how they may inform GTAs' emerging understandings of themselves as teachers. Administered at the beginning and end of GTAs' first teaching semester, the surveys assessed shifts in GTAs' 1) mathematical identities (the degree to which GTAs identified as mathematicians in the present or as a future aim), 2) epistemological beliefs and aptitudes (GTAs' views on the nature of mathematics and knowledge in relation to effective mathematics instruction), and 3) teacher identities (the extent to which

GTAs identified as teachers currently or as a future goal)[8]. Mean and median comparisons of the survey data after one semester of teaching indicated that GTAs' experienced no change in their identities as mathematicians, had weaker identities as teachers, and were more likely to adopt constructivist views of mathematics.

Artifacts collected from GTAs (e.g., case arcs, lesson plans, and reflective writing statements that they developed in the teaching seminar) bring greater clarity to the survey results. Specifically, the sentiments that GTAs expressed through these documents indicated that they felt less competent in their teaching abilities after a semester of teaching. They attributed this decreased teacher efficacy to feelings of frustration associated with the extent to which they believed they were of assistance to students, their comfort and effectiveness in presenting course material, and abilities to successfully manage their time. However, Gallagher (2016) reported that GTAs were also more inclined to believe that a key component of effective teaching is developing a clear picture of how students think about and learn mathematics.

These results speak to various experiences that may have resulted in GTAs' decreased inclination to identify as teachers at the end of the term, as well as shifts to their epistemological beliefs regarding "good teaching." It is understandable that GTAs might feel less efficacious as an instructor after their first teaching experience, particularly in light of their aforementioned frustrations. In fact, such outcomes suggest that GTAs acquired a deeper understanding of the complexities of teaching and that they may not necessarily have "the right answer" or "the correct approach" as instructors. What remains unclear, however, is *what* GTAs learned about teaching and themselves as teachers through specific instructional experiences, *why* these

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[8] Gallagher (2016) adapted the Mathematics Attitude Inventory (MAI; Welch, 1972) and the FICS Math (Sonnert, 2009), and assessed epistemological beliefs and attitudes through an adaptation of a survey instrument for preservice elementary mathematics teachers (Roberts, 1993).

experiences were particularly poignant to GTAs. Furthermore, what implications might GTAs'

shifting beliefs and perceptions about teaching as a result of this learning have on their classroom

instruction?

Gallagher (2016) also conducted two interviews with each participant. The data from

these interviews, collected at the middle of GTAs' first and end of their second teaching

semesters, raise additional questions regarding the disciplinary influences on what GTAs learn

about teaching as a practice within their academic community and how this understanding might

implicate their identities as teachers. Gallagher used Lave and Wenger's (1991) situative

learning perspective to analyze the interview data as a way to acknowledge that learning as a

GTA in mathematics occurs in the community of "mathematicians" rather than in a community

of "teachers." In doing so, she found that GTAs were largely socialized to view teaching as

having minimal value in their development as mathematicians and that faculty were the sources

of information in this process. The messages students received from faculty also had a powerful

effect on their beliefs related to teaching. Specifically, each GTA received messages about

teaching that contradicted and resulted in shifts to their original beliefs on the value of teaching

in their discipline. Three of the students in Gallagher's (2016) study arrived to graduate school of

the mind that teaching was valued by professors but by the end of the year believed that faculty

dedicated little time to teaching in order to prioritize their research. One GTA, however, entered

graduate school with the understanding that teaching mattered little to faculty, but received

messages from faculty that teaching was, in fact, valued in their work as mathematicians. By the

end of her first year, this GTA expressed that although she understood that faculty spend a

significant amount of time on research, she believed that they also valued and frequently

contemplated their work as teachers. Thus, Gallagher's interview findings raise questions

regarding whether GTAs' dissociation from their identities as teachers was informed by what they learned about how the practice of teaching is perceived in their discipline through this socialization process and in what ways.

The studies reviewed in this section suggest that GTAs may cultivate identities as teachers as they "practice" and learn the work of teaching, and that they view the experience of teaching as an important element of this process. Indeed, a host of studies reported that GTAs view their teaching experiences and involvements in teaching preparation programming as valuable opportunities to acquaint themselves with the work of teaching and assess their interest in a future career that entailed postsecondary instruction (e.g., Barr & Wright, 2018; Connolly et al., 2016; Zehnder, 2016). For example, GTAs in Connolly et al.'s study credited their teaching experiences as graduate students as influencing their attraction to teaching in three ways: 1) minimizing their bias against faculty teaching roles, (2) affirming their interest in a future faculty teaching position, or 3) reducing their interest in working in a future teaching position as a faculty member.

What remains unknown, however, are questions of *why, how,* and *when* various elements of and experiences associated with GTAs' teaching practices inform their views of themselves as teachers and the profession at large. The relationship between teaching experience and the formation of a teacher identity is not necessarily linear or inevitable, as Gallagher's (2016) finding that GTAs were *less likely* to identify as teachers after a semester of teaching suggests. Hence, it seems that a key question in need of further clarification is how various aspects of and factors that shape teacher identity (e.g., perceptions of one's pedagogical knowledge and qualifications, future aims as an instructor) contribute to the construction of GTAs' teacher identities over time and based on what they learn through their teaching experiences? Although

these studies provide indications that the act of "practicing" one's teaching affects teacher identity, we have little understanding of the nature of this relationship. The research reviewed here, as well as situative perspectives of learning, intimate that a key factor of consideration is the environments in which GTAs come to understand the work of teaching, both in relation to personal identities as teachers and as members of their respective disciplinary communities.

Becoming a Teacher in Higher Education Contexts

Facets of the faculty and doctoral student socialization literatures indicate that contextual factors play a key role in whether doctoral students may be more or less inclined to develop teacher identities. Findings that faculty members — especially those employed by research universities — are socialized to prioritize research over teaching are well documented (e.g., Bowen & McPherson, 2016; Moore & Ward, 2010; van Lankveld, Schoonenboom, Volman, Croiset, & Beishuizen, 2017). These findings are particularly applicable to GTAs who, as discussed earlier, are employed primarily at research and research-intensive universities.

Illustrating this point, Connolly et al.'s (2016) interviews with over 3,000 GTAs in STEM disciplines at three research universities revealed that these GTAs frequently received messages from their academic departments — particularly their research advisors — that teaching was not as valued in their discipline as research. GTAs indicated further that such messaging was both explicit and implicit in nature. As one study participant explained, "They [faculty members] didn't say it directly, but it was sort of an attitude that [teaching] was less worthy or less, I don't know, less important than research and didn't really require any preparation" (p. 29). Correspondingly, doctoral students who aspire to join the ranks of the professoriate might be attuned to similar messaging and subsequently prioritize research activities over their learning as university instructors.

As do messages about teaching itself, the nature, availability, and messages around teaching preparation programs vary by academic discipline and institutional context (Connolly et al., 2016; Kajfez, 2013). For example, some studies have found that GTAs receive most of their support and mentoring from peers and fellow TAs, who are also often untrained (Seymour, 2005), and a lack of departmental investment in teaching preparation programming can convey a message that teaching is not as important as other areas of academic life like research. Connolly et al.'s (2016) research also detected patterns in disciplinary messaging related to teaching preparation programming, reporting that students in biology (14%) were more likely to report that their advisors discouraged their participation in such programming than students in engineering (6%) or physical science (7%). Such observations raise questions about whether GTAs in other academic disciplines, such as the social sciences and humanities, might report similarities or differences in the messages they receive about the importance of teaching preparations.

Connolly et al.'s (2016) interview data further revealed that GTAs tended to characterize their advisors' views on teaching preparation programming in different ways, specifically, 1) openly supporting such involvement despite departmental resistance, 2) abstaining from offering an opinion on such involvement, or 3) strongly discouraging such involvement. GTAs expressed further that they found interactions with advisors who adopted the third view particularly stressful. These GTAs explained that their advisors were less willing to invest time in students who sought out teaching experiences, since this signaled to the advisors that their students were not committed to their research.

These findings illustrate various ways that institutional and disciplinary norms and expectations may shape the extent to which GTAs are compelled to learn and identify as

postsecondary instructors. Clarifying our understanding around such interactions requires intentional consideration of *what* GTAs learn about teaching through their exposure to such messaging and how this learning might inform their personal behaviors and views of themselves as teachers.

In addition to organizing knowledge and work into academic disciplines, a defining characteristic of academic work in higher education contexts is that the individuals who conduct such work often hold multiple roles. Whereas teacher identity is heralded as existing "at the core" of primary and secondary teachers' professional identities (Sachs, 2005, p. 15), teaching is but one of several roles held by faculty members and graduate students in college and university settings. Faculty members' professional identities are defined by the roles they hold themselves as researchers and teachers, as well as citizens of their disciplines and fields. The academic identities of graduate students may be as or more complex, as they encompass the roles of researcher or practitioner, potentially as teacher, but also as student. Empirical research suggests that holding these multiple academic roles has important implications for GTAs' teaching-related learning as well.

Winstone and Moore's (2017) examination of the "intermediary" (p. 497) status of nine GTAs in a school of psychology in the United Kingdom speaks to this point. Nine study participants had differing levels of teaching experience, ranging from one to three years in a variety of capacities (e.g., grader, discussion and laboratory leads, guest lecturers). Winstone and Moore used focus groups to explore participants' perceptions of the benefits and challenges of serving as a GTA, the GTA role, and their instructional training experiences and support needs.

The authors' analysis revealed that GTAs' "in-between status" (p. 497) as both student and lecturer — but neither in full — presented challenges to their identity construction as

teachers. The researchers found that GTAs struggled to establish clearly defined teaching identities due to a lack of self-efficacy in their command of course content, as well as their perceptions that students doubted their subject matter expertise. GTAs were particularly anxious about their abilities to establish themselves as a "knowledgeable person" (p. 497) and answer students' questions accurately and with confidence. GTAs also expressed that the ambiguous, undefined nature of their positions complicated the purpose and responsibilities of the GTA role for both themselves and their students. Moreover, they indicated that the degree to which they were empowered to experiment with the "provisional self" of an academic was contingent upon the instructional autonomy they were afforded by their academic departments. GTAs also spoke to tensions between their various academic roles, which presented further challenges to developing identities as teachers. Chief among these hurdles was GTAs' tendencies to view their teacher identities as mutually exclusive to, and compromising of, their researcher identities.

Findings from other studies reinforce the ways in which GTAs' academic disciplines, coupled with nebulously defined and seemingly conflicting roles, can present barriers to cultivating teacher identities while also being a graduate student. For example, Muzaka (2004) administered a survey consisting of open-ended questions regarding the most beneficial and problematic aspects of facilitating small group seminars to 10 of 25 GTAs in a UK social sciences department. Like Winstone and Moore (2017), Muzaka found GTAs lacked both a sense of academic autonomy and authority in matters related to course instruction, content, and structure. Participants similarly reported that a primary source of this tension was their concerns that the time they dedicated to teaching would detract from their research and student responsibilities. These findings led Muzaka to conclude that that GTAs "occupy an ambiguous niche; they are simultaneously teachers, researchers, students and employees, with considerable

tensions emerging as a result of the often conflicting rights and responsibilities associated with such roles" (p. 1). Interviews with eleven GTAs in environmental sciences, sociology, and English at Lancaster University led Park and Ramos (2002) to reach the related conclusion that GTAs felt marginalized by their academic departments' skepticism of their teaching abilities due to their "ambiguous role as neither fully staff nor fully student" (p. 52).

These findings paint GTAs' experiences navigating multiple roles as an ongoing source of conflict and frustration in their learning experiences as postsecondary instructors. They also suggest that learning to adopt a bifurcated view of teaching as separate from one's research can have implications for the extent to which GTAs view themselves as teachers. Yet Winstone and Moore (2017) also raise the possibility that a GTA's status as both student and teacher enabled them to identify with students in ways inaccessible to professors while also embodying a position of authority. They concluded that such malleability positions GTAs in a "unique" rather than "ambiguous" niche that enables them to shift between identities to meet contextual demands.

These findings suggest that GTAs' efforts occupying and balancing multiple academic roles may also foster their growth as teachers. Other researchers reinforce this possibility when urging academic departments to structure GTAs' training, mentoring, and assistantships in ways that enhance students' abilities to capitalize on synergies across these roles and cultivate integrated research-teacher identities (e.g., Barr & Wright, 2018; Beisiegel & Simmt, 2012; Gormally, 2016). Yet it is unclear when and why navigating multiple academic roles might promote, hinder, or neglect to inform GTAs' beliefs, behaviors, knowledge, and identities associated with teaching. For example, under what conditions do GTAs perceive that their teaching experiences capitalize on their identity malleability and, in turn, renew their interest in the work of teaching? Moreover, how might evolutions to the meanings GTAs assign to their

varying roles inform how they prioritize, learn through, and identify with their work as teachers over time?

Baker and Lattuca's (2010) writing on the implications of role prioritization for doctoral students' identity development provides a useful backdrop for contemplating such questions. Specifically, they explain that as doctoral students become acquainted with the norms and behaviors of their academic departments, they communicate their acceptance of these norms and activities by participating in associated teaching and research practices. In doing so, doctoral students experiment with, assess, and prioritize different roles (e.g., researcher, teacher) in relation to both their internal values and commitments, as well as external expectations. Baker and Lattuca believed that this process has important implications for doctoral students' identity development because the roles student prioritize may be encouraged or questioned by the members of their academic communities. They wrote:

> When a student's role prioritization matches that of the community, the student is likely to be willing to internalize those roles (and corresponding priorities), thus influencing their identity development. Doctoral students may also perceive that they need to shed past identities (e.g., practitioner, artist, activist) that appear to conflict with the adoption of new identities (e.g., researcher, teacher). (p. 819)

These observations highlight the potential power of formal and informal interactions with, as well as communications from, members of doctoral students' disciplinary communities.

Yet Baker and Lattuca (2010) also raise the important caveat that the extent to which a doctoral student acquires an academic identity rests on the degree to which that student both internalizes and externalizes aspects of an academic identity. Identity development is a product of self-concept *and* how a person is viewed by and organizes oneself in relation to other — but

neither exclusively. They report that researchers (e.g., Hall & Burns, 2009; Jackson, 2007) have found that individuals who hold marginalized identities find certain expectations of faculty to conflict with their personal and cultural beliefs and identities. Similar conflicts might also arise for GTAs whose social identities and personal beliefs come into tension with elements of their teaching practice, such as controversial subject matter and establishing authority in the classroom. These tensions could in turn "interfere with the wholehearted adoption of new ideas, practices, and new identities" (Baker & Lattuca, 2010, p. 822).

Thus, the academic contexts in which GTAs learn can have a substantial influence on how they view the work of teaching and themselves as teachers, but participation in the practices of their academic disciplines does not guarantee that doctoral students will adopt the values, norms, and customs of these communities. Although GTAs are exposed to messages from figures of power on the perceived value of various academic activities, they also have agency in determining the extent to which they adopt and enact specific academic practices and identities. Subsequently, GTAs' behaviors, beliefs, and identities as teachers can develop *in accord* or *in contrast* to various elements of their teaching practice. What remains unclear, however, is how *what* GTAs learn through their participation in their teaching practices yields such outcomes.

Reinforcing this assertion, Weidman and Stein (2003) argued that the forces that shape doctoral students' socialization experiences are not limited to environmental factors; rather, personal characteristics (e.g., race, gender, socioeconomic status) and predispositions (values and expectations) accompany graduate students to their doctoral work. Like Baker and Lattuca (2010), Weidman and Stein noted that students belong to communities (e.g., family, social, political) beyond the confines of academia. Weidman and Stein argue that these communities exert "simultaneous, concomitant influences" (p. 643) that shape how individuals interpret and

react to forces within their academic spaces. Thus, we must also consider how GTAs' personal attributes and social memberships inform their learning and experiences as university instructors.

As demonstrated throughout my review of this literature, GTAs' teaching practices and environments have implications for their learning and, subsequently, identities and practices as teachers. In the section that follows, I highlight scholarship that illustrates ways that GTAs' perceptions of themselves as teachers may also inform their teaching practices. This research further suggests that GTAs' teacher identities intersect with their other social identities and that these interactions have implications for their learning and practices as teachers. As explained by Carter and Doyle (1996), "the process of learning to teach, the act of teaching and teachers' experiences and choices are deeply personal matters inexorably linked to their identity and life story" (p. 120).

The Influence of Teacher Identity on Teaching Practice

Earlier in this chapter, I highlighted empirical findings (e.g., Gallagher, 2016; Gormally, 2016) that suggest GTAs' teaching practices and identities develop in tandem. Here, I argue that GTAs' identities as teachers may also *inform* their pedagogical beliefs, approaches, and aptitudes (i.e., teaching practices). Sachs (2005) portrayal of the role of teacher identity in K-12 teaching supports this position. Specifically, Sachs contends that teacher identity:

> provides a framework for teachers to construct their own ideas of 'how to be', 'how to act' and 'how to understand' their work and their place in society. Importantly, teacher identity is not something that is fixed nor is it imposed; rather it is negotiated through experience and the sense that is made of that experience. (p. 15)

Inherent in Sachs (2005) statement is the notion that teacher identity is grounded in teachers' beliefs related to how to exist or see oneself as a teacher (i.e., "how to be"), how to behave as a

teacher (i.e., "how to act"), and how to learn and develop knowledge as a teacher and about teaching (i.e., "how to understand").

Following Sachs' (2005) depiction, I suggest that GTAs' identities as teachers pertain not only to how they think about themselves as postsecondary instructors but also inform the behavioral (i.e., instructional decisions, approaches, interactions) and cognitive (i.e., learning, beliefs, and attitudes) elements of this work. Thus, in addition to developing *through* GTAs' teaching practices, GTAs' identities as teachers may give shape *to* their teaching practices.

The conceptual synergy between GTAs' teaching practices and teaching identity is supported by Nyquist and Sprague's (1998) model of GTA identity development as well. Based on literatures of apprenticeship in professional development, the model portrays GTAs' identity development in relation to three identity stages (senior learner, colleague-in-training, and junior colleague) informed by four dimensions of development (pedagogical concerns, academic disciplines, relationships with students, and relationships with authority figures.) Nyquist and Sprague conceive the dimensions as developmental in that changes in GTAs' development as teachers are evidenced in how GTAs talk about teaching and themselves as teachers in relation to these four dimensions in increasingly complex ways.

As a senior learner, GTAs continue to identify with students but act as subject experts who have the ability to assist learners. As they progress to colleagues-in-training, GTAs increasingly identify as a "teacher" and are aware of skills and knowledge they need to cultivate in this position. As GTAs reach the stage of "junior colleagues," they have acquired confidence in many aspects of their roles as teachers, perhaps only lacking the formal creditably and cultivated intuition of more experienced faculty.

After testing their model for a decade, Nyquist and Sprague (1998) concluded that the process of developing a teacher identity is neither linear nor smooth but more like a "'two-step forward, one-step back' process" (p. 78) and that GTAs enter this process with varying levels of teaching experience and develop at different rates. Nyquist and Sprague identified additional factors that influenced GTA' identities as teachers, including their preexisting beliefs of effective teaching, institutional socialization experiences, meaning-making around messages about teaching, and peer influences.

Nyquist and Sprague's (1998) model provides valuable insight on factors that likely inform GTAs' identities as postsecondary instructors, as well as how they may experience teaching. Their conceptualization of GTAs' identity construction as iterative and complex also aligns with widely acknowledged depictions of the process by which individuals form teacher identities as fluid and multifaceted in nature (e.g., Beijaard, Meijer, & Verloop, 2004; Beauchamp & Thomas, 2009; Rodgers & Scott, 2008).

Despite these contributions, Nyquist and Sprague's model poses several limitations to understanding GTAs' learning and identity construction. Although their model included background information relevant to GTAs' teaching (e.g., prior teaching experience), it does not attend to other dimensions of GTAs' identities that may inform their teaching approaches and beliefs. For example, how might GTAs' cultural backgrounds or gender influence how they learn to view and approach relationships with authority figures and students?

The model further specifies three explicit identity stages (senior learner, colleague-in-training, and junior colleague) that GTAs "move through" (p. 66) as they develop as teachers. However, the model offers little explanation about the mechanism that causes this development to occur, let alone the potential influence of GTAs' teaching-related learning on this process. In

particular, how might the learning that GTAs experience in relation the model's four dimensions of development (i.e., pedagogical concerns, academic disciplines, relationships with students, and relationships with authority figures) inform *why* they move through these three identity stages? Moreover, do GTAs' learning unfold in distinct ways based on their stage of identity development? If so, how might such differences help explain the variations Nyquist and Sprague observed in GTAs' instructional practices and identities across the three identity stages?

Nyquist and Sprague (1998) characterized teaching as an intensely emotional experience and underscore that "the role of affect cannot be minimized in understanding TA development" (p. 79). Scholarship from the broader teacher identity literature supports this sentiment as well.[9] However, there are no comparable studies sampling GTAs, which leave us with a little understanding of how the identities graduate students hold might inform how they interpret their teaching experiences and subsequent perceptions of themselves as teachers.

The Influence of Social Identity on Teaching Practice and Teacher Identity

Further studies raise questions about how GTAs' social identities affect what they learn about teaching as they participate in this practice. Survey results in Connolly et al.'s (2016) research uncovered a host of gender differences in how graduate students experienced and approached the work as university instructors. GTAs in this study who were women were less likely than those who were men to occupy guest lecturer (34% versus 42%) and instructor of

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[9] Beauchamp and Thomas's (2009) review of the teacher identity literature indicates that emotions play an important role in how K-12 teachers express and develop their identities as teachers, as well as how they approach their professional work and experiences. Rodgers and Scott (2008) similarly found that a key assumption underlying conceptualizations of identity development across the teacher education and professional development literatures is that identity development occurs in relationship with others and entails emotions. van Lankveld et al.'s (2017) qualitative synthesis of 59 studies reported that five psychological processes were found to be involved in the development of a teacher identity among university instructors: a sense of appreciation, a sense of connectedness, a sense of competence, a sense of commitment, and imagining a future career trajectory. These studies took place in 6 continents (8 of these studies occurred in North America); the researchers do not indicate study participants' rank (e.g., assistant versus full-professor), role (e.g., tenured/non-tenured faculty, GTA), disciplines, or institution types.

record positions (14% versus 26%). Women GTAs also participated in teaching preparation activities at slightly higher rates than men (87% vs. 83%). This trend continued into participants' post-doctoral positions and early-faculty years, with more women reporting high-levels (55 hours or more) of post-graduate participation in teaching preparation programs than men in similar roles (23% versus 15%). Further, more women (12%) than men (6%) reported that their advisors actively discouraged them from participating in teaching preparation programs. The survey also found that international respondents were less likely than their US students to work as instructors of record (20% versus 32%) or guest lecturers (28% versus 49%), and that White students were less likely to participate in teaching preparation programming than Asian students (84% versus 89%).

Connolly et al. (2016) controlled for race and gender when assessing potential influences on teaching preparation outcomes. Regression analyses indicated that women were initially less confident in five of the six pedagogical knowledge and skill areas than men. However, women who participated in any amount of teaching preparation programming experienced gains in all six areas of teacher efficacy to a degree that nearly cancelled out the initial differences observed between male and female GTAs in this area. These findings suggest that women and men may experience teaching preparation programming in ways that differentially inform their confidence related to teaching, but it is unclear why this might be the case.

Research on faculty teaching reinforces the importance of considering the influence of personal factors on how one learns and approaches the work of postsecondary instruction. There is substantial evidence that the instructional experiences of faculty of color are considerably different than those of White faculty, particularly white male faculty (e.g., Chesler & Young, 2007; Connolly et al., 2016; Turner, Gonzalez, & Wood, 2008). Chesler and Young's (2007)

examination of the salience of faculty members' social identities in their teaching offers one illustration of such occurrences. Participants in this study included an equal number of women and men who hailed from the social sciences ($n = 25$), natural sciences ($n = 22$), and humanities ($n = 17$). Participants identified as White ($n = 18$), African American ($n = 20$), Asian American ($n = 13$), Hispanic ($n = 9$), and Native American ($n = 4$). Semi-structured interviews revealed that faculty members who identified as White and men were far less likely to anticipate and encounter challenges to their instructional authority or pedagogical knowledge than faculty of color or women. Several faculty of color, irrespective of their gender, experienced "anticipatory vigilance" (p. 13) as teachers, or a perceived need to establish their pedagogical qualifications and scholarly expertise (e.g., by listing their academic credentials and accomplishments) in their first interactions with students; this pattern that did not emerge among White faculty.

More recently, Settles et al. (2019) conducted interviews with 118 faculty of color at a predominantly White research university. The study sample was relatively balanced in terms of women ($n = 56$) and men ($n = 62$), who identified as American Indian (n = 6), Asian (n = 56), Black (n = 30), and Hispanic (n = 26). Participants included 42 assistant, 35 associate, and 42 full professors, each in tenure-track positions, across a variety of academic disciplines. In their interviews, study participants indicated that they were routinely asked to "do 'diversity work,' in part so that others (i.e., White faculty) would not have to, and in part due to the assumption that as faculty of color, they would want to focus on race and diversity tasks" (pp. 66-67). These participants further felt that such expectations constrained their abilities to carry out their instructional responsibilities and academic scholarship as effectively as their White counterparts, who were consequently able to dedicate more time their teaching and research.

Ahluwalia et al.'s (2019) report similar findings in their study of five tenure-track and

seven tenured faculty of color's' experiences teaching multicultural competence courses in

counseling departments at a variety of colleges and universities across the United States. Study

participants included eight women and four men who identified as Black, Latinx, Asian

American, and Native American (respectively, $n = 5, 4, 2$ and 1). Similar to the FOC in Settles et

al.'s (2019) study, nine of these 12 participants believed that their institutions thrust more

expectations upon FOC — particularly those who were untenured or adjuncts — to teach

diversity and multicultural competence courses than White faculty because FOC were generally

viewed as holding more expertise in this area. These participants further expressed that such

courses were "undervalued and not seen as areas of scholarly expertise" (p. 191) among faculty

and that, in turn, routinely teaching these classes undermined their qualifications as overall

academics.

Seven participants further believed that they were more inclined to receive poor

evaluations when teaching classes on multicultural competence. Specifically, these FOC

indicated that students were often resistant to taking multicultural competence courses because

they saw little value in the content and/or were skeptical that instructors of these courses had a

"personal agenda, or . . . the credibility to teach the material" (p. 195). Study participants also

suspected that students frequently questioned their qualifications as instructors and scholars

based on their race, an outcome that Ahluwalia et al. (2019) note mirrors findings reported in

related research (e.g., Sue et al., 2011; Vereen et al., 2008).

Other studies highlight the salience of faculty members' nationality in their teaching.

Dedoussis (2007), for instance, found that international faculty often reported feelings of

isolation as a result of holding different pedagogical values and beliefs than their peers and

students. Faculty who identified as non-U.S. citizens in Munene's (2014) work similarly

indicated that they frequently experienced disrespect in their classroom instruction due to

language barriers with their students.

As a whole, these findings suggest that graduate students and faculty experience distinct

challenges and assign different meanings to their work as teachers based on their social

identities. Such research reinforces the importance of clarifying how graduate students' social

identities might inform their learning about teaching, as well as their evolving perceptions of

themselves as teachers. In the following section, I provide a summative evaluation of the

literature presented throughout this chapter.

Assessment of the Literature

My review of the literature on graduate student instruction identified three overarching

patterns in this scholarship. The collective findings from these studies also point to several areas

in need of additional research. I discuss these patterns and directions for future study below.

Emergent Patterns

The first theme that emerged through my evaluation of literature on graduate student

instruction indicates that GTAs learn the work of teaching, at least in part and probably in large

measure, through their instructional experiences. In addition, these studies suggest that GTAs

(re)construct teaching practices and identities through the learning that occurs as a result of these

instructional experiences and preparations. These instructional experiences most often pertain to

activities associated with the actual *act* of teaching (e.g., classroom interactions with students,

preparing course materials), but also include experiences related to other elements of GTAs'

teaching practices (e.g., interactions with instructional colleagues, involvements in professional

development programming). Studies indicate further that as GTAs participate in these practices, they navigate multiple roles and that this prioritization process has important implications for their learning and identities as teachers.

The second theme that emerged from this review speaks to the influences of academic contexts on GTAs' learning, practices, and identities as postsecondary instructors. GTAs' teaching experiences occur within and are shaped by the academic institutions, disciplines, and departments in which they teach. Subsequently, GTAs learned about teaching through their participation in the social practices (e.g., teaching) of their academic communities. Furthermore, GTAs' instructional practices and identities appear to be influenced by the messages that significant others (e.g., faculty, fellow GTAs) in these environments convey about the value of teaching. Importantly, however, GTAs also have agency to adopt and enact specific practices and identities that may or may not be endorsed by fellow members of their respective teaching communities.

The third and final theme suggests that in addition to contextual factors, GTAs' social identities, including their identities as teachers, and educational experiences informed how they experience, understand, and approach their work as teachers. Hence, GTAs' teacher identities may develop through and also influence their instructional practice. However, the influence of GTAs' identities and student experiences on what they learn about the work of teaching through their classroom instruction remains unclear. A particular question of interest is what role might GTAs' social identities play in the ways they exercise agency when deciding whether or not to embrace specific teaching practices and their associated identities?

Limitations and Future Research

My review of the literature further indicates that better understanding how GTAs learn the work of teaching bears two points of clarification: 1) what "teacher identity" and "teaching practice" represent in relation to graduate student teaching, and 2) the relationship among GTAs' learning about teaching, identities, and educational experiences as they participate in teaching-related activities within their academic environments.

Defining Teacher Identity. A key barrier to clarifying how "who I am" influences "how I teach" as a graduate student is the lack of consensus regarding what teacher identity represents in this context. Illustrating this point, scholars conceptualize teacher identity in empirical studies of the GTA role and experience as 1) personal characteristics relevant to teaching (e.g., prior teaching experience, participation in professional development, perceived importance of teaching, and teacher self-efficacy) (Cho et al., 2011), 2) pedagogical beliefs and concerns (e.g., Gallagher, 2016; Gormally, 2016), 3) self-perceived abilities to work effectively as a GTA (Winston & Moore, 2017); and 4) how GTAs think about themselves in relation to their current and potential future work as instructors (Kajfez, 2013). Thus, researchers broadly conceptualize GTA teacher identity in relation to GTAs' experiences related to teaching (e.g., prior teaching experience), views of themselves as teachers, and pedagogical beliefs and concerns.

In doing so, a number of these studies define teacher identity in relation to factors that may *inform* GTAs' perceptions of themselves as teachers rather than *who GTAs understand themselves to be* as teachers. In essence, these studies reveal factors that may influence the process by which GTAs develop identities as teachers but do not necessarily represent teacher identity itself. For example, my self-confidence as a teacher may *shape* my emerging understanding of myself as an instructor (i.e., teacher identity), as well as how I learn, approach,

and think about this work (i.e., teaching practice). My sense of teacher efficacy does not, however, speak to *who I understand myself to be* as a teacher.

Conceptual confusion around "teacher identity" exists in the broader teacher identity literature as well. Beijaard et al.'s (2004) review of 22 studies of teachers' professional identity revealed that scholars define teacher identity in various ways but, as a collective, characterize teachers' professional identities in relation to four "essential features of teachers' professional identity" (p. 107). Specifically, study findings portray teachers' professional identities as 1) dynamic, resulting from an ongoing process by which individuals (re)interpret experiences and learn who they see themselves to be and also want to become as teachers, 2) personal and contextual in that such identities vary by teaching cultures and the meaning teachers assign to them; 3) multifaceted, or encompassing sub-identities of varying levels of centrality to a teacher's professional identity, and 4) agentic through teachers' active involvement in using their professional development to make sense of their roles and reach their goals as teachers. Hence, teacher identity is generally understood to be fluid, influenced by internal and external factors, layered with multiple sub-identities, and grounded in the assumption that teachers have agency in their work and to achieve their purposes in teaching. More recent reviews of the teacher identity literature reinforce these findings (e.g., Beauchamp & Thomas, 2009; Rodgers & Scott, 2008).

Based on their review, Beijaard et al. (2004) conclude that professional identity formation is "not only an answer to the question 'Who am I at this moment?' . . . but also an answer to the question 'Who do I want to become?'" (p. 122). This aligns with Kajfez's (2013) conceptualization of teacher identity, which adapted Erikson's (1968) perspective of identity as the "answer to 'who are you'?" to define teacher identity as the answer to "who are you as a teacher?" (p. 31). Kajfez also used Possible Selves Theory (Markus & Nurius, 1986; Oyserman

& James, 2011) to consider how GTAs think about their potential future work and selves as instructors in the academy.

In accord with these views, teacher identity represents "who I am, who I am becoming, and who I aspire to be as a teacher" — a definition particularly applicable to understanding a GTA's emerging sense of self as a postsecondary instructor. For these reasons, I define teacher identity in this study as "GTAs' emerging sense of themselves, as well as who they aspire to be, as teachers."

Importantly, I recognize that conceptual and empirical literatures indicate that it may be difficult to separate GTAs' identities as teachers from their pedagogical beliefs, knowledge, and concerns (i.e., teaching practices). For example, Connolly et al. (2016) contend that teacher-efficacy is a primary predictor of future performance, such as instructional behaviors and decisions. Others argue that GTAs' confidence as teachers has important implications for their identities as teachers (e.g., Park & Ramos, 2002). Baker and Lattuca (2010) speak to this, asserting that "As doctoral students become increasingly capable of the skilled performances associated with research or teaching, they may also describe an evolving sense of self" (p. 820).

Both arguments are plausible: a GTA with a high teacher-efficacy might be more inclined to experiment with new instructional approaches (i.e., teaching practice), whereas a lack of efficacy could discourage a GTA from pursuing a career in teaching (i.e., cultivating an identity as a teacher). However, is "teacher efficacy" an element of GTAs' teaching practice (i.e., a pedagogical belief related to one's personal instruction) or teacher identity (i.e., how one sees and feels about oneself as a teacher), or both? Scholars have conflicting views on these points and consensus in the near future is unlikely. As a result, I must acknowledge "definitional

overlaps" between GTAs' teaching practices and identities in my research and remain open to what can be learned about these complex constructs.

Defining Teaching Practice. Handley et al. (2007) state that a primary limitation of the situative learning literature is a lack of empirical examination of how and why identities develop through individual agency and contextual influences (much like our lack of understanding as to how GTAs construct teacher identities as a result of how they exercise personal agency as teachers in their academic disciplines.) To amend this shortcoming, Handley et al. created a framework grounded in a situative perspective to illustrate the interdependent relationship between teaching practice and teacher identity through participation.

Handley et al.'s (2007) figure illustrates the dynamics among the constructs of participation, identity and practice (see Figure 2.1). The figure depicts this relationship using two-way arrows to convey that ". . . it is through participation that identity and practice develop. Participation enables or constrains opportunities to develop identities and practice . . ." (p. 175). These authors contend further that evolutions to a person's identity or practice could also result in that individual seeking opportunities for participation. When applied to an example in the realm of graduate student instruction, the beliefs that doctoral students form about teaching and learning might compel them to seek academic responsibilities that entail new forms of participation in their academic communities as instructors where they have opportunities to teach in accord with these pedagogical beliefs.

Figure 2.1.

Core Components of Situated Learning Theory: Participation, Identity, and Practice
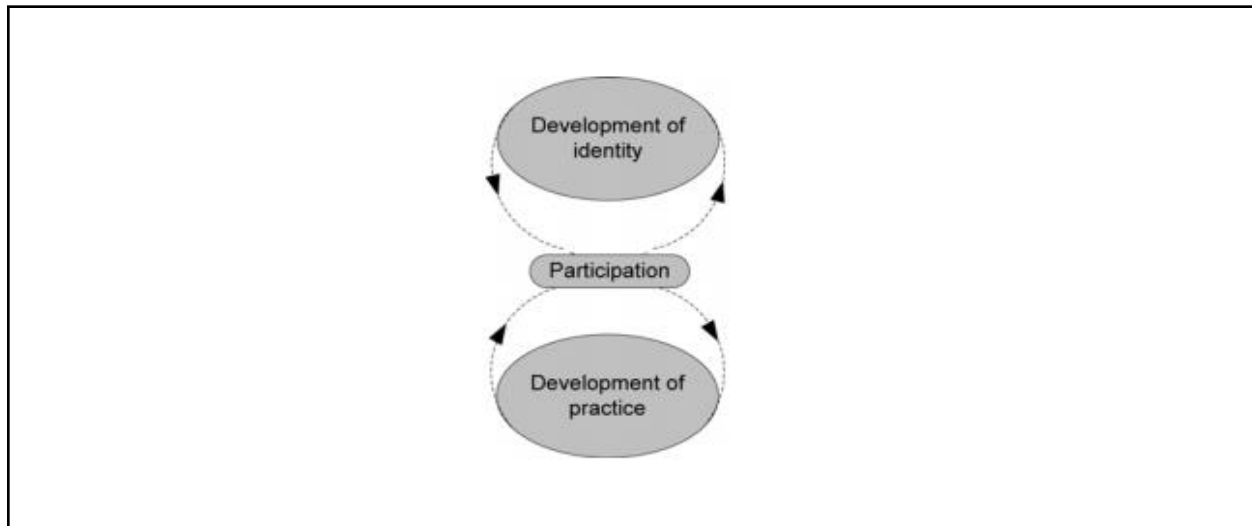
Note: Relationship among identity, participation, and practice. Reprinted from "Participation, Identity and Practices in Client—Consultant Relationships," by K. Handley, T. Clark, R. Fincham, & A. Sturdy, 2007, *Management Learning, 38*(2), 173-191, Copyright 2007 by Sage Publications. Reprinted with permission.

Handley et al. (2007) advise that an important step in using this framework in empirical research is distinguishing "participation" from what Wenger (1998) considers "mere engagement in practice" (p. 75). Handley et al. proceed to explain that a critical assumption underlying a situative perspective is that "participation involves 'hearts and minds': a sense of belonging (or a desire to belong), mutual responsibilities, and an understanding of the *meaning* of behaviours and relationships" (p. 181, emphasis in original). Based on this framing, they conceptualize participation as "meaningful activity" or "the relationships and meanings which such activity may or may not imply" (p. 181) and practice as "observable activity" (p. 181) (e.g., an activity, interaction, or behavior). Thus, practice from Handley et al.'s purview is limited to observable outcomes and behaviors that may make learning (i.e., participation) observable to researchers. When applied to the topic of graduate instruction, learning the work of teaching *occurs* through GTAs' *participation* in elements of their teaching practice that they find meaningful (e.g.,

challenging, rewarding, provoking) and *manifests* through elements of their teaching practice that are *observable* (e.g., instructional moves, interactions with students).

Handley et al.'s (2007) explicit attention to the linkage between participation (learning) and meaning-making provides an especially valuable lens to examine how the meaning GTAs' assign to various instructional experiences informs how they learn and evolve as teachers. By contrast, Wenger's (1998) original conception of practice is markedly broader than Handley et al.'s definition. Specifically, Wenger describes practice as encompassing a community's shared activities, roles and relationships, perceptions, images, among other explicit and tacit items, norms, sentiments, and processes. Thus, from Wenger's perspective, GTAs' teaching practices extend beyond explicit *acts* of teaching to policies, norms, symbols, tools, language, beliefs, relationships, and other variables that GTAs encounter in the academic communities in which they teach.

These differences mirror Lampert's (2010) questioning around what "practice" encompasses, as well as how one can empirically examine the construct while preserving its complexity. From Wenger's (1998) perspective, GTAs' teaching practice is a multidimensional construct that reflects their understandings of their instructional roles, the norms of the disciplines in which they teach, the nature of activities associated with their classroom instruction, etc. Yet as Handley et al. (2007) aptly point out, these elements of GTAs' teaching practice are difficult to observe. This critique in turn compels them to propose the methodological solution to limit practice to "observable activity."

In making this decision, Handley et al. (2007) demonstrate how researchers can operationalize "practice" in a concrete way while also narrowing their scope of focus. Yet limiting practice solely to identifiable activity (e.g., teaching moves) neglects to attend to its less

conspicuous, cognitive components (i.e., learning, beliefs, and attitudes). This is problematic, as conceptualizing participation as "meaningful activity" speaks to the intertwining of cognition and participation in the social activities of given communities. Through this framing, GTAs' meaning-making is a cognitive activity that takes shape through their "participation" in the social practices of teaching — and this participation also gives shape to their thinking about teaching practice.

Empirical studies of graduate student instruction offer several insights as to how one might operationalize GTAs' teaching practices from a situative perspective that is both tangible and continues to acknowledge the less observable elements of these practices. Like Handley et al. (2007), researchers of these studies often limit practice to outcomes and behaviors that may make learning (i.e., participation) identifiable. At the same time, these outcomes and behaviors are not limited to directly "observable activity." Rather, practice in these studies encompasses concepts like pedagogical knowledge, sentiments, and beliefs that researchers were able to *detect or document* in some way (e.g., pre- and post-evaluations, interviews, reflective memos, student evaluations, survey data).

In light of these points, I conceptualize GTAs' teaching practice as a multidimensional construct that can be measured through *detectable* or *documentable* activity. Conceptualizing teaching practice in this way enables me to examine how GTAs construct teacher identities through their participation in "observable activity" (e.g., classroom instruction) *and* also through their thoughts and statements about equally important beliefs about teaching practice (e.g., the influence of disciplinary norms, understandings of teacher roles, perceptions of good practice) as shared in interviews and personal reflections. This approach further aligns with Lampert's (2010) observation that scholars have examined how individuals learn the work of teaching and develop

identities as teachers by focusing on specific sub-components (e.g., classroom instruction, evaluation and assessment) of their overarching teaching practice.

Clarifying Learning through Instructional Experiences. My review of the teacher identity, graduate student instruction, and situative learning literatures offers useful insights on how one might conceptualize "teacher identity" and "teaching practice" in a study of how graduate students learn teaching. These literatures also indicate that the process of learning this work is a sociocognitive activity that occurs as GTAs participate in and exercise agency in response to the teaching practices of their academic communities — namely, the academic discipline. Findings from these studies further suggest that it is through this learning and enactment of individual agency that GTAs may or may not adopt communal teaching practices and identities. However, a number of questions remain regarding the association between GTAs' experiences and what they learn as teachers, as well as the potential roles of social identity and prior educational experiences in this learning. In the following section, I explain how a situative perspective of learning provides an especially valuable lens to examine such relationships.

Conceptual Framework

The literature reviewed in this section offers important insights for the conceptual framework that guides my examination of GTAs' learning about teaching (see a visual representation of my conceptual framework in Figure 2.2). My conceptualization of GTAs' teaching-related learning and identity construction is grounded upon three assumptions that sequentially map onto each component of Figure 2.2.

- Assumption 1: As depicted at the left-side of the model, GTAs have personally salient social identities and student experiences that accompany them to their work as GTAs. This component of the model is based on the assumption that these social identities and educational experiences may shape GTAs' pedagogical beliefs and what they learn about teaching and themselves as teachers at a given point in time.

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- Assumption 2: The center component of the model suggests that GTAs learn about teaching through their instructional experiences (i.e., participation in teaching practice). This learning occurs within the larger contexts of the academic departments, disciplines, and institutions in which GTAs teach. As GTAs participate in and learn about teaching practice, they exercise agency when determining whether to embrace and organize themselves in accord with specific instructional practices and identities.
- Assumption 3: It is through their participation in/learning about teaching practice, as well as the agency that they exercise through such participation, that GTAs construct teaching practices and teacher identities. The elements of teaching practice and teach identity comprise the third component of this model. GTAs' teaching practices and identities seemingly *form* in tandem and *inform* one another as GTAs "do the work" of teaching. Both teaching practice and teacher identity are the "outcomes" of interest and are explicitly referenced by the circles at the right-side of the model.

Figure 2.2.

Conceptual Framework Guiding this Study
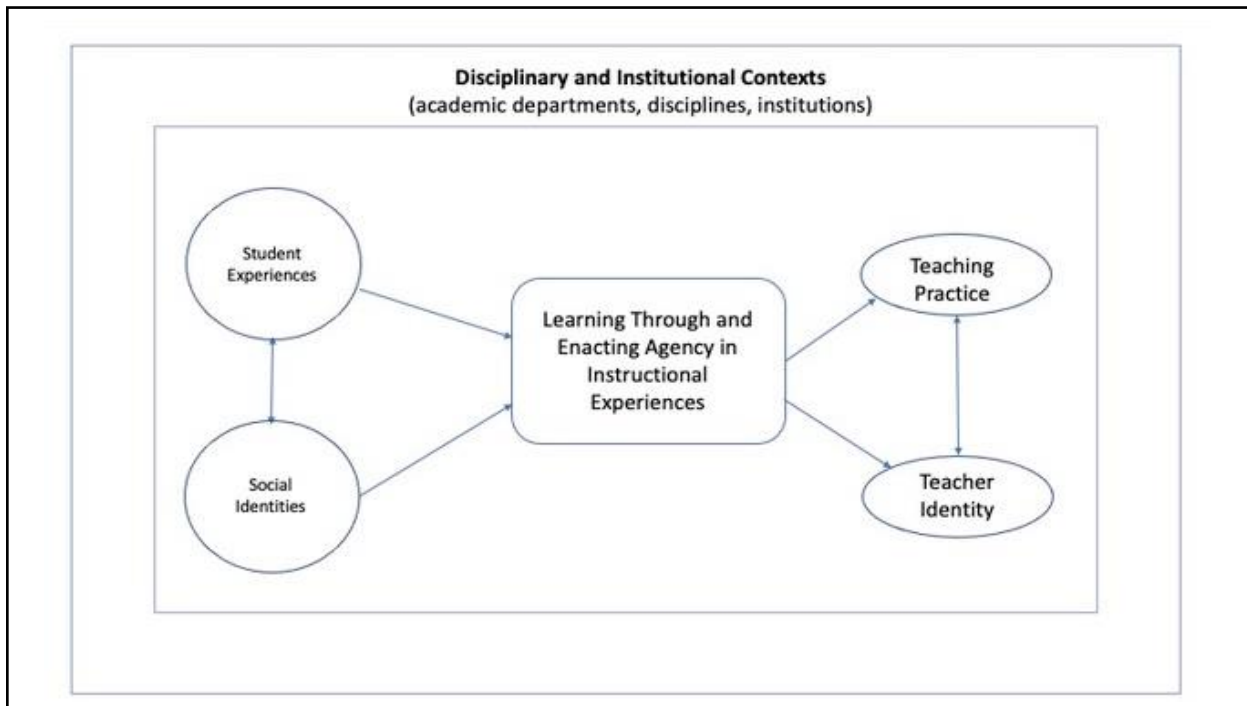
Using this conceptual framework, I aimed to study **what GTAs learn about the work of postsecondary instruction through their instructional experiences in the course that they are currently teaching.** In the paragraphs that follow, I explain how I anticipated that framing this study from a situative perspective of learning would position me to assess how what GTAs learn through their instructional experiences informs the agency that they exercise in their

teaching and the potential influence of GTAs' social identities and student experiences on this decision-making. Conceptualizing GTAs' learning through a situative learning lens also reinforced my assertion that GTAs' "teaching practices" and "teacher identities" are distinct but potentially interdependent constructs with overlapping elements and/or factors of influence (such as teacher efficacy).

A situative perspective of learning defines learning as "the gradual appropriation, through guided participation, of the ability to participate in culturally defined, socially situated activities and practices" (Sawyer & Greeno, 2009, p. 354). As Lave and Wenger (1991) explain, "learning is participation" (p. 49) and "an integral and inseparable aspect of social practice" (p. 32). As these definitions imply, learning from a situative perspective occurs through activity with others and is shaped by the context in which that activity takes place. In short, what GTAs learn depends to a large extent on where and how they learn it. Likewise, situative perspectives conceptualize learning environments as complex social systems that encompass multiple people, artifacts, and cultural practices (Sawyer & Greeno, 2009). For this reason, learning cannot be reduced to individual interactions or separated from the context in which it occurs.

Wenger (1998) reinforces the importance of social interaction to one's learning from practice when stating, "the concept of practice connotes doing, but not just doing in and of itself. It is doing in a historical and social context that gives structure and meaning to what we do" (p. 47). Thus, individuals derive meaning not only from their *participation* in practice but in relation to the specific *contexts* of the communities in which this participation takes place. In higher education settings, these communities are the academic departments, disciplines, and institutions in which GTAs teach.

Thus, a core tenet of situative learning theory is that learning occurs through social interactions and "participation" in social practices. By conceptualizing learning as both a cognitive and social activity, situative perspectives consider how contextual influences (e.g., disciplinary expectations around teaching) intersect with personal factors (e.g., identities and beliefs) to better understand how the meaning individuals make through such interactions informs what they learn. By acknowledging the inextricability of what is learned from where it is learned, situative perspectives can shed light on how academic environments inform GTAs' teaching-related learning. This framing consequently positions researchers to closely examine the association between GTAs' learning and their instructional experiences, as well as the implications of this dynamic for their identities and practices as teachers within specific disciplinary communities. I emphasize "learning through instructional experiences" (i.e., participation in practice) rather than "meaning-making" in my conceptual model given situative learning theory's explicit focus on learning and participation in social practice. I conceptualize meaning-making as a process that occurs in conjunction with GTAs' learning and participation. In other words, as GTAs participate in teaching practice, they make meaning of *and* learn from that experience. Thus, meaning-making is part of the learning process and references the active nature by which GTAs learn about teaching.

My review of the literature indicated that GTAs develop practices and identities through actual teaching experiences. This notion is consistent with situative learning theory, which would understand GTAs' *learning* to occur, in part, through their *participation* in culturally and locally constructed *instructional activities*. From a situative perspective, participation is "a more encompassing process" that involves both "being active participants in the practices of social communities and constructing identities in relation to these communities" (Wenger, 1998, p. 4).

Indeed, a core assumption of "learning as social participation" (Wenger, 1998, p. 4) is that learning occurs through participation and is the vehicle by which individuals develop practices and (re)form identities. According to Wenger, "learning changes who we are and creates personal histories of becoming in the context of our communities" (p. 5). Thus, identity construction is an outcome of learning (i.e., participation) because as individuals learn, they become different people. When applied to the study of GTAs, a situative perspective suggests that GTAs' identities as teachers may shift as they participate in and learn through elements of their teaching practice (e.g., pedagogy courses, personal instruction, cultural norms, instructional relationships) because these experiences can change how GTAs understand themselves as teachers. Thus, in addition to considering how *what* GTAs learn about postsecondary instruction occurs in context, situative perspective can shed light on *how* such learning implicates GTAs' evolving instructional practices and identities.

Handley et al.'s (2007) conceptualization of teacher identity aligns well with this framing. Drawing upon a variety of sociocultural perspectives (e.g., Alvesson & Willmott, 2002; Bandura, 1986; Ibarra, 1999; Giddens, 1991), Handley et al. (2007) broadly conceptualize identity as 1) a developmental process that occurs through learning and social practice; 2) fluid, multiple, and negotiated across multiple contexts; and 3) informed by power relationships. Hence, this conceptualization echoes scholars' portrayals of teacher identity as multiple, dynamic, multifaceted, and agentic, which lends support to using Handley et al.'s framework to understand the social (re)construction of teacher identities among GTA populations.

In sum, situative learning perspectives suggest a process in which GTAs learn the work of teaching within the contexts of their academic disciplines and institutions. It is through GTAs' participation in the social practices of these academic spaces (e.g., teaching preparation

programs, coursework, research and teaching assistantships, professional conferences) and their interactions with fellow members of these communities (e.g., faculty, peers, administrators) that they seem to form identities as students, researchers, and teachers. As a result, GTAs' academic roles appear to be intricately interwoven with the identities they hold as members of their respective academic disciplines and institutions.

Chapter 3: Methodology and Methods

As demonstrated by my review of the literature, there is lack of research on doctoral students' learning, identities, and practices as postsecondary instructors. Accordingly, I undertook an exploratory study of what Graduate Teaching Assistants (GTAs) learned about teaching through instructional experiences that they perceived as informing how they understood and enacted their teaching practices and identities. An important element of this study was examining how *what* GTAs learned about teaching was affected by the instructional contexts in which they were teaching, as well as the personal characteristics and educational experiences that accompanied them to this work from pre-existing sociocultural contexts.

Research Questions

One overarching research question guided this study: *What do GTAs learn about the work of postsecondary instruction through their instructional experiences in the course that they are currently teaching?* The following sub-questions focused attention on the key dimensions of this overarching question:

(1) What instructional experiences shape GTAs' teaching practices and in what ways?

(2) What instructional experiences shape GTAs' teacher identities and in what ways?

(3) What influence, if any, does social identity have on what GTAs learn about postsecondary instruction through their instructional experiences?

(4) What influence, if any, do GTAs' experiences as students have on what they learn about postsecondary instruction through their instructional experiences?

Methodology: Social Constructivist and Phenomenological Perspectives

In this section, I describe the philosophical and epistemological underpinnings of my study. I first explain how social constructivist and phenomenological perspectives guided my methodological approach. I then provide a brief overview of how my epistemological and conceptual framing informed the methods that I employed to answer my research questions.

Social Constructivist Perspective

I approached my study from a social constructivist lens in order to examine the knowledge that GTAs constructed as teachers based on the social contexts in which they were teaching. As McRobbie and Tobin (1997) explain, social constructivism assumes that knowledge is socially situated and occurs through social interactions with others. In addition to the social aspects of learning, social constructivists recognize the personal aspects of knowledge creation. Speaking to these points, McRobbie and Tobin (1997) state:

> In the personal sense, meaning is constructed by individuals as new information interacts with their extant knowledge…learning is personal and subjective and only exists in the minds of knowers. There are, therefore, multiple ways in which individuals may construct their meaning from a given context. In the social sense, while knowledge is personally constructed, the constructed knowledge is socially mediated as a result of cultural experiences and interaction with others in that culture (Glaserfeld 1993, Tobin 1993a). (p. 194)

A social constructivist perspective aligns with my conceptualization of GTAs' learning as teachers as occurring *in situ*, or in context, and in response to the meaning that they ascribe to their instructional experiences. This conceptual framing is grounded in situative perspectives of learning, which presume that individuals learn about social practices (like teaching) and

themselves (as teachers) as they participate in these practices with others (e.g., Lave & Wenger, 1991; Sawyer & Greeno, 2009; Wenger, 1998). In this view, learning occurs as individuals make meaning through their participation in social practices (Wenger, 1998.) Accordingly, adopting a social constructivist perspective allowed me to attend to the influence of GTAs' teaching environments and their individual meaning-making on their knowledge creation as university instructors.

Phenomenological Perspective

I examined the interconnections among GTAs' meaning-making, learning, and identity construction as teachers by drawing upon phenomenological perspectives as well. While phenomenology can be understood as a method that focuses analytical attention on "the lived experience" (Van Mannen, 1990, p. 9) and how our lived experience becomes conscious to us (Merriam & Tisdell, 2015), one can also understand phenomenology as a perspective that underlies a study. As a method, phenomenology takes different forms. In its original version, "the task of the phenomenologist . . . is to depict the essence of basic structure of experience" (Merriam & Tisdell, 2015, p. 25). Merriam and Tisdell explain that in this form of phenomenology, researchers distill such meaning-making through "phenomenological reduction" or continually revisiting the essence of an experience, which is presumed to be consistent for all participants, and that in doing so "we isolate the phenomenon in order to comprehend its essence" (p. 26). Other versions of phenomenology also focus on the meaning that individuals make of their lived experiences but do not assume that there is some universal "essence" that is the same for all individuals who have a particular experience.

In this study, I am less influenced by the particulars of phenomenology as a method and instead take a phenomenological perspective. This perspective explains my interest in

understanding how GTAs develop understandings of teaching and themselves as teachers as they interpret and assign meaning to their experiences as university instructors. One way to understand GTAs' "lived experiences" as teachers is to identify instructional experiences that hold some "meaning" to them (i.e., remain with or make some impression upon them) and then examine "what" GTAs learned or took away about teaching and themselves as teachers from such experiences.

My conceptual framework emphasizes the importance of individual meaning-making in GTAs' learning and identity construction. I took a broadly phenomenological perspective as a way to privilege meaning-making to better understand participants' instructional experiences and learning. Combining elements of phenomenological and social constructivist perspectives focused my attention on GTAs' knowledge and identity construction through participation in the social practices of teaching rather than the identification of some universal "essence" of the GTA experience.

Methods

Qualitative research is oriented toward understanding the processes that connect people, events, and situations (Maxwell, 2013). As Merriam and Tisdell (2015) explain, qualitative research uncovers such processes through an inductive approach, in which "researchers gather data to build concepts, hypotheses, or theories rather than deductively testing hypotheses . . . [through] bits of pieces of information from interviews, observations, or documents [that] are combined are ordered into larger themes" (pp. 15-16). Maxwell states further that it is through this process-oriented, inductive approach that qualitative research advances intellectual goals associated with understanding participants' meaning-making (e.g., GTAs' interpretations of their instructional experiences), contextual influences on participants' behaviors (e.g. disciplinary

influences on GTAs' instructional approaches), processes by which events and actions take place (e.g., GTAs' learning about teaching), and unrealized relationships (e.g., the influence of social identities and student experiences on GTAs' teaching practices).

My assessment of the literature on graduate student instruction demonstrated that few empirical studies have engaged GTAs in conversations and reflection designed to understand how the meaning they assign to and their interpretations of specific instructional experiences might affect their learning about teaching and associated practices and identities. Further scholarship, if applied to the GTA experience, suggests that the narratives and stories that GTAs create about their teaching practices and themselves as teachers can offer valuable insights on such linkages (see Beauchamp & Thomas, 2009; Beijaard, Meijer, & Verloop, 2004). In this study, I used an in-depth qualitative and exploratory approach to encourage GTAs to share the narratives and stories they construct in response to instructional experiences that resonated with them in some way. Aligned with a situative perspective, I intentionally employed research methods that would allow me to collect information on the ways that contextual influences (e.g., course content, structure of assistantship, student interactions) might inform the types of classroom and overall instructional experiences GTAs found to hold some meaning in their work as teachers and, consequently, their learning about teaching. These methods included interviews, audio journals, a social-identity-in-teaching instrument, and classroom observations. I anticipated that using these methods to elicit first-hand accounts of the GTA teaching experience might also offer perspective on how graduate students' educational backgrounds and social identities implicated their learning and identities as university instructors.

In this chapter, I discuss my researcher positionality and reflexivity. I then provide a detailed overview of my study design, including the research site, study sample, and methods of

collecting and analyzing the study data. I conclude by discussing the limitations of this study and the trustworthiness of the data.

Positionality Statement

Merriam and Tisdell (2015) identify "bracketing" (p. 29) as a critical element of phenomenological research, one that requires temporarily setting aside one's biases and beliefs about the phenomenon one will study. Also referred to as "epoché" (p. 25), this process occurs prior to conducting interviews with individuals who have experienced the phenomenon and entails examining and becoming aware of one's personal views and biases as a researcher. Today, researchers conducting qualitative studies often use positionality statements to convey their awareness of the importance of reflectively examining, rather than assuming it is possible to completely 'set aside,' their subjective understandings of the phenomenon under study.

From the conception of this study, I pushed myself to remain conscious of how my experiences in various academic roles shaped my dissertation research. Engaging in this reflexive process helped unveil several assumptions I hold about graduate students' learning as postsecondary instructors. As a higher education researcher, I am keenly sensitive to the ways students' social identities can inform their learning and experiences both within and outside the classroom. I also assume that the identities and experiences that accompany individuals to their teaching affect how they learn, conduct, and make meaning through this work. These beliefs stem from my own educational and instructional experiences. For example, I tend to feel more confident teaching and learning in the presence of women than men, which I attribute to identifying as a woman and my educational experiences at a single sex (all female) high school. As a White woman and native English speaker, I also often reflect on how my experiences teaching and learning at academic institutions that enroll primarily White and English-speaking

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students differ from those of my peers who identify as members of marginalized racial groups and/or as international students.

At the time I began this study, I had worked, taught, and studied at four research universities and accordingly brought these administrative, instructional, and academic experiences to this research. My experience teaching graduate level courses and seminars, in conjunction with my work as a graduate student instructional consultant, motivated me to examine how doctoral students learn the practice of postsecondary instruction. I continued to reflect upon my own challenges, insights, and questions about university instruction when crafting interview questions and audio journal prompts throughout the study.

My own experiences as a GTA also facilitated my rapport building with study participants. As a doctoral student and mother, I am keenly aware of the tensions entailed in holding multiple academic and life roles and could therefore easily relate to participants' challenges balancing their research, teaching, student, and personal responsibilities. Working as a postsecondary instructor and instructional consultant further acquainted me with emotions (e.g., uncertainty, overwhelm, elation) that often accompany one's teaching, particularly when learning new pedagogical tactics, navigating conflict with students and teaching teams, and witnessing students' challenges and growth over the course of a semester.

Given these common experiences and reactions, I routinely reflected on similarities and differences that emerged between my own instructional experiences and those of my study participants. These observations prompted me to contemplate the potential influence of our academic contexts, social identities, and educational backgrounds on how we experienced this work. Relatedly, I routinely reminded myself to replace my consultant hat with my researcher hat, particularly when engaging in research activities that mirrored my consulting activities such

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as conducting classroom observations and interviews about teaching. I also indicated to study participants at the onset of each interview that I was not evaluating the effectiveness of their teaching but striving to understand how they learned and began to see themselves in relation to this work.

My experiences teaching and offering instructional consultations to doctoral students further acquainted me with the myriad ways that social identities can become salient in teachers' pedagogical beliefs and concerns — particularly those associated with course content, respect received from students, and perceptions of one's instructional qualifications and credibility. As a result, I was wary that I might be more inclined to ask leading questions with GTAs' social identities in mind when trying to understand factors that informed their reactions to specific instructional experiences. To diminish this tendency, I incorporated a number of open-ended, probing questions to surface each participant's authentic and unaltered views on their learning as teachers and related factors of influence. I also regularly contemplated how preexisting biases and assumptions might shape my conversations and relationships with study participants, as well as my interpretations of their instructional practices. I was very intentional to communicate my awareness of my positionality to study participants as well. For example, I included a positionality statement in the Social-Identity-in-Teaching Matrix that I administered to participants prior to our first interview and as a point of reference in each interview thereafter (see Appendix A).

Given my research interests and professional commitments, I am vested in enhancing the quality of postsecondary instruction and supporting university instructors in their professional growth. As a result, I aspire to help graduate students discover how they can find fulfillment in their teaching experiences as a way to bring more motivated, student-oriented instructors into

college classrooms. Accordingly, I was cognizant to refrain from asking questions that might encourage GTAs to view the work of teaching and themselves as teachers in a more positive light than they are naturally inclined to do so.

Study Site

Most faculty members earn their doctoral degrees from research-intensive/extensive institutions like the university in this study. Indeed, the Association of American Universities reports that its 63 member-institutions, all of which are research universities, award 42% of the nation's research doctoral degrees, 51% of doctoral degrees in STEM (i.e., science, technology, engineering, and math) fields and social sciences, and 61% of all doctoral degrees in arts, humanities, and music (Association of American Universities, 2021). The University in this study, henceforth referred to as "the University," is one such member institution and plays a key role in preparing the future professoriate. Illustrating this point, the University annually awards an average of 800 doctoral degrees (excluding those of professional practice).

As discussed in Chapter 1, many research universities offer teaching preparation programs to better prepare doctoral students and faculty for their instructional work. The University's teaching and learning center offers these courses and workshops as well; one such program is a graduate student teaching orientation to prepare doctoral students for their instructional responsibilities as GTAs. The program is open to the University's broader campus community and tends to enroll upward of 500 GTAs annually, most of whom have little to no instructional experience. As such, this orientation program provided an optimal site to recruit doctoral students preparing for their first instructional roles as GTAs.

Study Sample

For the purposes of this study, I confined the study context to GTAs' teaching appointments (i.e., as opposed to also systematically examining GTA's understandings of the teaching practices of their academic departments, discipline, and institution). Yet in doing so, I acknowledge that the learning that occurs through GTAs' instructional experiences is embedded within and shaped by the academic environments in which they teach. In accord with a situative perspective of learning and the relevant literature, I anticipated these contexts were likely to be implicated directly or indirectly in GTAs' understandings of their own and others' teaching practices.

Recruitment and Selection Process

Participant recruitment took place between August to September 2019 and targeted GTAs registered to participate in a university-wide teaching orientation program. This programming was offered through the university's teaching center and took place over four days in August, several weeks before GTAs assumed their teaching appointments for the Fall 2019 term. This specific orientation program was targeted at GTAs in the social sciences and humanities, the majority of whom were required to participate in this programming by their academic departments.[10]

As part of the orientation program, GTAs enrolled in daily workshops of their choice that oriented them to various facets of university instruction, including: discussion and small group

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[10] Each study participant indicated that their academic departments required their participation in this teaching orientation program; hence, no study participant participated in this programming voluntarily. However, GTA teaching preparations and requirements vary by academic department. Accordingly, some departments at the University may not require GTAs to participate in this programming. GTAs who taught in the hard sciences (e.g., engineering, technology) enrolled in a separate teaching orientation program, also offered through the University's teaching center, due to the differences in the nature of teaching those course (e.g., holding lab sections).

facilitation, evaluation and assessment, classroom conflict, identity and authority in the classroom, and instructional technology. Diversity, equity, and inclusion (DEI) teaching-focused courses also comprised a portion of the orientation program, which is reflective of the University's broader commitment to such ideals. Illustrating this point, the University's strategic plan has an explicit DEI component and a dedicated DEI office that oversees the implementation of these initiatives across the campus community. The University's commitment to DEI work is further evidenced in its curricular offering, such as an undergraduate diversity requirement through which students are required to complete a certain number of courses aimed at promoting multicultural competence.

To recruit study participants from the teaching orientation program, the University's teaching center provided me with the names and email addresses of GTAs who indicated upon registration that they would like to receive information about my study. These GTAs included 237 of 512 total GTAs, each in the social sciences and humanities, who registered for the teaching orientation programming.[11] My initial outreach to these 237 GTAs outlined the general aim of my study (i.e., to better understand what GTAs learn about teaching and themselves as teachers), as well as participation criteria and incentives (see Recruitment Announcement in Appendix B).

Participant selection criteria were grounded in the situative learning perspectives that frame this study, which suggest that academic discipline, social identities, and prior teaching and student experiences shape GTAs' teaching experiences and resultant learning about teaching and themselves as teachers. Given my particular interest in the intersections between GTAs' social

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[11] Each GTA in this teaching orientation program hailed from the social sciences or the humanities. However, I was not provided a breakdown of participants by academic discipline, which varies annually. Each year, roughly 500-550 GTAs from the social sciences and humanities enroll in this orientation program.

identities and learning about teaching, I sought to select a sample that was sociodemographically

diverse but relatively focused in terms of disciplinary affiliation and prior teaching experience.

To help me achieve this objective, I asked all potential participants to complete and return an

Intake Form (see Appendix C) attached to the initial Recruitment Announcement. In addition to

sociodemographic data and prior teaching experience, the Intake Form collected information on

GTAs' Fall 2019 teaching appointment (e.g., teaching responsibilities, course content and

format, anticipated student enrollment). The form also required each participant to indicate the

academic discipline(s) in which they were teaching and receiving their doctoral degrees. I sent

two follow-up invitations to GTAs who did not respond to the first and second email invitations

for a total of three emails to each GTA.

Three overarching criteria guided my selection process: academic discipline, teaching

experiences, and social identity. I selected participants on the basis of broad disciplinary

categories within the social sciences. Minimizing the span of disciplines in which GTAs were

teaching complemented my theoretical framework by positioning me to examine the

"situatedness" of what GTAs learned about teaching within the contexts of a relatively similar

set of disciplines. This sampling choice also permitted me to select participants in disciplines that

were similar in some ways to my own field of study, which is multidisciplinary in nature and

heavily influenced by social scientific thought and research approaches.

A key focus of my research was how GTAs new to teaching learn about this work

through their instructional experiences. Accordingly, my sampling criteria included amount and

type of prior teaching experience, followed by GTA appointment type. This enabled me to

exclude anyone with more than one year of any form of teaching experience or prior

instructional responsibilities as a GTA. I also excluded individuals who would have only

minimal responsibility for classroom instruction in their upcoming GTA appointment in light of my interest in what GTAs learn as they engage in the practice of classroom instruction.[12] To be eligible for this study, graduate student participants were required to have: 1) doctoral student or candidate standing, 2) instructional responsibilities for a Fall 2019 course, and 3) plans to pursue or at least be open to a career that entails teaching in postsecondary settings.

I strove to recruit a sample that was sociodemographically diverse so that I could examine potential intersections between GTAs' learning about teaching and their identities as a whole person. Accordingly, I asked GTAs to indicate their race/ethnicity and gender on the Intake Form and used these criteria to select a sample that held a variety of racial/ethnic and gender identities.

Resultant Sample

The collective inclusion and exclusion criteria that structured my selection process yielded a sample of nine participants with little to no teaching experience slated to lead a Fall 2019 discussion section in one of the following social sciences: political *science (n=3),* history $(n = 2)$, anthropology $(n = 1)$, communication studies $(n = 1)$, sociology $(n = 1)$, and psychology and women's and gender students $(n = 1)$. Study participants also held a relatively diverse set of racial, ethnic, and gender identities. The racial/ethnic identities represented in the sample included White $(n = 4)$, Black $(n = 1)$, Middle Eastern $(n = 1)$, Middle Eastern and North African $(n = 1)$, South Asian $(n = 1)$, and White and Latino $(n = 1)$. The majority of participants were U.S. domestic students, and three participants identified as international students. Five $(n = 5)$

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[12] The one study participant who worked previously as a GTA did not have responsibilities for classroom instruction in this former instructional role. Rather, this participant's prior responsibilities as GTA consisted of holding office hours and assisting the instructor of record with grading.

participants identified as men; two ($n = 2$) participants identified as women, and two ($n = 2$) participants identified as non-binary.

Each selected participant completed a consent form outlining the details of their participation and protections as study participants (see Appendix D). To incentivize participation, prospective study participants were offered $200 for their participation in three interviews, to be dispersed the study in two installments: 1) $100 after the completion of their second interview, and 2) $100 after their completion of the third and final interview (thus, $200 in total compensation).[13] These details were outlined on the consent form as well.

Data Collection

The primary objective of my research design was to collect data that illuminated what GTAs learned about teaching through their instructional experiences as new teachers. To reach this objective, I collected data from three semi-structured interviews, two audio journals, and a social-identity-in-teaching instrument (each is described below). I also observed two class sessions for each participant. Rather than serve as sources of data that were systematically analyzed, I used observations to understand participants' classroom experiences more fully. See a detailed timeline of these data collection activities in Table 3.1.

As evidenced in Table 3.1, data collection took place in three waves over a relatively short time span between September 2019 and January 2020. As a result, it was critical that the timing, frequency, and duration of my research activities provided sufficient opportunities to establish a shared understanding of each participant's teaching environment and experiences, as well as to identify classroom experiences that facilitated GTAs' learning about teaching. My

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[13] Incentive funds were acquired through a dissertation research grant provided by the researcher's academic institution.

review of the literature also demonstrated that teaching can be highly emotional work. Consequently, I needed to capitalize on opportunities to establish a strong foundation of trust that encouraged participants to be vulnerable and authentic when sharing their reactions to teaching experiences that were potentially emotionally-charged.

Table 3.1.

Data Collection Timeline

Date	Research Activity
September 2019	
Week 2	Administered Social Identity Matrix
Week 3	Began Wave 1 Classroom Observations
Week 4	Began Wave 1 Interviews
October 2019	
Week 2	Concluded Wave 1 Classroom Observations and Interviews
Week 3	Administered Audio Journal 1 and Social Identity Matrix
Week 4	Began Wave 2 Classroom Observations
Throughout	Transcribed, coded, wrote summaries of and analytic memos based on interviews and journals; revised Interview 2 protocol
November 2019	
Weeks 1-3	Conducted Wave 2 Interviews and Observations, $100 incentive installment
Throughout	Transcribed, coded, wrote summaries of and analytic memos based on interviews and journals; revised Audio Journal 2 prompts
December 2019	
Week 2	Administered Audio Journal 2 and Social Identity Matrix (last week of class); scheduled Interview 3
Throughout	Transcribed, coded, wrote summaries of and analytic memos based on audio journal; revised Interview 3 protocol
January 2020	
Weeks 1-3	Conducted Interview 3; $100 incentive installment
Throughout	Transcribed, coded, wrote summaries of and analytic memos for interviews

I designed my multi-pronged approach to data collection with these necessities in mind. I intended to surface participants' teaching-related learning through repeated inquiries in a variety of formats (i.e., interviews and reflective exercises) over the course of the semester. I also aimed to use these efforts as a means to foster rapport with study participants so that they were willing to entrust me with potentially sensitive information (e.g., values, beliefs, insecurities, emotions) underlying the significance that they assigned to specific occurrences in their instruction.

Social-Identity-in-Teaching Matrix

I asked each participant to complete a Social-Identity-in-Teaching Matrix prior to our first interview (see Appendix A). The purpose of the matrix was to develop a baseline understanding of which social identities GTAs perceived as informing their learning, practices, and identities as teachers. Over the course of the study, participants completed the social identity matrix two additional times as part of both audio journals. Collecting this data at three time points (i.e., the beginning, middle, and end of the term) allowed me to assess the consistency with which various social identities were salient in GTAs' instructional experiences. I also provided participants copies of the matrix as a point of reference when we arrived at the portion of each interview that focused explicitly on the potential influence of their social identities on their teaching.

Interviews

To test my interview protocol, I conducted four pilot interviews with doctoral students (who were either teaching at that time or had prior GTA experience) from June through September 2019. These pilots resulted in a number of revisions to the protocol that I used in my first interview. Over the course of the study, I conducted three, 90-minute, semi-structured

interviews with each participant throughout the Fall 2019 and early Winter 2020 terms (see interview protocols in Appendices E – G). Conducting interviews in a semi-structured format and over a ninety-minute period of time afforded participants ample opportunity to answer each question in detail and for me to ask follow-up questions based on their unique experiences and responses. All interviews were transcribed for later analysis.

First Interview. I conducted the first interview one month into the Fall semester. This initial interview provided an opportunity to build rapport with study participants and inquire about any teaching-related learning that GTAs may have experienced in the first weeks of their instruction. I also collected background information on GTAs' beliefs about teaching, as well as how (if at all) they perceived their social identities and educational experiences to influence their learning, practices, and identities as teachers that term. Questions for this initial interview were grounded in the literature on situative learning theory, graduate student instruction, faculty learning, and the broader teacher identity literature. To assure that I addressed the key concepts under study, I created an "evaluation crosswalk" (O'Sullivan, 1991, p. 43) table to align my interview and audio journal questions with each research question (see Appendix H).

Second Interview. The second interview took place in the middle of the Fall term, roughly one month after the first interview, and within one week of conducting the second classroom teaching observation and receiving participants' first audio journal. The primary objective of Interview Two was to engage participants in reflection on their learning as teachers through their instructional experiences up until that point in the Fall semester. In this interview, I revisited some foundational questions that I asked in the first interview. I also developed a number of participant-specific questions based on my recent observation of their classroom instruction and preliminary analysis of the teaching-related learning experiences shared in their

first interview and audio journal. My questions revisited inquiry regarding the potential

influences of social identity and student learning experiences on what GTAs gleaned from these

experiences as well.

Third Interview. The third and final interview took place in the early weeks of the

Winter 2020 term to allow participants time to process their teaching experiences and review

their student evaluations. To assure course evaluations were fresh in their minds, I reminded each

participant one week before our interview to review their evaluations in preparation for our time

together. Much like the second interview, I crafted participant-specific questions based on the

insights that GTAs shared about specific instructional experiences in their second audio journals.

I also asked participants to walk me through additional learning experiences since our last

conversation, as well as any further insights on topics discussed in earlier interviews.

Audio Journals

Each participant submitted two audio journals in the Fall 2019 semester (the first in

October, the second in December). The audio journals served as a vehicle for GTAs to

independently process concrete and timely examples of classroom experiences that led to new

insights about teaching. As noted above, I then developed inquiry based on what participants

shared in these recordings as a way to explore their instructional learning experiences in greater

depth in upcoming interviews. Each audio journal consisted of a series of questions about

participants' teaching-related learning experiences in their work as university instructors (see

Appendices I-J). Participants used a digital recording device (i.e., their cellular phone or

computer) to capture their responses to these prompts and then uploaded their audio recordings

to a password protected folder on Dropbox. Each folder was accessible to one designated

participant and me. Like each of the three interviews, both audio journals were transcribed for later analysis.

Observations

The objective of this study was not to assess or validate participants' pedagogical knowledge, skills, or approaches. Rather, I aimed to clarify what GTAs learned as they participated in these cognitive and behavioral elements of their instructional practice. Consequently, conducting observations of participants' teaching was not as pertinent to my research questions as using observations to contextualize each participant as an instructor and the learning they experienced in this role.

Observations took place in the week leading up to the first and second interviews. These timepoints enabled me to gain a general sense of GTAs as teachers, contextualize classroom experiences referenced in participants' audio journals and interviews, and identify potential lines of questioning for interviews. More specifically, course observations provided valuable exposure to classroom climates and structures, language, and instructional approaches that characterized participants' work as teachers and may have differed from aspects of my own educational experiences. The information that I gathered through these observations allowed me to craft customized questions grounded in specific pedagogical decisions and approaches, interpersonal exchanges, and individual reactions witnessed in each participant's classroom instruction. I then used this inquiry in interviews to 1) guide participants in pinpointing explicit instances that they perceived as significant to their teaching in some way, 2) assess how GTAs' interpretations of such experiences informed their subsequent motivations to act or respond in various ways and, ultimately, 3) better understand any teaching-related learning associated with these instructional experiences.

Given that observations were not intended to serve as a source of data, I used an informal observation protocol. I took brief, informal notes to help me recall GTAs' teaching contexts and identify classroom occurrences that might speak to participants' learning about teaching and warrant further questioning (see Observation Guide in Appendix K). Examples of such occurrences included moments of pause or confusion as GTAs presented course concepts, GTAs' challenges and successes fostering classroom participation, and GTAs' apparent level of rapport with their students. In preparation, I practiced conducting observations of this nature in three instructional seminars offered through the University's GTA teaching orientation (i.e., the same orientation from which I recruited study participants). These "practice observations" also acquainted me with the teaching preparations that participants received prior to assuming their instructional roles that Fall.

Data Analysis

In the passages below, I provide a comprehensive overview of the two primary components of my analytic process: 1) developing the codebook and coding the study data, and 2) writing and discussing reflective and analytic memos.

Developing the Codebook and Coding the Data

The social constructivist and phenomenological underpinnings of my methodological approach were consistent with a situative learning perspective in which individual meaning-making in particular contexts (as a precursor to understanding any conjunctive learning) is the focus of data collection and analysis. In order to "pursue several constructs that were explicit in the research questions" (Weston et al., 2001, p. 386), I used my research questions and sensitizing concepts to guide the development of the codebook. As Bowen (2006) explains:

Social researchers now tend to view sensitizing concepts as interpretive devices and as a

starting point for a qualitative study (Glaser, 1978; Padgett, 2004; see also Patton, 2002).

Sensitizing concepts draw attention to important features of social interaction and provide

guidelines for research in specific settings. (p. 14)

Accordingly, sensitizing concepts help guide the analytic process by suggesting "directions along

which to look" in the study data (Bowen, 2006, p. 7). The sensitizing concepts for this study

were those that I deduced to be integral to GTAs' learning as teachers and included teaching

practice, teacher identity, instructional experiences, social identity, and student experiences. As

previously shown in Figure 2.2 (see p. 61), I constructed my conceptual framework to function

as a lens through which I could closely examine the relationship of these concepts to GTAs'

teaching-related learning as a result of their participation in the social practice of university

instruction. My decision to foreground this specific set of concepts, as well as how I defined

them for the purpose of this study, was inspired by my review of the literature on graduate

student instruction, faculty learning, teacher identity, situative learning theory, and sociocultural

views of identity. This literature informed the inherent definitions for each of the preliminary

codes as well.

The original codebook consisted of five categories: 1) Meaningful Classroom Teaching

Experiences, 2) Teaching Practice, 3) Teacher Identity; 4) Social Identities; and 5) Student

Experiences. Several codes comprised each of these categories. I tested the initial codebook on

four interview transcriptions, which resulted in the identification of emergent and redundant

codes and subsequent revisions to the codebook. As I tested the codebook, I identified and

inserted quotations to help illustrate and further refine my definitions for each code. Table 3.2

illustrates a portion of the codebook in its initial stages of development.

Table 3.2.

Sample Excerpt from Initial Codebook

Name	Abbreviation	Description	Illustrative Quotes
Race & Ethnicity	R&E	Salience of racial or ethnic identity in teaching	Sample Quote 1: ". . . I'm the only Black person in the class . . . it's still in the back of my mind that my teaching evaluations will probably be also related to just being a Black woman. We tend to get the worst teaching evaluations." Sample Quote 2: "One student asked, 'How does race factor into all of this?' . . . I couldn't answer . . . I have no idea what I'm talking about because I'm not familiar with the material and because I'm a White guy . . . The main professor is [also] a 75-year-old White guy . . . I mentioned to the students that it's likely that race would probably not be discussed in as much depth . . . or as critically as it might be were the professor a different person . . . I definitely verbally acknowledged that neither the professor nor I was in the best position to speak to that particular question."
Gender	GEN	Effects of being a man, women, non-binary	Sample Quote 1: "Apparently one student must have enjoyed the classroom and the discussion, and he gave me a handshake after the class. He probably wouldn't have done to a female instructor . . . [another male student] just gave me a shout out when I was walking down the hall . . . they probably wouldn't have done to a female instructor . . . male students maybe feel more comfortable communicating with me in certain ways . . ." Sample Quote 2: "I feel like they listen to me and respond to me more when I'm more masculine presenting. The more feminine weeks . . . they've been a little more resistant . . . I have to work a little harder to corral them . . . to get responses from things . . . I've heard from plenty of women-identifying teachers and professors that there's a dance that you have to do to maintain a position of authority in the classroom, because you're already being considered a less than, due to your gender. But then being soft enough to not alienate yourself."

A primary aim of this study was to contribute to theory-building by offering a more

refined and nuanced depiction of the ways in which GTAs learn to become teachers, as well as

how they cultivate and leverage aspects of their identity in this process. In light of this theory-

building goal, I used an open-coding approach through the qualitative software analysis program NVivo to remain "open" to codes and phenomena that emerged through my data analysis. By taking an open-coding approach, I was able to "capture *new* insights" (Maxwell, 2013, p. 107, emphasis in original) based on what participants deemed most important about their experiences to guide future coding and evolutions to the codebook. As I coded the data, I followed Saldana's (2009) recommendation to continually ask myself what participants were trying to accomplish as teachers, how they approached and talked about their teaching, their assumptions about themselves as teachers and the people with whom they interacted (e.g., students, fellow instructors), and what generally struck me about their instructional experiences.

As I revisited, redefined, and renamed codes, I also contemplated how various codes related to and differed from one another. Through doing so, I identified emergent patterns, or groupings of data with shared characteristics (Saldana, 2009), and ways to further distinguish concepts with additional codes and sub-codes. As I accumulated more data, I also checked for conflicting evidence and cases. This process resulted in recoding some data excerpts, as well as revising several codes.

I finalized the codebook after several months of using a "constant comparison approach labeling phenomena and saturating categories with repeated supporting evidence" (Weston et al., 2001, p. 388). The final codebook (see Appendix L) consisted of the following categories and codes, respectively: 1) "Factors of Influence" (background, environmental factors, student experiences, GTA social identity, student social identity); 2) "Teacher Identity" (affinity for teaching, teaching career, teacher efficacy, instructional style); and 3) "What was Learned About Teaching" (characteristics of teaching practice, content, feedback, teaching goals, grading, GTA experience, GTA-Student relationships, instruction, student learning and engagement, learning

and teaching environment). Many of the codes that comprised these categories consisted of multiple sub-codes, which were informed by the literature and emerged through my coding and memoing processes. The final codebook comprised 69 total sub-codes.

Writing and Discussing Memos

As evidenced in Table 3.1, my data collection and analysis took place concurrently. A central part of my analysis was writing reflective summaries and analytic memos. I wrote reflective summaries after listening to each audio journal and completing each interview. As I drafted these summaries, I documented participant commentary that spoke to my research questions and conceptual framework: what GTAs were learning about teaching and themselves as teachers, the contexts in which this learning occurred, and the salience of GTAs' social identities and students experiences in this learning. I also used reflective summaries to capture aspects of the interviews and audio journals that would not be reflected in transcriptions, such as participants' voice inflections and body language and my own impressions of each participant and our rapport.

In addition to interview summaries, I routinely wrote analytic memos to acquaint me with and to help me interpret the study data. As Saldana (2009) shares, analytic memos help researchers reflect on and write about:

How you personally relate to the participants and/or the phenomenon; your study's research questions; your code choices and their operational definitions; the emergent patterns, categories, themes, and concepts; the possible networks (links, connections, overlaps, flows) among the codes, patterns, categories, themes and concepts; an emergent or related existent theory; any problems with the study; any personal or ethical dilemmas with the study; future directions for the study; the analytics memos generated thus far; the

final report for the study. (p. 40)

In the paragraphs that follow, I describe the role of analytic memoing in the following aspects of my data analysis: 1) refining coding and data collection processes, 2) identifying and organizing findings, 3) moving from patterns to claims, and 4) putting forth theoretical propositions.

Refining Coding and Data Collection Processes. My coding and analytic memo writing took place synchronously in that there was "a reciprocal relationship between the development of a coding system and evolution of understanding a phenomenon" (Weston et al., 2001, p. 397). As Saldana (2009) states, analytic memos provided a space for me to contemplate codes "not just as a significant word or phrase applied to a datum, but as a prompt or trigger for written reflection on the deeper and complex meaning it provokes" (p. 32). In particular, analytic memos helped me assess the extent to which my existing codes fully captured and accurately represented the intended concepts and ideas. For instance, it was through analytic memoing that I decided to stop using the code "Meaningful Classroom Teaching Experiences" to tag instructional experiences that led GTAs to learn something about teaching or themselves as teachers. As I reflected and memoed on excerpts tagged under this code, I realized that participants rarely described such experiences as "meaningful" per se. Rather, these instructional experiences resonated with (i.e., held some inherent meaning for) GTAs to a great enough degree that they resulted in some new insight, contemplation, and/or question (i.e., learning) about teaching or themselves as teachers. Furthermore, many of these instructional experiences occurred in areas of GTAs' teaching practice beyond their classroom instruction, such as when working with their instructional teams, grading students' work, hosting office hours, preparing for class, and participating in pedagogy courses. I consequently renamed the code "Meaningful Classroom Teaching Experiences" as "What Was Learned" as a way to emphasize GTAs'

learning as teachers, given my explicit focus on learning from a situative perspective and to better represent how this learning occurred through an array of instructional experiences and in a variety of contexts.

I developed an effective strategy to capture factors that influenced GTAs' learning as teachers through analytic memoing as well. The strategy consisted of two steps: 1) identifying and coding larger "chunks" of data that represented "what" participants learned through their instructional experiences (under the code "What GTAs Learned"), and then 2) double-coding these passages to tag factors that shaped this learning. At the end of this process, I had coded (and then double-coded) over 600 references in the data that fit these criteria. I also identified emergent concepts within these passages that warranted their own codes and sets of codes that comprised broader categories of data. As Saldana (2009) predicted, analytic memo writing subsequently served as "an additional code- and category-generating method" in that as I reflected and wrote memos on the codes that I applied to my data, I "discover[ed] even better ones" (p. 41).

Writing analytic memos at each wave of data collection also helped me refine my methodological tools. For example, these memos prompted me to reflect on and gauge the extent to which the data I had collected thus far directly answered my research questions. I then used these insights to revise future interview protocols and audio journal instructions. Common adjustments included incorporating additional question probes and customized inquiry based on each participant's unique instructional experiences and insights. Alternating between data collection and analysis consequently aligned very well with my phenomenological design, as I was able to collect rich descriptions of GTAs' lived experiences as teachers based on my evolving understanding of their individual and collective experiences in this capacity.

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Identifying and Organizing Findings. Saldana (2002) advises that "By memo writing about how some codes seem to cluster and interrelate, a category for them may be identified" (p. 41). I, too, identified clusters of emergent patterns through memoing. These groupings evolved into broader categories that represented "what" GTAs were learning about various sub-areas of their teaching practices (e.g., classroom instruction, grading, broader teaching environment) and teacher identities (e.g., instructional style and qualifications, affinity towards teaching). In this way, analytic memoing provided a valuable exercise to document my evolving understanding of critical codes associated with the study's sensitizing concepts and elements of GTAs' instructional practices and identities most implicated by their learning/participation.

Once I had completed all my data collection, transcriptions, and coding, I created master summaries to capture my overall impression of each participant. To do so, I revisited and synthesized key takeaways from the reflective summaries that I wrote after every audio journal and interview. I also noted my concluding impressions of each participant and any discernible changes to GTAs' instructional practices and identities. I then shifted from individual to group analysis by identifying the most prominent emergent patterns across the master summaries. This analysis revealed that GTAs' insights about teaching and themselves as teachers fell into three sub-areas of their teaching practices (i.e., teaching environment and preparations; student learning, engagement, and conduct; and evaluation and assessment) and four sub-areas of their teacher identities (i.e., instructional qualifications, teaching style, pedagogical aspirations, and affinity towards teaching), respectively.

I proceeded to create separate matrices for each sub-area of teaching practice and teacher identity (i.e., one matrix for "teaching environments and preparations," another for "student learning, engagement, and conduct," and so on). Organizing the data by categories of emergent

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findings permitted me to synthesize data excerpts associated with each sub-area of teaching practice and teacher identity. I was then able to identify and document patterns within these patterns across the study sample. I used the following prompts, each inspired by the study's research questions and conceptual framework, to write synthesizing descriptive summaries of: 1) similarities and differences across GTAs in terms of what they learned about each sub-area of teaching practice and teacher identity, 2) common insights among GTAs, as well as changes to their instructional practices and identities at different points in the term, 3) the types of instructional experiences GTAs frequently associated with learning about specific sub-areas of teaching practice and teacher identity, 4) when GTAs' social identities and student experiences became particularly salient in their teaching, and 5) areas of overlap between what GTAs learned about teaching practice and themselves as teachers. Through this exercise, I identified connections within and across categories that contributed to emergent themes that directly addressed the study's research questions.

Moving from Patterns to Claims. Having identified *what* GTAs learned through their participation in practice, I turned my attention to *how* this learning occurred and implicated their practices and self-conceptions as teachers. In other words, I transitioned from finding patterns in the data to articulating theoretical claims grounded in the data. Analytic memoing was essential to forming these claims, which Birks, Chapman, and Francis (2008) speak to when stating:

> It is through memoing that the researcher is able to articulate, explore, contemplate and challenge their interpretations when examining data. Similarities and differences are identified, relationships are explored and hypotheses spawned. The result is the generation of theoretical assertions that are grounded in raw data, yet possess the quality of conceptual abstraction. The process of memoing requires the researcher to

acknowledge and demonstrate the logical processes that have brought them to this point

(Strauss and Corbin, 1998). Memos are therefore the vehicles that transport the

researcher from the concrete to the conceptual. (p. 71)

In this cycle of analytic memoing, I examined how the emergent themes in the data mapped onto

and complicated my original conceptual framework. I also outlined a series of analytic questions

based on these emergent findings, the study's research questions and conceptual framework, and

the relevant literature to focus my writing. The analytic questions included, but were not limited

to, the following: What was happening for participants as they participated in and learned about

teaching practice and themselves as teachers? How did participants describe the process by

which they came to new insights, contemplations, and/or questions about teaching or themselves

as teachers? What was salient to participants about the instructional experiences that led to such

learning? Was the nature of their experiences as university instructors changing in particular

ways and, if so, what factors and experiences contributed to these changes? In what ways did the

literature and guiding theoretical framework help (or not help) me interpret these patterns?

Saldana (2009) advises that a primary purpose of analytic memoing is to ". . .document

and reflect on: your coding process and code choices; how the process of inquiry is taking

shaped; and the emergent patterns, categories and subcategories, themes, and concepts in your

data — all possibly leading toward theory" (p. 32). By the end of this memoing cycle, I had

crafted a set of evidence-based statements in the form of theoretical claims that responded to the

study's research questions and justified my revised conceptual framework. I introduce my

revised conceptual framework in Chapter 8.

Study Limitations

An important limitation of this study is the extent of what can be understood about the relationship between GTAs' learning through their instructional experiences and evolutions to their practices and identities as university instructors. As established at several points in my literature review, individuals continually reconstruct their teaching practices and identities. Accordingly, GTAs will continue to learn about teaching in the future and in turn, their existing instructional practices and identities will evolve beyond the last point of data collection in this study. Obtaining a comprehensive understanding of the full evolution of GTAs' skills and identities over one short period of time is therefore unlikely.

Constraining my study site to one institution, as well as to disciplines in the social sciences, also poses limitations of transferability. For instance, the research university in which GTAs were teaching prioritizes academic research and relies heavily upon graduate student instruction. Accordingly, this university and its respective departments have specific research and teaching expectations of their graduate students that may be less prominent in other types of academic institutions. Relatedly, structures of GTA appointments vary by academic field (e.g., teaching discussion sections in the social sciences versus leading lab sessions in the hard sciences) and course level (e.g., instructing general education versus graduate courses). Thus, this research cannot account for how differences in courses, instructional responsibilities, norms, and attitudes by academic field or level might differentially affect how and what GTAs learn about teaching or themselves as teachers through their participation in the practices of those communities.

As part of my recruitment process, I intentionally targeted GTAs who indicated some level of interest in a career that would entail teaching. My rationale for doing so was that such

participants were arguably more likely to aspire to form identities and pursue work as postsecondary instructors. However, by solely including individuals who fit this profile, I also decreased the likelihood of uncovering important elements of this learning process experienced by GTAs who were initially less drawn to teaching.

My study sample consisted of participants from academic disciplines that differed from my own. I had some experience navigating and interpreting different disciplinary norms, language, beliefs around teaching through my work as an instructional consultant through my university's teaching center. However, such differences could still result in misunderstanding or misinterpreting aspects of participants' experiences. To mitigate this possibility, I intimately familiarized myself with participants' teaching contexts through extended engagement with each participant and observations of their classroom instruction. Relying on participants to acquaint me with the less familiar aspects of their teaching practices also minimized my chances of making incorrect assumptions around their associated learning.

In the following section, I discuss how my study meets many of Tracey's (2010) markers of qualitative quality. Yet two primary threats to validity remain: 1) the authenticity and accuracy of participant responses, and 2) the implications of GTAs' participation in this study on their learning as teachers.

Authenticity and Accuracy of Participant Responses

It is possible that participants were prone to respond to interview and journal questions in ways they believed would please me or enhance my assessment of their teaching abilities. To reduce this possibility, I routinely reminded participants that there were no "right" or "wrong" answers to my questions and that my primary interest was their own interpretations of and learning from their instructional experiences. However, this directive also presumes that

participants have a certain mature capacity that allows them to identify and articulate experiences that yield insights into how they perceive the work of teaching and themselves as teachers. In an effort to promote such reflection and elicit responses rich in detail, I posed tailored interview questions to each participant grounded in examples of their unique instructional experiences that I gleaned through classroom observations and their audio journals.

Studies that rely heavily upon recall of experience are subject to concerns regarding the accuracy of such recollections. However, threats to validity as a result of the accuracy of participants' memories of their teaching experiences were minimal. The timeframe for the study and the use of multiple interviews and audio journals provided opportunities to repeatedly prompt participants to reflect on notable experiences associated with their teaching closely after the actual experience took place. More importantly, however, my intent was not to evaluate participants as teachers. As a result, I was less concerned with the *accuracy* of their reflections than the *implications* that GTAs' reflections held for how they perceived their work and themselves as teachers. My objective was not to assess the quality or effectiveness of GTAs' teaching. I did, however, remain attuned to and inquire in interviews about potential contradictions between participants' articulated beliefs around teaching and actual classroom behaviors. My aim in doing so was to better understand potential tensions between GTAs' aspirational and actual teaching practices and identities. The coupling of repeated questioning with classroom observations facilitated this understanding.

Learning as a Result of Study Participation

Finally, there is general consensus that reflection plays a key role in the (re)formation of teacher identities (e.g., Beauchamp & Thomas, 2009; Sprague & Nyquist, 1999). Several participants indicated that they arrived at a number of insights about teaching and themselves as teachers as they reflected upon the questions that I posed in the interviews and audio journals. It is therefore unclear whether GTAs' learning from various instructional experiences would have occurred otherwise or at a different time if they had not participated in these reflective exercises.

Trustworthiness

In her highly cited article on criteria of excellence in qualitative research, Tracey (2010) puts forth a framework to help qualitative researchers convey the value of their work. The framework outlines various markers of "qualitative quality" (p. 838), including but not limited to: worthiness of topic, coherence of study, rigor of research methods and analysis, credibility of findings, researcher sincerity and ethics, and significance of contribution. I use Tracey's framework below to organize and communicate the strengths of this study.

Worthiness of Topic

Tracey (2010) maintains that "good qualitative research is relevant, timely, significant, interesting, or evocative" (p. 841). As evidenced by my assessment of the literature, there is a lack of empirical research that examines how doctoral students' instructional experiences implicate their learning as teachers and associated practices and identities. My study sought to contribute to our understanding of this phenomenon.

Coherence of Study

Research with meaningful coherence (Tracey, 2010) exhibits clear interconnections among the literature and the study questions, design, and findings. My research questions and conceptual framework were based on a set of theoretical constructs and empirical findings derived from the relevant literatures. My methodological approach followed from the conceptual underpinnings of the study as well. For example, I recruited study participants who were sociodemographically diverse so that I could attend to intersections between GTAs' social identities and insights as teachers. Selecting participants from a small subgroup of social science fields also allowed me to use situative learning theory to situate GTAs' instructional experiences within a relatively similar set of academic disciplines. My conceptual framework further guided the development of the questions that I asked participants in the audio journals and interviews. As an extra measure of assurance, I used the aforementioned "crosswalk" table (See Appendix H) to confirm that this inquiry directly linked to the study's research questions.

Similarly, my methodological choices cohered with the epistemological assumptions of social constructivism and phenomenology. To better grasp the phenomenon under investigation, I encouraged GTAs to share stories they constructed about their "lived experiences" as university instructors. This in-depth qualitative and exploratory approach equipped me with a deeper understanding of how the meaning that GTAs ascribed to their instructional (i.e., "lived") experiences and contexts shaped their learning as teachers. I practiced additional due diligence when situating the study findings in pertinent literatures and clearly articulating how the data answered the research questions.

Rigor of Research Methods and Analysis

Tracey (2010) argues that rigor is a requisite but not a determinant of quality research. She proceeds to outline several indicators of rigor in qualitative research, including saturation or the accumulation of enough compelling and significant data to substantiate one's claims. I employed several methods to reach saturation in my data collection and analysis. The frequency, proximity, and duration of my interview and audio journal activities provided ample opportunity to surface comprehensive accounts of GTAs' teaching-related learning through repeated inquiry in a variety of formats over the course of the semester. Between each round of data collection, I coded and analyzed the data. This cycle eventually led to a point of saturation in that I no longer identified additional codes or emergent themes in the data (Saunders et al., 2018). As I demonstrate in Chapter 7, I also integrated multiple theoretical perspectives to guide my interpretation of the study findings. In doing so, I exercised further rigor by adopting a multifaceted theoretical framework that prepared me to "see nuance and complexity" (Tracey, 2010, p. 841) when analyzing an abundant amount of data.

Individuals who maintain rigor in their research make their analytic work transparent to others (Tracey, 2010). I adhered to principles of transparency in my data reporting and analysis in several ways. Earlier in this chapter, I outlined the process by which I organized and evaluated my data in detail in order to make my analytic approach clear to readers. I also practiced transparency when using analytic memos as a springboard to document, communicate, and reconsider my interpretations of the study data in individual reflection and conversations with fellow researchers. Birks, Chapman, and Francis (2009) speak to such efforts when describing memo writing as an analytic strategy that allows researchers to "achieve abstraction while remaining true to the data" (p. 74) and to sustain open communication with other stakeholders in

a study. I, too, "remained true" to my data by writing extensive and timely analytic memos to articulate my initial musings on and evolving arguments about the study data to my dissertation chair. In these exchanges, my chair offered alternative explanations of emergent patterns, challenged my assumptions, and posed questions to help me interpret my findings through a theoretical lens. This ongoing dialogue was invaluable to deepening my understanding of the study data, uncovering biases that shaped my analysis, and clarifying my thinking around potential theoretical claims.

I made my interpretations of the study data further apparent when discussing my work in writing groups and consultations. For example, I participated in a dissertation writing group comprised of doctoral students who were also in the process of analyzing and reporting their dissertation findings. I presented elements of my analysis to group members, who questioned and offered suggestions on how to improve the clarity, soundness, and logic of my developing arguments. Additionally, I held routine consultations with a faculty member at my university's writing center throughout all phases of my dissertation. As such, this professor became quite familiar with my study topic, data, and analysis and gave feedback at each stage of my dissertation writing process. Hence, in addition to holding myself accountable to standards of transparency, debriefing my study data with academic colleagues helped me refine and corroborate my analytic assertions.

I verified my study findings and claims in other ways as well. For instance, I re-read the data excerpts affiliated with each study finding several months after creating the matrices of emergent patterns. Revisiting these excerpts at a later date enabled me to view the study data with fresh eyes and a more evolved understanding of the study participants. I also made several adjustments to my claims about the study findings based on this later read of the data.

Credibility of Findings

Tracey (2010) defines credibility as the "trustworthiness, verisimilitude, and plausibility of the research findings" (p. 842). One practice that aids qualitative researchers in obtaining credibility is producing thick descriptions or "in-depth illustration(s) that explicate culturally situated meanings (Geertz, 1973) and abundant concrete detail (Bochner, 2000)" (Tracey, 2010, p. 843). My recursive approach to collecting and analyzing the study data permitted me to craft customized interview questions grounded in participants' actual instructional experiences. I also drew upon classroom observations to elicit illustrative details from participants based on specific and tangible examples from their own instruction. This multipronged methodological approach, coupled with ongoing memoing, positioned me to capture rich, first-hand accounts of GTAs' authentic instructional experiences and mitigate the possibility of making assumptions about their teaching-related learning.

Tracey (2010) identifies methodological triangulation as another indicator of research credibility because multiple "methods of analysis allow different facets of problems to be explored, increases scope, deepens understanding, and encourages consistent (re) interpretation" (p. 843). I used methodological triangulation to increase the credibility and validity of my research findings and claims as well. In his writing on strategies of multiple triangulation, Denzin (1989) outlines two forms of methodological triangulation: "within-method" or single method triangulation and "between-method" or multiple method triangulation (p. 243). Denzin proceeds to describe between-method as the most effective form of methodological triangulation because it combines dissimilar methods and, in doing so, permits researchers to capitalize on the strengths and overcome the shortcomings of each distinct method. My study employed a between-method form of triangulation consisting of interviews, audio journals, a social-identity-

in-teaching instrument, and classroom observations. Implementing multiple methods permitted me to compare and contrast notes from classroom observations, audio journals, and interviews to identify connections and discrepancies in participants' individual and collective instructional experiences. This design also enabled me to make claims about the study sample and data based on a fairly comprehensive view of participants' lived experiences as GTAs because each method yielded "a different picture and slice of reality" (Denzin, 1989, p. 246).

Researcher Sincerity and Ethics

Researcher sincerity is "marked by honesty and transparency about the researcher's biases, goals, and foibles as well as about how these played a role in the methods, joys, and mistakes of the research" (Tracey, 201, p. 841). One tactic that I used to establish such sincerity was practicing ongoing reflexivity throughout my study. As noted in my positionality statement, I continually questioned and pushed myself to consider how "who I am" as a person implicated how I thought, acted, and was perceived as a researcher. In addition to ongoing reflection and memo writing, I contemplated my inherent inclinations and values through conversations with faculty and peers. My dissertation chair and I regularly examined various assumptions underlying my forming thoughts and arguments about my study data. I also assessed these matters with members of my dissertation writing group, many of whom hailed from other academic disciplines and held different social identities than me. I found these distinctions to be a great asset, particularly when peers approached my research from alternative academic and personal lenses. In addition to encouraging me to view my data from novel perspectives, my peers' questions and feedback often led me to identify unbeknownst biases and presumptions that accompanied me to my research.

Procedural ethics refer to ethical behaviors and decisions like participant safety, rights, and confidentiality as determined by organizational bodies like Institutional Review Boards (IRB) (Tracey, 2010). I took a number of steps to observe ethical standards and procedures throughout my research process. I secured IRB approval for my study prior to recruiting participants. As part of my recruitment process, I explained to potential participants that I would take considerable measures to uphold the principles of confidentiality in the storage, analysis, and production of any materials or presentations that resulted from the project. One method included storing all study data in deidentified form in a password-protected folder on Dropbox accessible only to me and my research supervisor. Likewise, I used pseudonyms for study participants and was very cautious to remove potential identifiers (e.g., course names, country of origin, name of former academic institution) in all final reports. As stated prior, each participant also completed a consent form that described the focus and intentions of my research, study participation as completely voluntary, and the nature and timeline of all participant activities.

Another marker of ethical research is transparency in terms of "honesty about the research process" (Tracey, 2010, p. 842). I demonstrated such transparency in several ways. For starters, I made key components of my research process available in my appendices. I also documented and disclosed unexpected situations, insights, and changes associated with my research activities and choices in reflective memos and ongoing communications with my dissertation chair, respectively. Examples of such occurrences include alerting my dissertation chair to the following: 1) that I lost a portion of an interview due to a technical glitch with my audio recorder, 2) that certain codes did not accurately capture the tagged data excerpts and that I struggled to distinguish various elements of teaching practice from teacher identity in my coding process; and 3) that I felt it necessary to incorporate more targeted and probing questions in

subsequent interviews and audio journals to better focus participant responses and extract more concrete examples of their teaching-related learning.

Significance of Contribution

A final benchmark of quality qualitative research is the contribution(s) of the study (Tracey, 2010). As I discuss in detail in Chapter 8, my study findings have theoretical, methodological, and practical significance. In addition to "extending, building, and critiquing disciplinary knowledge" (Tracey, 2010, p. 846) about the GTA experience, my revised conceptualization of the process by which GTAs construct identities as teachers offers directions for future research and theory-building. This study also has methodological significance in that it may introduce and acquaint others with forms of data collection uncommon to studies on graduate student instruction. These methods include the use of audio journals to collect rich narratives that reveal the meaning that GTAs ascribe to their instructional experiences in a nonintrusive manner and at frequent intervals, as well as a social-identity-in-teaching instrument to assess how GTAs' personal identities were implicated in their teaching. Finally, this research offers practical suggestions to enhance GTA training programs and various aspects of their teaching assistantships.

Conclusion

In this chapter, I provided an overview of key elements of the study design, including the research site, my recruitment process and the resultant sample, and my data methods and collection. I then discussed in detail how I organized and analyzed the study data by describing the development of my codebook and the critical role of memoing in my data analysis. I

concluded by outlining several limitations of the study, as well as the many precautions that I took to enhance the trustworthiness of my results and conduct my research in an ethical manner. In Chapters 5 and 6, I summarize what I learned in response to the study's research questions through these data collection and analysis efforts.

Chapter 4: Study Contexts and Participants

In this chapter, I describe the university setting in which the nine ($n = 9$) participants in this study were teaching and learning as first-time graduate teaching assistants (GTAs). I then briefly introduce the participants by providing an overview of their pedagogical aims and concerns at the onset of their teaching term.

Educational Environment and Preparations for Teaching

The focus of my research inquiry was what GTAs learned about university instruction and themselves as teachers through their participation in the teaching practices of their academic disciplines and institution. Of particular interest was how the academic contexts in which GTAs were teaching, as well as their social identities and student experiences, informed this learning. In the paragraphs that follow, I describe the institutional environment in which the participants in this study were working as first-time university instructors as a way to establish a shared understanding of how various facets of this broader context gave shape to the nature of this work.

Each GTA in this study was a doctoral student teaching at a Research-1 (R1) Doctoral University, a classification that applies to institutions with "very high research activity" and that award at least 20 research/scholarship doctoral degrees or at least 30 professional practice doctoral degrees in at least two programs annually (Carnegie Classifications, 2021). The GTAs' University, henceforth referred to as "the University," is one of the largest producers of academic research and doctoral degree holders among all U.S. universities (National Science Foundation, 2021).

Doctoral students play a critical role in the University's research engine. Each year the University enrolls roughly 16,000 graduate students, who comprise one-third of the overall student body.[14] The University is particularly known for its robust graduate student training and production of doctoral degree holders (National Science Foundation, 2021). A key component of the University's doctoral training is engaging in faculty research projects and this work constitutes a substantial portion of many doctoral students' academic responsibilities.

In addition to its massive research output, the University has a longstanding national and international reputation for academic excellence. National and international rankings regularly recognize the University as a top-ranked postsecondary institution (U.S. News & World Report, 2021; Times Higher Education, 2021). The University's flagship campus enrolls undergraduates from across the United States and over 100 countries and has a highly selective admissions process. Admitted students tend to rank at the top of their high school classes and to score in the 90th percentile on standardized college entrance exams. The majority of the University's students are White and less than twenty percent of the student body identify as first-generation students or are eligible for Pell Grants (i.e., federal financial aid reserved for low-income students). Additionally, nearly half of the University's undergraduates are out-of-state students for whom annual tuition hovers around $50,000. As these statistics suggest, the students at the University tend to be very high-achieving, and the majority of them hail from middle- and upper-income White families.

As is the case at most research universities, graduate students play a critical role in the delivery of the University's undergraduate instruction (Austin, 2002; Friedman, 2017). The University's undergraduate curriculum requires the completion of general education courses,

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[14] The description of the University's study body is based on information made available through a reputable public website. I do not cite this website in order to maintain confidentiality promised to study participants.

which are frequently offered in the format of large professor-led lectures accompanied by smaller graduate student-led discussion sections. These general education courses are required of all of the University's undergraduate but primarily enroll first- and second-year students. Additionally, the University requires its undergraduates to take general education courses within and outside their academic majors. Subsequently, GTAs assigned to these general educational courses often teach students with varying levels of familiarity with and interest in the subject matter at hand.

In sum, doctoral students play a prominent role in the University's research production and instructional delivery. These students are further expected to execute such responsibilities in the contexts of a R-1 university with a longstanding history of and renowned reputation for its commitment to research productivity. The emphasis that research institutions like the University place on scholarly output – and often at the expense of teaching and undergraduate education – is well-established in the higher education literature (Shapiro, 2009; Bowen & McPherson, 2016). As such, it is important to consider how institutional values around research might also shape the University's prioritization of other academic activities, such as undergraduate education and the training of its graduate teaching assistants, as well as the messages that its doctoral students receive about balancing their research and teaching responsibilities.

The Participating GTAs

As previously explained, study participants represented a diverse set of racial, ethnic, and gender identities across six disciplines in the social sciences. Participants' racial and ethnic identities included four students who identified as White, one who identified as White and Latino, and one each who identified as Black, Middle Eastern, Middle Eastern and North African, and South Asian. Three participants identified as international students; the rest were

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U.S. domestic students. Five participants identified as men, two as women, and two as non-binary. With the exception of one third-year PhD student, participants were entering the second year of their doctoral studies. Seven of the nine participants held undergraduate and/or master's degrees in fields related to their doctoral studies from research universities in the United States. Two of the international participants earned their prior degrees in their countries of origin.

Table 4.1 summarizes participants' demographic and academic backgrounds. Each participant was teaching a course in a department in which they were pursuing their doctoral degree. One participant, who was a dual degree doctoral student in psychology and women and gender studies, was teaching in the department of psychology. Although several participants taught general education courses in the same department, each GTA was assigned to a different course (e.g., no participant taught the same course as another participants). Thus, every participant was teaching a different course at the time of this study.

Table 4.1.

Participants' Demographic and Academic Backgrounds

Participant Pseudonym	Academic Discipline(s)	Earned Degrees	Institution Type Previously Attended	Gender & Preferred Pronouns	Self-reported Race
Amir	History	BA in History, MA in History & Philosophy	International public research university	Man, he/him	South Asian
Charlotte	Psychology, Women's & Gender Studies	BA in Psychology, BA in Women's Studies	Public research university	Non-binary, they/them	White
Emma	Sociology	BS in Public Health, BA in Women's & Gender Studies (double-major)	Public research university	Non-binary, they/them	Black
Harper	Anthropology	BA in Anthropology	Private research university	Woman, she/her	White
Jakob	Political Science	BA in Political science, minor in statistics	Public research university	Man, he/him	Latino, White
Jessie	Political science	BA in Political Science & Middle Eastern studies	Public research university	Woman, she/her	White
Kai	History	BA in Political Science, BA in History	International public research university	Man, he/him	Middle Eastern
Kolby	Political Science	BS in Economics, BA in Political Science	Public research university	Man, he/him	Middle Eastern, North African
Parker	Communication Studies	BA in Psychology	Public research university	Man, he/him	White

Table 4.2 provides an overview of study participants' teaching preparations and appointments. Each GTA in this study completed a mandatory one week, university-wide teaching orientation program several weeks before assuming their teaching appointments. Explained in greater depth in Chapter 3, this programming provided the platform by which I

recruited study participants. In addition to this initial teaching orientation, six of the study participants enrolled in a concurrent teaching course offered through and required by their academic departments during the semester in which they were teaching. Three of these participants were in teaching courses offered by the department of political science, two in history, and one in communications. A seventh participant voluntarily enrolled in a diversity and inclusion teaching certificate offered through the graduate school, which also took place during the teaching semester. Thus, seven of the nine GTAs participated in an additional pedagogy course (i.e., beyond the university-wide teaching orientation program) during the teaching semester under study.

Further outlined in Table 4.2, participants led a discussion section for a general education course in one of the following social science disciplines: political science, history, anthropology, communication studies, sociology, and psychology. Each course consisted of a weekly lecture and discussion sections, and all participants worked under the supervision of an instructor of record. Six participants were members of teaching teams that consisted of three to five GTAs each. However, three participants served as the sole GTA for their course of instruction. All GTAs, irrespective of the structure of their teaching team, held the following responsibilities: leading two to three weekly discussion sections, preparing instructional materials, holding office hours, and grading students' academic performance. GTAs' instructional authority in each of these areas of their teaching practice varied by appointment; these differences will be discussed in greater depth in Chapters 5 and 6.

Table 4.2.

Participants' Teaching Preparations and Appointments

Participant	Teaching Preparations	Course Discipline & Level	GTAs on Teaching Team	Number of Sections	Total Course Enrollment*
Amir	University-wide teaching orientation, departmental pedagogy course	History 200	1	2	48
Charlotte	University-wide teaching orientation	Psychology 100	4	3	300
Emma	University-wide teaching orientation	Sociology 300	3	2	90
Harper	University-wide teaching orientation, diversity & inclusion teaching certificate	Anthropology 200	1	3	75
Jakob	University-wide teaching orientation, departmental pedagogy course	Political Science 100	4	3	240
Jessie	University-wide teaching orientation, departmental pedagogy course	Political Science 100	5	3	75
Kai	University-wide teaching orientation, departmental pedagogy course	History 200	5	2	300
Kolby	University-wide teaching orientation, departmental pedagogy course	Political Science 100	3	3	260-280
Parker	University-wide teaching orientation, departmental pedagogy course	Communication Studies 300	1	3	75

*Anticipated student enrollment across all sections based on previous year's enrollment numbers. Prospective study participants provided anticipated class numbers on their Intake Forms (see Appendix C) at the time of recruitment.

Doctoral students at the University typically work in either a research, teaching, and/or administrative capacity to receive academic funding and a living stipend. The process by which academic departments assign doctoral students to these positions varies across the University,

and students have variable levels of input into their assignments. On their study intake forms (see Appendix C), GTAs indicated whether they a) elected to work as a graduate teaching assistant from the appointment options made available to them through their department, or b) would have preferred to work in a different capacity, such as a research assistant. Of the nine participants, six opted to serve as GTAs for their Fall 2019 appointment. These GTAs indicated that they were looking forward to their work as instructors and anticipated that teaching would be a core component of their professional work after graduation.[15] The three participants who did not choose to work as GTAs for their academic appointments indicated that they were less enthusiastic towards their upcoming instructional responsibilities and would have preferred to work as research assistants and/or taught a course more directly related to their research interests.

Introduction to Study Participants

In this section, I introduce each study participant. To do so, I provide a high-level overview of what participants identified as their prominent pedagogical beliefs, aims, and concerns in our first interview. These conversations intentionally took place several weeks into the semester in which GTAs were teaching so that participants had some exposure to their instructional roles prior to our initial discussion.

Amir

At the onset of his teaching term, Amir was a second-year PhD student in history and the sole GTA for a three-credit, two-hundred level course in the history department. Amir was eager to teach and opted to work as GTA for his academic appointment that semester. He also

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[15] Study participants indicated the extent to which they were looking forward to their teaching responsibilities and anticipated teaching to be a central component of their professional work after graduation by selecting responses on the Intake Form based on a Likert Scale with 1 being "very little," 5 being "very much.".

anticipated pursuing a career after graduation that entailed university instruction. Amir is a South Asian man and holds a bachelor's degree in history and master's degrees in history and philosophy from an international regional university.

Amir indicated that he would view the semester as a success if he could cultivate students' appreciation for studying history, particularly the value of examining specific historical events as a way to critically assess contemporary politics. Amir was pleasantly surprised that his accent did not present any barriers in his instruction or to students' learning. However, Amir was spending more time than he anticipated acquainting himself with the course material because he had limited exposure to many of the topics as an undergraduate abroad. As Amir explained:

> Ethnicity is important because I [am South Asian and] specialize in South Asian history. So, when I'm teaching a world history class, there are a lot of moments I'm not familiar with . . . ethnicity becomes important because of the kind of discipline and the kind of class that I'm doing. It might be that if I was teaching a different class, it wouldn't be so important.

Amir felt particularly insecure about his knowledge of the subject matter when grading students' first homework assignments. As he shared, "I become extremely self-conscious. I have five books open . . . Wikipedia open on my laptop to make sure that I'm not doing any wrong to this particular person's paper."

Amir formed his first friendships with members of the LGBTQ+ community upon moving to the States for his doctoral program — something he found notably more difficult in his home country given that homosexuality was criminalized until recently. Amir had also recently become more aware of issues of gender discrimination through the #MeToo

movement.[16] He credited these experiences for his newfound awareness that as a heterosexual male, he might not find specific topics as triggering as his students who were women or part of the LGBTQ+ community. As such, one of Amir's aims for the term was to push himself to continually consider the perspectives of marginalized groups and facilitate conversations around sensitive subject matter with intentionality. While he wanted students to view him as approachable, Amir and fellow GTAs in his pedagogy course concluded it's best not to overly concern yourself with students' opinions of you as an instructor.

Charlotte

Charlotte was assigned to teach an introductory psychology course and felt very uncomfortable instructing a class that they had never taken as an undergraduate. As an instructor, Charlotte believed it was imperative to "be the authority on everything." Yet at the same time, Charlotte had little time or desire to become an expert on this subject matter. A dual-degree doctoral student in women's studies and psychology, Charlotte would have much preferred to teach in women's studies or work as a research assistant. Yet the department assigned them to a four-credit, one-hundred level psychology course as one of four GTAs through a process that Charlotte equated to a "black box" in which few students knew why they selected to teach various classes.

Charlotte was in the second year of their PhD and identified as White and non-binary. They also held bachelor's degrees in psychology and women's studies from a public research university. A satisfying teaching semester for Charlotte would entail engaging students in good discussions in a space they found safe and welcoming. Charlotte felt it further important that

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[16] The #MeToo movement is a global social movement about sexual violence (https://metoomvmt.org/get-to-know-us/history-inception/).

students learn something "valuable" or applicable to their lives. As Charlotte explained,". . . [from] a women's studies, feminist perspective, there's such a politics there behind whose time matters and who gets to decide what that time is filled with." As a recent undergraduate, Charlotte only recently knew what it was like to be on the other side of activities that were simply "busy work" and did not want to impose those requirements on their students. They further empathized with the multiple hurdles facing low-income students like them and tried to clarify aspects of college that Charlotte found foreign as an undergraduate, like the value of office hours. Charlotte also experienced challenges of anxiety and depression and openly shared the benefits they reaped from seeing a therapist with their students as a way to emphasize the importance of tending to one's psychological health.

Charlotte believed that age would be an advantage in classroom relations and management. As Charlotte reasoned, "I can leverage the fact that I'm anywhere between five to ten years older than them as a point of similarity . . . [and also] as a place to position myself as someone of authority . . ." Charlotte was the only person in any section to use "they/them" pronouns, which led them to suspect that there "may be a lot of eyes on me." Relatedly, it seemed to Charlotte that the predominately male section was more judgmental of them. Charlotte further sensed that men in that class thrust more feminine expectations upon them in terms of the support and information they expected Charlotte to "give" them.

Emma

At the onset of the teaching term, Emma was starting the third year of their doctoral program in sociology. Emma identified as a Black, non-binary person and was one of three GTAs teaching a four-credit, three-hundred level sociology course for the term. Although Emma

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looked forward to teaching two sections, they would have rather worked as a research assistant and did not foresee wanting teaching to be a significant part of their professional work after graduation. Emma held bachelor's degrees in public health and women's and gender studies from a public research university.

Emma's foremost priority as GTA was to convey to students ". . . to be more diligent in taking care of themself because academics just aren't as important as taking care of your own body . . ." As Emma reasoned, students would not succeed academically if they were ". . . falling apart or in the hospital from stress." As a fellow student, as well as someone with a history of mental health challenges, Emma empathized with students' mental exhaustion and wanted to assure them that well-being took precedence over school.

With respect to learning outcomes, Emma hoped to observe some form of progress in students' understanding of the material while also communicating that it was "OK to struggle" through the learning process. Emma had personally experienced many of the challenges facing low-income and first-generation students. Accordingly, Emma made a point to highlight campus resources that might slip under their students' radar, even though it was evident to them that most students were from wealthier families and had previously attended private schools.

Prior to the start of the term, Emma made a list of instructional strategies and approaches used by undergraduate professors to replicate or avoid as GTA. For example, Emma did not like speaking up in class as a student and accordingly provided students different ways to earn participation points, such as by posting commentary to the class discussion board. Emma was also very intentional about explaining their motivations for using instructional approaches that they found off-putting, such as group work.

Although Emma was accustomed to "being the only Black person in the classroom," they were surprised that one section did not have any Black students. Yet, for the most part, Emma was not finding race to be as salient in their teaching as initially anticipated, which they attributed to the course not directly addressing issues of race. At the same time, Emma acknowledged that race and gender were always back of mind, especially when interacting with students who were men. When speaking to this point, Emma said, ". . . my teaching evaluations will probably be related to just being a black woman. We tend to get the worst teaching evaluations."

Emma had "heard" that students often viewed young GTAs as under-qualified and took them less seriously than older instructors. Emma was further concerned about teaching a sociology course, given that they were not a sociology major as an undergraduate. These apprehensions prompted Emma to state the following to students the first week of the term as a way to set expectations about their content knowledge and their responsibilities as learners:

> I know more about this content than you because I'm older and I've been doing this for a long time. But I'm still learning because I'm still young, so any questions you have, I might not know it, but we can figure it out together.

Students were receptive to Emma's encouragement to work together to identify solutions, a tactic that always worked well for them as a high school tutor. Students were also generally accepting of Emma's answers in class discussions and offered positive feedback on her teaching in office hours, which bolstered Emma's confidence in teaching subject matter that they were still learning.

Harper

Harper is a White woman in the second year of her doctoral studies. At the time of the study, Harper was pursuing her PhD in archeology, a sub-field within the department of anthropology, and teaching three sections as the sole GTA for a four credit, 200 level anthropology course. She opted to serve in this role and anticipated pursuing an academic career that would entail a substantial amount of teaching. Harper's teaching experience was limited to working as a philosophy tutor while pursuing her bachelor's degree in anthropology at a private research university.

As GTA, Harper's primary aim was for her students to enjoy the class. Harper also intended to model instructional approaches of professors she admired, particularly with respect to creating an engaging learning experience by pushing students to consider tough questions. She was also eager to serve in a mentoring capacity to students who wanted to pursue further studies in the discipline, such as by taking students on field studies, much like professors had for her. Despite this enthusiasm, Harper could not fathom that GTAs, who constituted "the majority of the teaching force on this campus," received a mere six hours of training prior to assuming their instructional responsibilities. Harper felt unprepared for her role as GTA and questioned whether students would view "a young woman" as knowledgeable as an experienced professor. Harper was also unclear how to establish that she was "in charge of this classroom," particularly when she was not an expert on the many class topics or a "trained teacher."

The course Harper taught during the period of this study satisfied the University's diversity requirement for undergraduates, and Harper believed that students should leave class with a deeper appreciation of this component of the course. However, Harper felt that she had learned very little about how to "teach about race" through her GTA orientation program.

Consequently, Harper decided to pursue a diversity and inclusion teaching certificate offered through the graduate school as a way to cultivate this pedagogical knowledge.

Harper described herself as a low-income student, who as an undergraduate attended a private institution that primarily enrolled individuals from wealthy families. It was clear to Harper that the majority of her students hailed from privileged backgrounds based on their comments in office hours and attire bearing names of various private college preparatory schools. As an instructor, Harper was empathetic to personal and academic challenges facing lower-income students like herself and wanted to be accessible to these students. She also wanted to create a supportive and welcoming atmosphere and often framed her efforts to create such a space by thinking about the type of learning environment that would be conducive for her sister, who was the same age as her students.

Jakob

Jakob identified as a White and Latino man and was in the second year of his PhD in political science at the start of this study. He looked forward to leading three discussion sections as one of four GTAs for a four credit, 100 level political science course for the term. Jakob opted to work as GTA for his academic appointment and was fairly certain that he wanted to pursue a career that entailed university instruction. As a doctoral student, Jakob took an active role in the University's graduate student union. Jakob had less than one year of prior instructional experience, which consisted of working as an online English and writing tutor, and had recently graduated from a public research university with a bachelor's degree in political science and a minor in statistics.

As GTA, Jakob aspired to foster students' excitement for learning about politics. He also wanted to debunk common misconceptions about his field of study. As Jakob explained, ". . . a

problem we in political science have . . . [is that] people come into it thinking we're going be discussing Donald Trump versus Hillary Clinton, and that's not really what we do . . ." Rather, Jakob wanted students to learn how to grapple with and critically assess complex course concepts "like political scientists." He further hoped the course would encourage students to look at the world a little differently and be critical of "what people really know," including himself and the professor.

As a student, Jakob always thought that faculty "had everything together." However, his experience thus far as GTA suggested that few people in research universities, including professors, knew much about teaching. Jakob subsequently figured he would be as well-positioned to teach as most junior faculty, who were clearly "still figuring it out." Jakob was reticent to ask for help with the subject matter, which was outside his area of expertise. He attributed such reluctance to fear that his department already viewed him as incompetent based on his academic and research performance as a doctoral student and did not want to advance that image of himself. As Jakob explained, "I don't want to look crappy. I don't want to look like I can't do anything right." In response, Jakob planned to "fake it 'til you make it;" a time-tested strategy that had served him particularly well in academia. Jakob also decided against telling students his age, which he reasoned could inform their treatment towards in him in one of two ways: students could be harsher and less respectful towards him, or they might be more forgiving of his shortcomings as an instructor.

Jakob believed that his age and fellow student status helped him put himself in students' shoes. He avoided assigning unnecessary work, which he never appreciated as a student. In his first weeks of teaching, Jakob further shared with his sections how he had recently overcome a series of psychological setbacks triggered by the pressures of graduate school. He also

highlighted campus resources that students could draw upon should they find themselves in similar circumstances. Jakob's personal experiences navigating college life with a physical (dis)ability also made him keenly aware of the restrictions of classroom spaces and the needs of one of his students who used a wheelchair.

As a low-income and first-generation student, Jakob wanted to serve as a resource to students in similar circumstances. He always appreciated professors who "put in the time" to assure students knew what they had to do to succeed in their class. Jakob wanted to carry this practice forward and encouraged students to meet with him to discuss their questions about the course, career paths available to political science majors, and the like. Jakob further stressed to his students, the majority of whom were first years, that they would fail regularly in college and be fine so long as they continued to put in the effort.

Several weeks into the term, it was clear to Jakob that " . . . a lot of these students are having an experience in undergrad very much unlike mine, where they're not having to have a job . . . buying the textbook is 'put it on dad's credit card.'" It was also becoming increasingly clear to Jakob that the University was "a more well-ranked school" than his undergraduate institution. Jakob was especially impressed by the quality of students' answers and their swift understanding of the material ─ so much so, that Jakob was beginning to question whether he was actually helping such driven and accomplished students learn anything. Jakob was also surprised to notice the insecurity he had about his sexual orientation in his role as instructor, as evidenced by his tendency to refer to his boyfriend as "my friend" when talking with students.

Jessie

Jessie was one of five GTAs teaching a three-credit, one-hundred level history course for the term. She was also in the second year of her doctoral work and identifies as a White woman. Jessie chose to serve as GTA and very much anticipated pursuing an academic career that would entail teaching after her doctoral studies. She graduated from a public research university with degrees in political science and Middle Eastern studies. Jessie had less than one year of teaching experience, which entailed instructing an orientation course to first year undergraduates in her former role as an academic advisor. In this role, Jessie frequently counseled students who were struggling academically because they never learned how to "do college" outside of class. Consequently, Jessie believed it was far more important that students gain knowledge and skills to help them succeed in college as a whole than receive high grades in her course. In her first weeks of teaching, Jessie was very intentional about making campus resources known to her students and encouraging them to meet with her in office hours to discuss their questions about course concepts or general college life.

A designated learning outcome for Jessie's course was for students to develop a more thorough understanding of the political system. In addition to obtaining this knowledge, Jessie wanted students to leave class with a firmer understanding of the practical aspects of political science like "how voting works." Jessie also intended to welcome and acknowledge difference around gender and across learning preferences as an instructor. She attributed these motivations in part to her twin sister, who faced numerous barriers as a non-binary student at a conservative institution and had a dramatically different learning style than Jessie.

Jessie was one of four women GTAs on her teaching team. The first day of lecture, the department head introduced the four women GTAs in what Jessie perceived to be a very

patronizing manner that almost made a case for their qualifications. Students in Jessie's section later that day reinforced these sentiments with comments like "Should you all be teaching? We're confused by that introduction that you had . . ." Jessie was warned by undergraduate professors who were women that gender "would come up in weird ways" in teaching but was surprised "to start off the class [by] addressing that issue." In the same class session, students further questioned Jessie's instructional qualifications upon learning that she was from and attended undergraduate in the South. Describing this interaction, Jessie said:

> I kind of lost some credibility to them in terms of me being intelligent . . . as soon as they knew what region I was from or what my university was, they didn't care . . . They asked me my experience with political science . . . and [a male student] said, 'Oh, well, what would you know about Arabic if you went to [that southern university]?' And there were some disparaging follow-up questions . . .

Since the occurrence, Jessie felt very hesitant to not "say something that's just blatantly wrong" when teaching that section. Jessie was also intentional to not portray herself as knowing something she did not in that class, particularly given that prevalence of "fact checking" instructors among students in political science.

Kai

Kai is an international student and identifies as a Middle Eastern man. At the time of this study, Kai had just begun the second year of his doctoral studies in history. Kai chose to serve as GTA for his academic appointment that term and was one of five doctoral students teaching a three-credit, two-hundred level history course. In his role as GTA, Kai looked forward to learning more about postsecondary instruction and anticipated pursuing a career that entailed a

substantial amount of teaching in his post-graduate work. Kai completed his undergraduate studies at an international research university and held degrees in political science and international relations, as well as in history.

When describing his motivations as an instructor, Kai shared how he was "turned on" to history when taking a similar course as an undergraduate. He subsequently hoped to foster such excitement for the subject matter among at least a few of his students. Kai also aspired to encourage students to become "different thinkers" by learning to historicize concepts and question beliefs they had previously taken for granted. As a teacher, Kai wanted his students to feel comfortable asking him questions about the material. Kai also avoided instructional approaches that he found off-putting as a student, such as cold calling, and allowed students to partake in practices he appreciated like following readings on one's laptop during class.

Kai was slightly concerned about the ramifications of appearing too close in age to his students, such as students taking him "less seriously since I'm not that old." Yet Kai also acknowledged that the proximity of their ages could carry benefits, such as students viewing him as more approachable than older faculty. As an international student, Kai further questioned whether his accent would shape students' perceptions of his competence, as he frequently needed to pause and recalibrate his thoughts when presenting course material due to the language barrier. It seemed to Kai that some students were not very friendly to him, which he thought might be related to students' higher socioeconomic status. Kai sensed he was teaching a very privileged student body noting further, "It's not something I can quite put my finger on, but my undergraduate environment was different from the undergraduate environment here . . . behaviors I would expect or I had in my undergrad that I don't see and vice versa."

Kolby

Kolby is an international student and identifies as a Middle Eastern and North African man. At the time of this study, Kolby was in the second year of his doctoral work in political science and pursuing a specialization in comparative politics. For his first term as a university instructor, Kolby was one of three GTAs teaching a three-credit, one-hundred level political science course. He chose to serve as GTA for his academic appointment and highly anticipated that teaching would be a part of his future professional work. Kolby completed his bachelor's degree in economics and political science at a public research university in the United States and his only prior teaching experience consisted of grading papers and holding office hours as a teaching assistant when studying abroad one semester. Like Jakob, Kolby also belonged to and frequented meetings of the University's graduate student union.

When it came to his instructional responsibilities, Kolby shared, "I like teaching. I don't like teaching this subject, it's so boring. . .it's just really important to me that I enjoy this stuff . . ." Kolby also felt ill-equipped to teach many issues addressed in the course. To illustrate this point, Kolby shared the following example:

> I just learned how parliamentary systems work. I even joked to my friends, 'if these kids knew how little their instructor knows about this area.' I had no idea how the UK parliamentary system works, but I have to lecture on it.

Despite such limitations, Kolby was reticent to allocate more time to learning the course material given that he was warned by faculty and peers on multiple occasions that "all first-time GTAs spent too much time on their teaching."

As GTA, Kolby wanted students to become better at processing political information and to grasp "baseline stuff" like "how democracy works" and "the facts of what [he was] teaching."

Kolby's foremost goal was for students to develop an interest in politics. He would find it especially fulfilling if students became "political junkies" and to make a difference in one or two students' academic choices, much like one of his undergraduate GTAs who "essentially put [him] on the path to grad school."

A shy student himself, as well as a person of color, Kolby placed great importance on creating an environment in which students of color and his more reserved students felt comfortable participating in discussions. Kolby was also very attuned to how gender dynamics might prevent women from sharing their ideas or asking questions in class. When Kolby moved to the United States from abroad eight years earlier, he worked very hard on "getting rid of his accent . . . [as a way to] hide his foreignness." As an instructor, Kolby was hesitant to share his international background with students out of concern that students might not like people from his country. Kolby suspected that his ethnic identity would become more salient when the class discussed political conflicts that pertained to his country of origins. Kolby further questioned how students would react if he decided to reveal his age to them at the end of the term.

Parker

Parker is a White man and was in the second year of his PhD Program in communication studies. Parker held a bachelor's degree in psychology from a public research university and was working as the sole GTA for a four-hour, three-hundred level course that linked communications and psychology. Parker did not choose to work as GTA for his academic appointment and reported that he would rather have gained additional research experience or taught a course more related to his research interests. Parker was also uncertain whether he aspired to pursue a career that entailed teaching for his long-term professional work.

As GTA, Parker wanted to avoid the "stern professor vibe," which always intimidated him as an undergraduate. He also thought it best not to share his age with students reasoning, "I'm not willing to potentially sacrifice all my authority in the classroom." Parker further recognized that "humor only works in a space of learning if it's backed up by actual useful material and credibility" and questioned whether revealing his age might undermine his qualifications and abilities to use humor in his instruction.

Parker suffered from public speaking anxiety, which he mentioned to a professor who advised Parker that "There's no reason to be anxious because simply by being a grad student here, you're light years ahead of them already." At first, Parker thought this remark was unhelpful but has also found this to be the case. Parker was further relieved to not have any non-traditional students in his class, which his mother advised could create complicated power differentials based on her experience as an adjunct professor. Parker was further aware that his status as male instructor in a predominately female discipline might position him as a dominant force in the classroom, but he hoped that his age might help remove some of those power differentials.

Parker had several students of color in his class and indicated that he tried to remain cognizant of how he might inadvertently disadvantage people based on race, privilege, or certain cultural experiences through his instruction. Parker did not find race to be especially salient in his teaching as of yet because ". . . there are just so many White people [here]." However, Parker also anticipated that issues around race and his identity as a White man would become more prevalent when the class addressed topics like "violence in the mass media" given that "an unfortunate reality is that Black people are generally portrayed as much more violent…"

Parker's best experiences as an undergraduate student were with professors who made themselves available to explore his innate curiosities. As an instructor, Parker wanted to help students achieve their own goals for the course, which he believed that "99% of the time was [just] passing or some letter grade above passing." Yet Parker acknowledged that this mindset may be less prevalent among the University's students, who he perceived as generally higher-achieving than students at his undergraduate institution. Parker was also quick to notice differences between his own and students' socioeconomic background. Speaking to this point Parker stated, "The students here are very wealthy, and I did not grow up that way."

Parker had numerous conversations about college teaching and "what works and what doesn't" with his mother over the years. These discussions, in conjunction with his own educational experiences, led Parker to believe that students should have a clear sense of what is required of them to succeed in a class. As GTA, Parker found himself frequently contemplating how to assess engagement in an equitable manner given that the instructor of record planned to grade everything, including student participation, on a curve.

Summary

At the onset of the term, all the study participants expressed some degree of unease with their general instructional preparedness and/or lack of expertise in the subject matter they were teaching as first-time GTAs. Participants' early instructional experiences also made it evident to GTAs that they were teaching very high-achieving and capable students, which led some GTAs to contemplate their own educational preparations. GTAs further questioned how their age and lack of faculty status, as well as various marginalized identities – namely, gender and race – might informs students' perceptions of their competence as instructors and willingness to treat them with respect.

As new instructors, GTAs tended to foreground particular ways of thinking about their teaching responsibilities. While some participants viewed teaching as a means to introduce students to their disciplines, others wanted to ensure students enjoyed the learning process and attained something of personal or practical value by taking their course and some embraced more than one of these instructional goals. In addition to advancing specific learning outcomes, all GTAs believed it was incumbent on them as teachers to create conditions conducive to student learning, engagement, and success. In their dual-role as students, GTAs were sensitive to the pressures of academic life and various challenges that students holding marginalized identities might face in their academic pursuits. Attentive to how their own positionalities had impacted their undergraduate experiences, these GTAs felt it important that they create supportive, inclusive, and equitable learning environments. Yet GTAs were uncertain how to put such conditions in place, particularly when teaching a predominately White and wealthy student body. Several GTAs also felt that the salience of their race and ethnicity in their work as instructors was closely tied to the extent that course materials addressed issues of race, power, and bias.

As these emergent patterns suggest, GTAs' early instructional experiences led them to form new beliefs and questions about teaching "this class, these students, and in this university." Furthermore, many of these beliefs were often associated with GTAs' social identities and experiences as students. In the following chapter, I describe what GTAs learned about addressing and advancing their pedagogical concerns and aims, respectively, as they participated in the teaching practices of their academic disciplines and institution. More explicitly, I examine how this "participation" took place in the form of "instructional experiences" that led GTAs to new insights about teaching and themselves as teachers. In doing so, I demonstrate that GTAs' interpretations of these instructional experiences were inextricably linked to the contexts in

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which they were teaching. I also consider the influence of GTAs' social identities and experiences as students on this learning.

Chapter 5: What GTAs Learned about Teaching and Themselves as Teachers

My analysis of the study data indicated that GTAs learned about three overarching areas of their teaching practice through their instructional experiences: 1) teaching environment and preparations, 2) students as learners, and 3) evaluation and assessment. In Table 5.1, I summarize what GTAs learned in relation to these three overarching areas of teaching and identify the ways in which GTAs' experiences as students became salient in this learning.[17] In the sections that follow Table 5.1, I provide detailed descriptions of GTAs' insights about each of these areas of teaching practice by highlighting specific instructional experiences that led to this learning. These examples illustrate various ways that GTAs' own experiences as students became salient in what they were learning about teaching as well. I also discuss the implications of such learning for GTAs' evolving pedagogical knowledge, beliefs, and behaviors (i.e., teaching practice) and conceptions of themselves as teachers (i.e., teacher identity).

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[17] I address the salience of GTAs' social identities in their teaching in explicit and great detail in Chapter 6.

Table 5.1.

What GTAs Learned about Teaching Practice

Overarching Area of Teaching Practice	What GTAs Learned About…	Salience of GTAs' Student Experiences in What They Learn About…
Teaching Environment and Preparations	• The availability and helpfulness of pedagogical resources, particularly teacher training programs and instructional consultations • The benefits and drawbacks of working on teaching teams • The importance of instructional guidance, preparations, and practice • The challenges of balancing multiple academic roles • Attitudes towards teaching in a R-1 environment	Attitudes towards college-level teaching and undergraduate education among faculty and doctoral students at a research university
Students as Learners	• Challenges to promoting student learning and engagement • The effectiveness of various instructional strategies in fostering student learning and engagement • Students' academic characteristics (e.g., approaches to learning, academic preparations and expectations, classroom conduct)	• Similarities and differences between GTAs' perceptions of students' preferred approaches to learning and their own preferred approaches to learning. • Students high expectations of instructors in comparison to students at GTAs' undergraduate institutions
Evaluation and Assessment	• Complexities of assessing student learning • Equity and effectiveness of various grading policies and approaches • Challenges in the grading process, particularly navigating grade grievances, providing feedback on students' work, and exercising instructional authority	The intensity of the academic environment and student body in comparison to GTAs' undergraduate experiences

Teaching Environment and Preparations

As the term unfolded, participants formed new opinions about the helpfulness of the instructional training that they received from their academic institution and departments. They also gained further insights about the structures and environments in which they were teaching, particularly with respect to working on instructional teams, leading discussion sections, balancing different academic roles, and teaching in a R-1 institution. In addition to learning about their academic environments, GTAs developed a deeper appreciation for the ways that dedicated instructional preparations could improve their own teaching practice.

Teacher Training Programs

Roughly half the participants believed that they learned useful instructional exercises through their participation in institutional and departmental teaching preparation programs. However, the same number of GTAs felt that this programming provided few opportunities to "practice" the skills they learned through this training. Parker, for instance, shared that he would be much more inclined to use the activities taught in his departmental pedagogy course in his own classroom instruction if that training provided "low-stakes" opportunities to practice these exercises. Another participant, Harper, struggled to translate lessons from the diversity and inclusion teaching certificate to her own teaching and wished that this program provided more space for participants to actually "practice" facilitating discussions around race. Kai and Amir echoed these calls for pedagogy courses to provide additional opportunities for practice; yet they also increasingly suspected that the only way to truly "learn to teach" was by "actually teaching."

Several GTAs interpreted the limited duration and, at times, questionable quality of teaching preparation programs made available through their institution and department as indication that faculty and the overall University placed little value on teaching as an academic

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activity. Harper, for example, was appalled to learn that many GTAs new to teaching completed a mere four-day teaching orientation prior to assuming their instructional responsibilities, especially given that graduate students constituted a significant portion of the University's teaching staff. As the term progressed, Harper began to increasingly question the "whole setup of graduate students as instructors," stating:

> [GTAs] are not given enough training, we're not given enough support . . . it just has only grown to bother me more in thinking about how I teach…without the proper techniques and without the tools really to be thinking about pedagogy in a better way, but also the impact it has on my students because I wish they had a better GTA.

Several GTAs in political science and history expressed similar disappointment in the instructional training offered through their academic departments. Kai and Jessie, for example, found their departmental pedagogy courses somewhat demotivating because their instructors seemed to care very little about teaching.

Instructional Consultations and Teams

Participants' experiences as GTAs yielded new insights about receiving teaching consultations and working on instructional teams as well. Roughly half the GTAs found mid-term teaching consultations (typically offered through the University's teaching center and required by their academic departments) to be very useful tools to better understand their strengths and limitations as instructors. Two of the three participants who served as the sole GTAs for their courses were grateful to work with instructors of record who valued teaching and their growth as teachers. These GTAs particularly appreciated their professors' willingness to provide dedicated feedback and guidance on their instruction while also granting substantial autonomy to them in most areas of their teaching practice.

In contrast, five GTAs who worked on larger instructional teams received little guidance from their instructors of record and were subsequently confused about how to structure their sections, design and administer classroom exercises, and coordinate lesson plans with their fellow GTAs. Participants on larger instructional teams also had variable levels of authority over their course materials and classroom instruction. GTAs in one discipline, for example, had substantial authority over how they structured their classroom instruction but were often confused about how to use this time given that they received such little direction from their instructors of record. Speaking to this dynamic, Jakob explained that the course professor "basically tells us just to come up with something" when GTAs inquire as to what they should address in section. Jessie similarly shared that her instructor of record suggested certain exercises for the GTAs to use at times but provided little to no advice on how to actually design or implement these activities. Jessie's first experience creating an assignment was also "completely trial-by-fire," which led Jessie to seek advice from a more experienced GTA in her department when faced with creating her second assignment. Jessie further learned through conversations with fellow GTAs that she had considerably more instructional authority than many of her peers. Jessie subsequently began to question how she would feel towards teaching if she had less autonomy in future GTA appointments, as well as to suspect that she would fare best as GTA with a balance of instructional authority and guidance.

Like Jakob and Jessie, Charlotte was unprepared for the course professor to tell GTAs to "just create content" when asked how they should elaborate upon concepts presented in lecture and course slides in their discussion sections. Consequently, Charlotte routinely felt ill-equipped to facilitate classroom discussions and believed that it was clear to the professor that Charlotte was "floundering" as GTA. Charlotte further struggled with their

limited level of instructional authority over their classroom instruction, because a centralized teaching team created all the course materials for a number of classes in the psychology department. Charlotte's instructor of record also expected GTAs to adhere to these materials in their original format to maintain a sense of consistency across sections. Charlotte found it very difficult to meet these expectations, as they intensely disagreed with how the materials required the GTAs to lecture "at students" and, in doing so, positioned them as "holder of knowledge." As Charlotte explained, this model stood in stark contrast to the "more generative forms" of teaching in women's studies to which Charlotte was accustomed and that encouraged instructors and students to construct knowledge together.

In addition to challenges with a lack of guidance and authority, half the study participants had little to no experience with discussion sections as undergraduates. Harper spoke to this disconnect when stating:

> I was not at an undergrad university that had this 'section set-up' thing . . . what is the point of this section? Am I actually drilling in these points that they wouldn't have gotten in lecture?. . .Not having a background in that as a student has obscured my ability to discern whether or not what I'm doing is at all impacting them.

Like Harper, Jessie also "had no idea" how to use her instructional time since "sections" were not a part of her undergraduate experience. Halfway through the term, Jessie accidentally learned that she had incorrectly presumed that some of her instructional responsibilities belonged to the instructor of record through an exercise in her pedagogy course. As a result, neither Jessie nor the professor was teaching the "skills for public policy" (e.g., how to read and interpret the text, prepare for exams, identify trends in graphs) that Jessie's department expected students to develop through their participation in the class. Jessie accordingly adjusted her instruction to

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focus explicitly on these skills for the remainder of the term, but students' final exam performance indicated that they continued to struggle with these competencies at the end of the semester. Based on this experience, Jessie intended to better clarify her instructional role and course learning objectives at the onset of future teaching assignments.

Emma was equally perplexed about the division of instructional responsibilities among their teaching colleagues. As Emma explained, their instructor of record never directly addressed this point with the team, and Emma had taken very few discussion sections as an undergraduate. With time, Emma came to see the section as a place to help students connect with the material in ways other than lecture, such as through exercises like small group work, peer presentations, and larger class discussions. However, Emma was unsure whether this interpretation was correct given that they came to this insight rather haphazardly through conversations with fellow GTAs, trial and error, and contemplations of what they would want from section as a student.

By the end of the term, nearly every participant concluded that fellow GTAs were invaluable resources to their learning as first-time instructors and that they desired a balance of guidance and autonomy in future teaching assignments. All GTAs further indicated that teaching was far more time-consuming than they initially anticipated. Emma, for example, knew teaching would require a lot of time but did not foresee how much it would affect all their other academic work. Charlotte was routinely exhausted trying to execute the "mental flip" of maneuvering among multiple academic roles that "all need to exist in the same place." Harper was equally surprised by "the fatigue" of teaching and began to view teaching as "something else on the to-do list." Harper further believed that doctoral students should not teach until they attained

candidacy in their doctoral programs due to the intensity of balancing their instructional

responsibilities with coursework and preliminary exams.[18]

Participants' concluding reflections further indicated that the majority of GTAs believed

that instructional authority over course decisions, designs, procedures, and the like was very

important to them in their work as teachers. Charlotte, for instance, remained very uncomfortable

with their minimal instructional authority as GTA. At the end of the semester, Charlotte

concluded that they were better suited to teach somewhere like their undergraduate institution

where doctoral students often "*are* [original emphasis] the instructors of record" and have

substantially more authority over course structures and content. Parker similarly decided that

"fitting my teaching style into someone else's, as is basically required in the context of GTA, can

be really challenging" and hoped to have greater instructional authority in his teaching

appointment the following term. Likewise, Emma intensely disliked working on hierarchical

teams and that the GTAs had little control over course design, policies, and exams —

particularly given that they knew the students better and arguably had "more" instructional

responsibilities than the course professor.

Attitudes Towards Teaching in a R-1 Environment

The majority of GTAs expressed further concern about the amount of time they should

dedicate to their instructional preparations in light of myriad messages that their academic

communities cared very little about teaching. These signals typically manifested in the quality

and availability of pedagogical resources, faculty and peer attitudes towards teaching and

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[18] Candidacy requirements vary by academic program. Harper's program required doctoral students to pass preliminary exams as one condition of advancement to doctoral candidate status. Harper believed that she would have more time to dedicate to her teaching practice as a doctoral candidate and no longer needed to fulfill these pre-candidacy requirements.

undergraduate education, and the extent to which teaching was rewarded in faculty hiring, tenure, and compensation decisions. Such messages weighed heavily on one GTA,[19] who thoroughly enjoyed teaching and was tempted to dedicate more time to his instructional preparations. Yet this GTA also thought it abundantly clear that the University and Research-1 (R1) universities[20] in general did not reward faculty for this work. Speaking to such beliefs, this GTA said, "I used to think, 'God, teaching is so important . . . You have a responsibility.' Very often now, I think like, 'I'm not being paid enough for this. It's not going to matter for my job market; do the bare minimum.'" The GTA went on to say:

> . . . the institutional setup of working for an R1 school and trying to get a job in an R1
> school has really kind of made me realize how useless it is to care more about
> teaching . . . If I won a teaching award, I'm going to ask myself, "Was I focusing on the
> right things?" Is that going to be a good thing necessarily? . . . I always thought that that's
> so cynical, but no, it's real . . . I, unfortunately, think in a much more costs and benefit
> way, in a selfish way than I thought I would. And the pressure is so intense. Honestly,
> anything I can take off my plate, I will . . . it's been completely about like, "what matters
> here? Don't be a chump. Don't focus so much on this thing, you'll lose this."

As the term progressed, the same GTA increasingly sensed that there were few benefits associated with "teaching well," stating:

> You're not getting tenure. . .a promotion, any money, you're not getting anything [from
> teaching] . . . I don't think I'm a bad teacher, but I think I could very easily slip into it . . .

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[19] Here and in a few other instances I refrained from using pseudonyms as a extra layer of protection for my participants, particularly when inadvertently revealing a students' identity might result in negative repercussions.
[20] As previously noted in Chapter 4, Research-1 (R1) Doctoral University is a classification that applies to institutions with "very high research activity" and that award at least 20 research/scholarship doctoral degrees or at least 30 professional practice doctoral degrees in at least two programs (Carnegie Classifications, 2021).

I kind of knew this already [and] it's really sad [but] there is no reason to teach well . . .

there's no reward for being a good teacher and there's no punishment for being a bad

teacher. It's just really zero. Maybe it's a department-by-department thing, but I don't

think so.

The GTA largely attributed many of these beliefs to conversations about teaching with

departmental faculty. For example, the professor who taught the department's pedagogy course

told this GTA and his peers taking this class:

When we hire, we never considered teaching. I mean, it is not even slightly a 1% thing,

it's just never going to matter. And if you suck as a teacher, [it] won't hurt you at all in

terms of getting a job admission, it just will not matter . . . All that matters is what's been

your research so far and what's your potential for research going forward.

Other faculty also "warned" this GTA "all the time" about focusing too much on teaching.

Describing such conversations, the GTA said:

They're like, "How's your semester going?" [And I respond], "Oh great. The class I'm

teaching is going really well." And they're always like, "don't get caught up in that,"

because they realize that that's not why you're here. That's not what matters. And, of

course, this is all advice given with the assumption that I'm going to apply to a R-1 and

want to work in a R-1. If I tell them, "No, I really want a liberal arts profession," then the

advice will change.

This GTA briefly considered focusing his job search on smaller, teaching focused institutions to

pursue his passion for teaching but ultimately concluded that he would "burn out" teaching six to

seven times per week. He further suspected that he would receive greater long-term fulfillment

from advancing his field through research. For these reasons, this GTA foresaw teaching remaining more of a "hobby that I get paid to do" than a core focus in his professional work.

Two additional GTAs reached similar conclusions about attitudes towards teaching among faculty at R-1 universities. The first GTA "heard" on multiple occasions that faculty in her department taught primarily out of contractual requirements. Her instructor of record frequently reinforced this stereotype through acts like telling GTAs to "just wing it" in section and that he often prepared lectures the morning of class. This GTA was further convinced that research universities placed little value on teaching as an academic activity. From her purview, large and impersonal classes — like many of the undergraduate course at the University — prohibited faculty from engaging students in thinking critically about course content. The same GTA also shared that few of her doctoral peers were interested in teaching careers, which she suspected was largely due to ongoing signals that teaching held little value in their department in comparison to research. For example, this GTA recently learned that her department "awarded" research fellowships to doctoral students who received poor teaching evaluations and that her broader discipline did not have a teaching journal. When asked what she made of such messaging, the GTA replied, "our discipline doesn't really emphasize teaching, at least at [the University] because it's a top research university." This GTA further sensed that her department placed little emphasis on teaching because "you can't do it all well," something that was becoming increasingly apparent to her through her own challenges managing multiple academic roles. By our final interview, this GTA had decided that she was probably better suited to pursue a faculty career at a more teaching-centric university like her undergraduate institution. She was consequently questioning how to structure her remaining time as a doctoral student to best communicate to future hiring committees that she valued undergraduate education, as it was

her understanding that her discipline tended to think of graduates from the University as caring very little about teaching.

Echoing these sentiments, a third GTA indicated that faculty in his department made it abundantly clear that research carried far more weight than teaching. For example, when asked by GTAs how much academic committees weighed teaching philosophy statements in their hiring decisions, the instructor of this GTA's departmental teaching course replied "Oh, at [this university], not at all." Such comments led the GTA to believe that learning about various facets of teaching, such as course design, was "not really something that [the University's doctoral students] spend a whole lot of time on." As someone who had attended a more teaching-centric undergraduate institution, this GTA found it "a jarring realization as an outsider and a first gen student" to realize that "undergrad teaching takes a back seat or maybe it doesn't matter much at all" at institutions like the University. Based on such observations, the same GTA concluded that should he pursue the faculty route he wanted to work at an institution that valued teaching rather than one that reprimanded him for dedicating time to his instructional practice.

Importance of Instructional Preparations

In addition to acquiring new insights about the environments in which they were teaching, GTAs' instructional experiences led them to see how "practicing teaching" enhanced their "teaching practice." Such "practice" often took the form of ongoing classroom instruction (e.g., delivering multiple iterations of the same lesson, experimenting with different instructional approaches, administering classroom exercises) and dedicated course preparations (e.g., learning content, rehearsing slides, preparing talking points and questions). A common insight among GTAs was that their classroom instruction improved with each subsequent delivery of a weekly lesson. As Emma shared, ". . . the second class might get the better lectures because I already

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know what may not have worked in the first class." When describing his final section for the week, Kolby said, ". . . everything is perfect, everything is streamlined because I've tried it out on two sections already . . . I'm on top of it, I know exactly how long things are going to take." Harper similarly shared that:

> . . . that first section is like a test, such that by the time I get to the second [section], it all comes out clearly. I remember the things I stumbled on, and I'm able to, in the moment, correct those things. Then, by the third section, it's even more improved . . . the whole week has gone by and I'm just, in general, feeling more relaxed and really confident . . .

GTAs' challenges in and improvements to their classroom instruction underscored the importance of dedicated course preparations as well. Illustrating this point, Jakob described how his first attempt to administer a new classroom exercise was very chaotic and confusing for students. Yet by the third section, his delivery was far smoother, students were more engaged during the activity, and demonstrated a better grasp of the material once the exercise concluded. Jakob attributed these improvements to acquiring more knowledge about the subject matter, as well as refining his approach and answers to students' questions, with each subsequent administration of the activity. Through this experience, Jakob realized that although casually discussing politics with students came quite easily to him, clarifying course concepts for students required more substantial preparation on his end. By the end of the term, Jakob sensed that he might "have a knack" for teaching. However, he also knew he had a long way to go before becoming a "great teacher" and that in order to do so he had to be more intentional about structuring his day around activities that would help him achieve that goal.

Kolby came to appreciate the importance of course preparations through similar challenges. On one occasion, he struggled to explain course concepts from the lecture slides to a

student in office hours. Another time, Kolby was unable to steer the dialogue in class from an exchange of personal opinions to one of critical analysis because he was unfamiliar with the literature on the topic under debate. As a result of such experiences, Kolby "started to prepare" for class halfway through the term in that he took his course preparations more seriously and prepared more thoroughly for his section. Through doing so, Kolby saw that he was far more confident and articulate in his instruction when he did so. Kolby found it especially valuable to outline a clear and firm roadmap of steps to guide students from basic to more complex concepts. Elaborating, Kolby explained that he learned that:

> . . . being able to present my thoughts in a coherent way that goes from A to Z, really logically, step-by-step, is not something I can do on the fly . . . I assumed, "Oh, I'll be able to just talk about this," and I [can] in a conversational way. But as far as in instructional way, as far as taking the students from the most basic building blocks to the logical conclusions and then to real world applications, [that] requires a lot of planning.

Thus, much like Jakob, Kolby learned that *teaching* course concepts required a different level of preparation than merely exchanging ideas related to the course material. Kolby further realized that preparing such "roadmaps" allowed him to focus on topics in need of further clarification when he was teaching, as opposed to the basic class structure.

Jessie reached similar conclusions by the middle of the term. In particular, Jessie came to believe that it was critical to set aside time to learn and practice course material to become a generalist and strong lecturer when teaching introductory courses. She reached this insight largely by observing her instructor of record, who gave exceptional lectures when he was very familiar with the subject matter but was far weaker in his instruction when course content was outside his area of expertise. The professor also directed questions on gender and race to the

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GTAs who were women and Black, which Jessie viewed as placing an unfair burden on marginalized populations to educate students about specific issues. Moreover, Jessie saw that she was far nimbler and fluid in her own teaching when she practiced her presentation of that week's material in advance of class.

With practice, Parker similarly came to find that teaching did not produce nearly as much anxiety as other forms of public speaking and to believe that "learning the material while you're teaching is totally doable." Harper also began to "feel so much more knowledgeable as a scholar" by "really digging into these concepts," such as the time she spent several hours reading about different archeological cultures to prepare a class activity. In addition to reinforcing the excitement she received from this work, the experience reminded Harper of the incredible opportunity teaching provided to learn about new areas of her discipline.

Perhaps most adamant about course preparations, Charlotte concluded that they absolutely "*needed*" [original emphasis] to spend more time reading about and practicing their presentation of course concepts. As Charlotte reasoned, "you can't really communicate something to other people if you don't understand it yourself." Charlotte was particularly uncomfortable with the lack of certainty with which they answered students' questions, which recalled Charlotte's dissatisfaction when their undergraduate instructors provided unhelpful explanations. Speaking to such discomfort, Charlotte described a time when they and fellow GTAs struggled to answer students' questions in a review session. Charlotte "hated" the entire experience, which they believed led "these students [to] probably think we're idiots." Charlotte's struggles to facilitate dynamic classroom conversations substantially undermined their teacher efficacy as well, particularly given that Charlotte considered their ability to "take different ideas and weave them together" as their specialty as an undergraduate. Yet Charlotte felt as though

they struggled to articulate their thoughts in all areas of graduate life and as if these challenges were transferring to their teaching. As a result, Charlotte began to view teaching as "continuation of [their] mediocrity" stating:

> This teaching business, it doesn't feel good . . . And the research part of grad school doesn't feel good. And then the classroom learning, personal learning period, doesn't feel good. Why am I here? What good's going to come out of this? . . . It just all wraps into each other, I suppose.

These challenges led Charlotte to further question whether they would ever be an effective teacher in women's studies, which is "incredibly discussion focused." Charlotte went on to say:

> If I can't create discussion in a psychology classroom of all places, then how the hell am I ever going to do anything with women's studies, which is considerably more intricate and there is more tact involved because they're talking about very important issues?

By the end of term, every participant anticipated dedicating additional time to course preparations in their future teaching assignments. Several GTAs planned to use the winter break to plan their lessons in advance as well. At the same time, a handful of GTAs recognized that they would not be able to "perfect" every lesson. Jessie, for instance, aimed to be more cognizant about when she could simply highlight a recent political development rather than rework an entire lesson when teaching material so closely tied to current events.

In addition to practicing the "act" of teaching, every GTA came to new insights, questions, and concerns about teaching and themselves as teachers through reflective work (e.g., conversations with fellow instructors, contemplations of recent instructional exchanges). For example, half the GTAs indicated that their participation in interviews and audio journals as

study participants was very valuable to their learning as instructors. Amir, for instance, shared that his participation in the study helped him think through "some of the questions that [he] was facing as a GTA." A peer several years ahead of Jessie in her doctoral work commented how reflective Jessie was about her work as a GTA, which Jessie attributed to "having to sit down and process" her work as a study participant. Others described their participation in the study as cathartic. One GTA referred to our interviews as "teaching therapy" to fellow GTAs, and another suggested that the University provide similar outlets for novice GTAs to work through their challenges. Upon concluding our final interview, the latter participant also said, "Thanks for all these very thought-provoking moments. Some of the changes I put in the classroom were out of some ideas that I feel like I voiced for the first time here."

Students as Learners

In this section, I discuss what GTAs learned about various challenges and strategies to improve student learning, engagement, and classroom conduct. I first examine GTAs' insights about advancing students' understanding of course concepts, particularly the importance of articulating and scaffolding their instruction towards transparent learning objectives. I then describe common challenges GTAs encountered and strategies that they found to be more or less effective in their efforts to foster class participation and exercise classroom management. I conclude by assessing GTAs' evolving understanding of students' academic characteristics, particularly their learning styles and educational preparedness.

Student Learning

In their first weeks of teaching, the majority of GTAs found it challenging to structure class in a way that allowed them enough time to thoroughly address key concepts. As Charlotte noted:

> There's always this time constraint in the back of my mind. How do I balance answering their questions well and having a discussion about those things, but then also getting the content that they're supposed to be encountering . . . in under 50 minutes?

Additionally, most participants noticed that students struggled to grasp key takeaways from section. This observation was based on students' questions and answers in class and office hours, performance on assignments and exams, and/or inabilities to make connections between lecture and section or across weekly discussions. Midterm feedback further indicated that students often shared in GTAs' confusion about the "purpose of section."

These observations prompted GTAs to become more intentional in structuring their classroom instruction around and articulating explicit learning outcomes for their section. Harper and Amir, for instance, learned that they were far more effective at communicating and addressing their intended learning objectives when they allocated a portion of their course preparations to prioritizing specific takeaways for each class. Students shared with Amir that they found it helpful when he had a more explicit structure to class as well. This feedback led Amir to reconsider his belief that section should be organic and free-flowing, an opinion based on his recent experience taking a course that had overly rigid discussion guidelines. More than half of the participants also learned that students wanted them to incorporate additional PowerPoints into their instruction as a way to better highlight and revisit key concepts. GTAs

were responsive to this feedback and reported improvements in participation and the accuracy of students' answers after making these changes.

Relatedly, Jakob, Charlotte, Jessie, and Kai came to understand through students' feedback and academic performance that class exercises and assignments often lacked clear instructions and learning objectives. Speaking to this insight, Jakob described a time when he administered a writing exercise intended to serve as a "brain dump" and provide students an opportunity to apply a writing skill that they had discussed in class. However, by the end of the activity, students had produced little writing and had little to share regarding what they found helpful about the exercise. The experience helped Jakob realize that he neglected to articulate this objective, which was in turn lost on students. Kai learned through midterm feedback that he also needed to better communicate the purpose of classroom exercises and how the quotes and images that he incorporated into his instruction spoke to specific historical eras and concepts.

Several participants realized that merely having an *awareness* of the importance of clarity in instruction did not necessarily translate to an *ability* to teach in a transparent manner. Parker, for instance, entered the term with a strong belief that transparency and structure were central elements of "good teaching." He attributed these beliefs to conversations with his mother, an adjunct professor, and his own experiences taking classes where professors neglected to put forth clear expectations of students. However, as an instructor, Parker learned through midterm feedback that students found his assignments and explanation of course concepts confusing and were unsure of the "point" of discussion sections. This feedback subsequently led Parker to believe that transparency and structure were even more important in teaching than he initially realized and to contemplate ways to improve his teaching accordingly.

Roughly half the participants came to develop deeper appreciation for the importance of "scaffolding" students' learning, or fostering students' incremental understanding of the subject matter by laying a firm groundwork of basic concepts before moving on to more complex materials. GTAs frequently came to this insight through observations of students' struggles to grasp higher-order concepts presented in class and on course assignments and exams.

Illustrating this point, students' challenges to assess and critique authors' claims in their first assignment helped Harper realize that she needed to "set the groundwork of how archeology works" before requiring students to analyze and critique more advanced constructs. Kolby came to a similar understanding when he saw that students lacked the foundational knowledge necessary to comprehend how a political figure used course terms in a duplicitous manner as a way to advance her party's political agenda in a podcast that he shared in class. As a result of this observation, Kolby became very intentional about walking students through the "basic building blocks" of course concepts using a "step-by-step process" before transitioning to more complex ideas. Jessie was similarly cautious to "baby step" students through new public policy skills and concepts, as well as inquire whether students had questions about this content, before moving on to more advanced material. An exchange in which a student told Kai "the exact opposite" of an author's argument led him to similarly see that students needed more assistance interpreting arguments before they could critique them.

GTAs further learned that they could help students connect with course concepts at deeper and more personal levels by using relevant examples and applied learning activities in their instruction. Kai, for instance, observed significant improvements in students' understanding of the material when he encouraged them to consider the subject matter through "their own historical frameworks" like the time they applied the principles of Marxism to events in their

lifetime. Kolby shared that one of the most important lessons that he learned about "teaching specifically political science" was the value of using "real world examples" to help students better relate to and grasp class concepts. Amir felt equally as strong about helping students learn to link historical and current events and firmly believed that interpreting historical threads in relation to "a contemporary world" was "one of the main purposes of doing history." Likewise, Charlotte contended that students were "hankering" to connect the course material to their personal lives and recalled a host of instructional experiences to illustrate this point. One occurrence entailed students demonstrating very little interest in a video about senior citizens and aging but great enthusiasm towards topics that were more applicable to their lives like personality quizzes and marriage. On a related front, Harper's observation of the course professor's use of fake artifacts to convey the concept of "fraudulence" led her to see the potential of using hands-on activities to engage students with abstract archeological concepts in a more tangible way. Harper shared further that witnessing students' excitement as they interacted with the artifacts recalled how she felt after her first archeology class and that the entire experience was inspirational to how she wanted to teach in the future. As these examples demonstrate, contextual factors like GTAs' disciplines and course of instruction substantially informed their beliefs about the value of using relevant examples and applied learning experiences in their instruction as well.

Student Engagement and Conduct

A prominent concern among all participants, albeit to different degrees, was how to improve classroom participation and conduct. GTAs often experienced lower levels of engagement in specific sections, which raised questions for them about the influence of class contexts (e.g., space, timing, climate) on such variations. A handful of GTAs also began to view

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teaching as a "performative" act and realize that they took students' reactions to their "instructional routines" to heart. Kolby, for instance, found student apathy far more upsetting than he anticipated:

> I'm really sensitive to it . . . teaching is performative, and when there's not a good reception to my performance. I get almost bitter. "Do you think I want to be here? I have work to do too, I'm busy, pay attention." You're performing at a crowd. I''s like when comedians are like, "I can see everybody in the crowd who is not laughing" . . . I can see you're not picking up what I'm giving.

Amir's observations of other professors in his role as GTA made him more attuned to the "performative elements of lecturing" as well. He described these professors' lectures as "so theatrical, the body language changes, the way they carry themselves. They make jokes . . . It's like they try to create this entire environment in the classroom where the students open up." These observations inspired Amir to develop his own abilities to give more engaging lectures as well. Charlotte detected a number of parallels between their work as GTA and background in theater. To Charlotte, teaching felt very much like acting — especially when they adopted "this presenter, peppy" voice to mask their anxiety and depression. Like Kolby, Charlotte found student apathy very uncomfortable saying, "I hate it when I ask them questions and they just look at me, and they don't move a single muscle in their faces. Oh, it's just the worst." As a student, Charlotte was always the person who disrupted "the quiet classroom" out of discomfort. Now an instructor, Charlotte was constantly spinning their wheels "to figure out what the silences mean."

GTAs attributed their evolving beliefs about their current and aspirational instructional styles to their observations of other instructors as well. Kai, for example, routinely struggled to

engage students but remained optimistic that he would become a more dynamic instructor over time, much like a former professor. Harper's observation of the ease with which a guest lecturer engaged a section that suffered from chronic low participation prompted Harper to consider how her demeanor might dampen students' energy and how she might "scale her excitement" when teaching the following term. On a related but distinct note, Jessie and Parker realized that they did *not* want to follow in the footsteps of their instructors of record who tended to "lecture at" rather than "engage with" students. In fact, Jessie shared that a key piece of advice she would offer herself at the start of the term would be to take note of the instructional practices she wanted to replicate and avoid her own instruction when watching others' teaching.

As the term progressed, GTAs identified a number of strategies to help foster student engagement. Several participants who had always found it intimidating to speak in front of the entire class provided their students alternative means to earn participation points, such as by posting questions and commentary to a class discussion board. Every participant found that placing students in small groups created less intimidating environments for students to share their ideas with one another. Emma, Jakob, Parker, and Charlotte further appreciated how group work shifted the onus on them as instructors to answer students' questions to the class to generate ideas as a collective. Charlotte was particularly attracted to the ways that group work "resembled a women's studies approach" and challenged the notion that the instructor "has all the knowledge." Jessie found great value in "peers teaching their peers," such as the time she observed students explain a higher-level concept to a fellow group member. GTAs' experiences administering small group work yielded new insights about tactics to improve the effectiveness of these groups as well. As an example, Jessie, Jakob, Kolby, and Parker learned that students

thought it helpful when they periodically checked in to help their groups work through areas of confusion.

GTAs' instructional experiences led them to identify strategies to better facilitate class discussions and to become better acquainted with the challenges associated with this work. Half the GTAs learned through student feedback that they could improve the clarity of the questions that they posed to students. A similar number of GTAs became more aware of the importance of generating discussions *among students* rather than engaging in "ping pong" dialogue with individual students. As an example, Amir's instructor of record advised that he could better "elevate the discussion" by putting students in conversation with one another and steering those discussions towards his intended learning outcomes. In response, Amir began to identify key takeaways for each lesson at the start of each week. In class, he then wrote any "interesting points" raised by students and related to these takeaways on the board. At the end of their discussion, Amir instructed students to "bring these points together" to illustrate how their collective ideas contributed to a larger thematic end. Additionally, Amir's perceptions of his own effectiveness at engaging students in discussions had a substantial influence on his energy and self-efficacy as a teacher. Conveying this point, Amir described a time when he was extremely unmotivated and down on himself after a class in which students reacted very indifferently to his instruction. Amir brought these concerns to his instructor of record, and they devised several changes to make in his teaching the following week. Students reacted very positively to these adjustments, and describing his reaction to this outcome Amir stated, "I was so ecstatic. I instantly typed an email to my professor [saying], 'It went so well. It was perfect . . .' And I was happy the rest of the day . . . It just affects you so much." Parker similarly learned through midterm feedback that his approach to facilitating class discussions often resulted in back-and-

forth exchanges between him and a solitary student. To better extend this dialogue to the entire class, Parker started to encourage students to clarify less complicated concepts to one another and to elicit viewpoints from multiple students when posing questions to the class.

Participants' classroom experiences also led GTAs like Amir, Kai, Kolby, and Harper to better appreciate the value of "pausing" and allowing students time to collect their thoughts in discussions. As Amir shared:

Sometimes when you ask questions, there is a silence . . . I slowly realized that that silence is required. That's when people are trying to articulate, remember, work out what they want to say, to make connection between the lecture classes that we have and the discussion sections.

Likewise, Kai learned that in order for students to share their critiques of the material, he needed to provide space for them to actually form such assessments. As he explained:

I immediately jump in and explain what it is…[In doing so,] I'm preventing them coming up with that on their own…What I did feels more like spoon-feeding the information, while I think the discussion section is more about them basically practicing retrieval, practicing reformulating their thoughts. That would be more helpful for them.

As the term progressed, GTAs saw that their rapport building efforts bolstered student participation. In particular, each participant reported that their students appeared more comfortable asking questions and sharing ideas in class when they were more intentional about fostering relationships with and among students. GTAs used ice breakers and humor in their teaching, as well as talked with students before and after class, as a way to foster a sense of community and comfort in the classroom. Emma, for example, began each class with students sharing something about themselves. Emma believed this practice was largely responsible for

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students' comfort participating in class discussions, exchanging ideas with one another, and approaching them with questions. Kolby, for instance, started experimenting with icebreakers after a fellow GTA who had excellent rapport with her students recommended the strategy. He found that students were much more willing to engage after participating in an icebreaker saying, ". . . when the discussion started, it was great. It was fantastic . . . I was making jokes, they were laughing, they were making jokes, they were really, really engaged."

By the end of the term, the majority of GTAs indicated that they were less concerned about their abilities to constantly engage students in classroom discussions, particularly in light of students' exam scores and year-end feedback. Harper, for instance, felt somewhat "hardened" to whether students consistently engaged with the material or found her energizing and attributed this shift largely to students' strong performance on their final exams and affirming evaluations of her instruction. Kai was pleasantly surprised by students' positive commentary on his evaluations, which led him to see that he was often overly critical of himself as an instructor. He particularly appreciated students' feedback that he created an inviting classroom atmosphere by always encouraging students to share their ideas and ask questions. One student went as far as to email Kai a thank you note for his instruction, which led Kai to believe that he "must be doing some things right." Learning that each GTA on his team received very different evaluation scores across their sections led Kai to further believe that students' engagement and perceptions of him as an instructor were often based on factors outside his control, such as their learning preferences and personalities, class time and space, etc. Kai further concluded that not every class will go well and that he should not overly concern himself with how his instruction is received every time he teaches. Charlotte similarly found their final evaluations to be "very generous" in that students described them as passionate, engaging, and articulate. However,

Charlotte also interpreted this feedback as a sign that they "might actually be OK with this" and "need to chill a little" about becoming friends with everyone in the class. Kolby was pleased to learn through final evaluations that his least engaged section really appreciated his instruction, which led him to conclude that he was probably "too cautious about reading the room." Parker was equally pleased to read that students responded well to the humor he brought to his instruction, which reinforced his belief that it was "OK to be myself" when teaching in the classroom. Jakob relatedly learned that he should not be intimidated to be himself when teaching because "everyone has a personality, and students probably will not hate yours" and that some sections will better engage with the material, and he may never know why. A key lesson for Jessie was that a bad day in the classroom does not make a bad teacher, and she can only do so much to engage students who are there to fulfill a requirement and have little interest in the subject matter. Jessie further realized that she needed to adjust her expectations around participation to better flow with the natural energy of her more introverted section rather than "force" students or herself to maintain a very high energy.

Through their efforts to foster student engagement, GTAs identified strategies to better exercise classroom management as well. The most prevalent insight among participants pertained to the importance of putting forth clear expectations around classroom conduct and participation. Parker, for example, decided that he needed to outline more explicit expectations that students remain the entire duration of a class after a session in which several students left a few minutes before the bell. Harper told one section very directly that "we really struggle with participation in here" when returning their midterm exams and was pleased to see the highest level of participation to date in section that day. She also began "calling out" a group of "cool

kids" who routinely disengaged from all-class discussions, which led to improvements in that group's participation and the quality of their responses.

Kolby and Amir were less comfortable acting upon advice from faculty and senior GTAs to put disruptive and unengaged students on the spot and adopted "softer" approaches to encourage better classroom participation and conduct. Kolby, for example, began to encourage participation from more students by saying things like, "I want to see three hands" and "I want to hear from someone I haven't heard from." Amir felt that a senior GTA's suggestion to directly admonish anyone demonstrating disruptive behavior during class contradicted the advice of the instructor of his departmental pedagogy course, who discouraged GTAs from placing students in a negative light in front of their peers. Amir also knew that he would not appreciate a professor reprimanding him in front of other students and decided to address issues around classroom conduct with students in private, such as in office hours or after class.

Students' Academic Characteristics

As GTAs worked to promote learning, engagement, and positive behaviors among their students, they uncovered a number of preexisting assumptions they and others held about the students they were teaching. These assumptions pertained primarily to students' academic characteristics, including their learning styles, educational preparations, and classroom behaviors. A common realization among participants by the end of the term was that students "truly" had diverse learning preferences — something GTAs "knew" existed theoretically but found quite challenging to "experience" as instructors, particularly when students' learning preferences differed from their own. Harper, for example, considered herself a "normative" learner who was very content with traditional lectures and tests. As a result, she was often perplexed by how to create activities that appealed to students with less traditional learning styles

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and to take such differences into account when evaluating students' work. Parker was similarly confused by students' requests to incorporate additional PowerPoints into his classroom instruction given that he had little use for slides as a student. This feedback eventually led Parker to see the value of perspective-taking as an instructor and to continually push himself to consider "how student*s* might respond to this, rather than how I would respond this as a student."

Likewise, Emma, Jakob, Kolby, and Kai developed greater appreciation for tactics they found less appealing and/or did not encounter as students as well, particularly group work, icebreakers, and lectures. These GTAs largely came to these insights as a result of observing students' participation levels and the quality of their responses in class discussions improve when they integrated these strategies in their instructional practice. Illustrating this point, Jakob learned that students appreciated when he lectured in section because it served as a "first pass" on the material. Students were especially receptive to Jakob's lecturing when he asked for their input on *when* they specifically wanted him to lecture in class (e.g., when covering new material or more complex concepts). Based on these observations, Jakob came to believe that he should not be intimidated to lecture reasoning that "you probably aren't awful at it and students probably don't hate it like you do." Jakob also aspired to learn how to prepare and deliver a strong lecture, as well as assess what students gained from this instruction, so that he knew how to "repeat the success" when lecturing in the future.

Jessie had long appreciated the importance of appealing to diverse learning preferences due to the stark differences in how she and her twin sister liked to learn. However, Jessie's conversation with a student in office hours led her to see that it was also important to challenge students to learn outside their comfort zones. Specifically, the student told Jessie that she had never experienced group work so extensively in a class. Jessie realized that consistently placing

students who were less comfortable speaking in front of class in small groups was a disservice to them because not all professors would cater to their individual learning preferences in this way. Jessie further concluded that she did not need to create a different lesson plan for each class based on the predominant learning style of that section. Rather, she came to believe that she should strive to structure her teaching in a way that appealed to different learning preferences in an even amount (e.g., by tailoring her instruction towards the introverted section one week and towards her extroverted class the next).

Another common insight among GTAs was that they and others held incorrect assumptions about students' academic preparations and classroom behaviors. Jakob and Amir, for example, received multiple warnings from their pedagogy courses and/or fellow GTAs that undergraduates at the University were often resistant to participating in class. However, both GTAs were pleasantly surprised to see that students were largely eager to learn and engage with the course material. Speaking to this messaging Amir said, "GTAs also have a kind of culture . . . they think that undergrads are an animal of a very specific kind. . ." Amir's pedagogy course also routinely implied that GTAs would struggle to create inclusive learning environments by insinuating that ". . . it's a kind of problem to bring all these different diverse body of people together in a conversation." Amir did not find either of these claims to be true in his interactions with students and, as result, continually pushed himself to enter every class with an open mind. When asked what advice he would offer fellow GTAs based on these insights, Amir said, "Do not have assumptions about students. They are not stupid; they know what is going on and they work really hard. Everything [you] learn about the typical undergrad in pedagogy is wrong." Amir further recommended that instructors of pedagogy courses ". . . stop assuming that [students] would not be as gender inclusive, or not be as inclusive in terms of race and religion."

Kai entered the semester under the assumption that students attending an American university renowned for its academic rigor and taking a course that addressed contentious issues would be eager to engage in class debates. Yet Kai received very little pushback on his ideas in class and eventually realized that he had painted a false image of the typical student at the University. Kolby, too, came to see that he also had incorrect assumptions about the University's undergraduates stating:

> What I learned about teaching at [the University] is basically how wealthy my students are . . . I was teaching a really privileged group of people. I went to undergrad at another state school [and thought], "I'm going to a big state school and it's going to kind of be the same as what I'm used to," and it was not. I learned that, no, people here tend to come from much higher median income backgrounds, [are] much more well-traveled . . . there were many things that I thought I would have to explain about the state of the world [and] thinking internationally that I saw was already present in my students who had traveled before, had spent some time abroad even before undergrad.

As these examples indicate, GTAs' instructional experiences exposed their own and others' assumptions about students and led them to examine the accuracy of these beliefs.

Evaluation and Assessment

GTAs' instructional experiences afforded them many opportunities to learn about assessment and evaluation practices, particularly measuring students' learning gains, providing feedback on students' work, and exercising institutional authority over the grading process.

The Complexities of Assessing Student Learning

GTAs relied on a number of indicators to gauge students' learning and engagement, including: 1) students' formal academic performance on assignments and exams, 2) the quality and accuracy of students' questions and responses in class and office hours, and 3) students' reactions to GTAs' instruction as indicated by their body language, evaluations, interpersonal interactions, etc. As the semester progressed, several participants began to question whether various metrics were indicative of "student learning" or related but distinct outcomes like student engagement and satisfaction. Jakob, Charlotte, and Parker acknowledged that it was evident that students *enjoyed* various aspects of their instruction based on their energy and laughter but that it was less clear whether their teaching actually helped their students *learn* the material. Additional GTAs began to differentiate evaluating students' academic performance and assessing their learning gains. Illustrating this point, Harper always considered grades and learning to be a "one-to-one relationship" as a student. Now an instructor, Harper saw that "having to quantify what [students] are learning with a number is really hard" and that a person's grade was not interchangeable with what they had learned in course. Kolby similarly noted that although students were "doing well" based on their exam and assignment scores, he was at a loss for how to measure what they were actually learning.

As some GTAs evaluated students' work, their expectations of students shifted. Harper, for example, came to believe that she should not presume to see some "monumental growth" in students by the end of the term. She further concluded that students progressed at different rates and that their academic performance was not necessarily indicative of her effectiveness as a teacher. Amir's observation of the substantial toll of a low grade on a student's morale led him to believe that the ultimate outcome of teaching was to help students develop as a whole rather than

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just academically. As such, he began to look for progress in students' learning rather than perfection in their academic performance when evaluating their work. As Amir explained:

> These are real human beings . . . I was going for this sort of perfection without thinking that this is a student who has emotions and who can feel really bad about it . . . the takeaway was that I need to be more forgiving as a teacher because the idea is not to police . . . the end of pedagogy is not to make sure that students are perfect because there is nothing such as perfection. The idea is for the students to learn . . . to appreciate the discipline.

On a related note, Jessie was slightly disappointed in students' performance on their first exams. However, the fulfillment she received from seeing students' progress by midterms helped Jessie realize that she found it far more rewarding to watch students learn and grow than to excel on every assignment or exam.

The Grading Process and Environment

Throughout the term, GTAs found it challenging to provide clear and reliable feedback on students' work. Amir, Harper, and Jakob feared that they were inconsistent in their grading due to the sheer number of papers that they reviewed at one time. Relatedly, Jakob, Emma, Charlotte, and Parker struggled to provide in-depth and timely commentary on students' assignments, which they saw as limiting students' understanding of the accuracy of their answers and of areas in need of further study for upcoming exams. Parker felt such inconsistencies in grading were unacceptable, particularly in light of his recent experience taking a class with a professor who provided very little and inconsistent feedback. Describing his experience in the course Parker said, ". . . I was just struck by how absolutely awful it was. I didn't want to

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recreate that thing. I sort of set that as the 'absolute do not do this' pole . . ." However, Parker found it challenging to "translate" these ideals to his own teaching and "had a bunch of problems with structure and regular feedback." In addition to developing a greater appreciation for the difficulties associated with this work, Parker came to see that implementing clear and consistent feedback systems was even more important to students' learning outcomes than he had previously realized.

Each of these GTAs further noted that their academic work suffered when inundated with grading responsibilities. However, GTAs gained some valuable insights through these challenges as well. For example, Emma learned that they needed to set clearer expectations regarding the amount of feedback students should expect from them on their assignments. Other GTAs concluded that they needed to allocate specific days for grading students' work.

GTAs arrived at new insights about examination processes and procedures as well. The majority of GTAs came to find that they needed to develop clearer test questions and evaluative criteria (e.g., in the form of rubrics) so that students knew what was expected of them on assignments and exams. However, GTAs' limited authority over course grading policies and procedures created a barrier to making such improvements. Nearly half of the GTAs were not allowed to see and/or have input on test questions, which constrained their abilities to thoroughly prepare students for exams. GTAs frequently lacked the authority to change evaluative processes and criteria they viewed as inequitable as well. Parker, for instance, believed that the professor's policy to only consider verbal participation privileged one form of student engagement over others. Parker also viewed the policy as benefiting students who were comfortable speaking in front of large groups, native English speakers, and White men due to positions of power. Parker argued further that "the process of thinking back and remembering" who spoke in section when

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grading participation was "biased in all sorts of ways, [including] race and gender, and I might be more likely to remember that people either similar to or different [than] myself are participating." Yet the professor routinely disregarded Parker's feedback on these points, and Parker eventually decided it was best to keep such concerns to himself.

Most participants voiced similar frustration with their inabilities to rectify what they perceived to be ineffective and unjust grading policies. Jakob, for instance, disagreed with the professor's demands that GTAs "push down" grades so that only a select number of students received A's in the course. From Jakob's perspective, students worked hard to receive high marks that they rightfully earned. Jakob further believed that the professor's unwillingness to honor grade changes requested by Jakob and his colleagues reflected poorly on them as GTAs. When faced with conveying this information back to students, Jakob refused to defend the professor's decisions and was honest about how he had advocated on their behalf. However, he also questioned whether his honesty about his limited instructional authority resulted in students viewing him less seriously as an instructor.

Jessie recalled a situation in which her instructor of record denied GTAs' request for international students to have permission to use a translation dictionary on exams. Describing the situation, Jessie said, "I'm very aware of structural inequalities, particularly around language, given the set of students that I have…I think the exam format is going to systematically disadvantage my students . . ." Jessie took several steps to address this inequity, including administering writing exercises that she found helpful when learning a foreign language as an undergraduate. She also routinely highlighted campus resources for her international students like the University's writing center.

Half the participants were taken aback by students' sense of entitlement when it came to their grades. Harper and Parker, for example, described very heated exchanges with students upon returning midterms, which led both GTAs to see that they could have better prepared for these conversations (e.g., by outlining talking points to clarify the evaluation process, anticipating students' potential reactions to their scores). Harper and Parker also expressed disappointment with how they deferred nearly all authority to their professors as a way to deflect students' anger and aspired to take greater ownership for their decisions in the grading process in the future. As Harper reasoned, "Teaching is not like working in the hospitality industry where 'the customer is always right.' I should be able to defend the test in an appropriate way."

A number of GTAs attributed students' sense of entitlement around their grades to working in a very elite and privileged academic environment. Harper was unaccustomed to conflict in the classroom and appalled when a student accused her and the professor of "setting students up to fail" on their midterms in front of the entire class. Harper explained that as undergraduates, she and her lower-income peers would never have challenged a teacher in this way because they viewed education as such a privilege. This incident also led Harper to believe that DEI-centric teaching was particularly important for students from higher income backgrounds who might be less inclined to contemplate issues of privilege and educational access. Kai echoed these sentiments when sharing his surprise at student feedback indicating the professor should clarify what Kai considered a very straightforward grading process. Kai was most astonished by "a few students who just sent emails at the end of the term saying, 'I didn't do the work, but I want to get extra credit.'" Kai denied such requests, explaining to students that he, the professor, and the syllabus clearly outlined exactly what students needed to do to achieve specific grades in the class. Like Harper, Kai suspected such entitlement might be more prevalent

among students from a higher socioeconomic status, as he did not recall such behaviors at his former institution.

In addition to describing students' sense of entitlement, several GTAs perceived students at the University as far more intense about their grades than themselves or their peers as undergraduates. Speaking to this belief, Jakob said:

> . . . they're just not happy with anything other than an A . . . as an undergrad, I would have been happy with an A minus . . . I get a lot of frantic emails/interactions…[I want to say] "these are the assignments that are basically not for credit and you're already freaking out. You need to chill."

Jakob was further perplexed by the degree to which he "should" accommodate students at an institution where families invested so much in their children's education. As one example, Jakob was initially resistant but eventually succumbed to students' requests for a review session before their exam out of pressure to satisfy the "student as customer." Another time, Jakob navigated an emotionally draining and time-consuming grade grievance with a student who he believed had treated him very disrespectfully throughout the entire appeals process. Thereafter, Jakob only pursued formal grade appeals if he completely disagreed with a student, reasoning that it was much easier to simply add a few points and "keep the customer happy."

Amir spoke to the strong achievement orientation among students at the University as well when describing a student's intense reaction in class to receiving a low grade on an assignment. The student was still visibly upset when he visited Amir in office hours and explained that he was under immense pressure from his parents to succeed at the University. Shortly after their meeting, Amir learned that the student had dropped the class. Amir felt responsible for this outcome, which "shook [him] to the core." However, the experience also

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deepened Amir's appreciation for the importance of considering the "whole student" (e.g., personal demeanor, background, first language) when evaluating their work and to encourage students to alert him of challenges in their personal lives so that he was aware of such barriers.

By the end of the term, GTAs concluded that evaluating and assessing students' work and learning, respectively, were some of the most challenging aspects of teaching. GTAs continued to question how to assess student learning and to consider strategies to assist them in this work, such as administering diagnostic tests at the start of the semester to gauge students' pre-existing knowledge of the subject matter. Several participants considered collecting student feedback through self-administered feedback forms and individual meetings to assess students' perceptions of their teaching and the course more regularly. Amir, for example, received a very negative year-end evaluation from a student he regularly met with in office hours to help with his papers. This feedback led Amir to conclude that instructors can easily fall out of touch with students' true perceptions of the class and their instruction. To better detect such misconceptions in future teaching assignments, Amir planned to administer a survey and require each student to meet with him midway through the term.

GTAs' experiences led them to identify evaluation and assessment practices to carry forward in their instructional work as well. Half the participants realized that collecting students' feedback independently and through instructional consultations provided useful information on what was and was not "working" for students. Harper, for example, learned a great deal about students' views on the benefits and drawbacks of the course and her instruction by creating and administering a midterm student evaluation to solicit feedback on their reactions thus far to the course and her instruction. GTAs including Kolby, Amir, Emma, and Parker gleaned useful insights on tactics to improve their classroom instruction through faculty observations of their

teaching and/or midterm teaching consultations offered through the University's teaching center. Each of these GTAs expressed that learning this information midway through the term, which might not otherwise be provided until year-end evaluations, was particularly beneficial in identifying ways to improve their instruction *before* the course had concluded.

A handful of participants identified strategies that they planned to carry forward when grading students' work as well. Kai was very impressed with his professor's "ungrading" approach, which emphasized engaging students in assignments that appealed to their innate interests, as opposed pressuring them to achieve a high grade in the class. By the end of the term, Kai anticipated implementing a similar strategy when designing his own classes as a faculty member. Relatedly, Amir began to give students the option to write rebuttals to their grades as a way to hone their skills crafting an argument. From Amir's perspective, the possibility always existed that he overlooked something when grading students' work. More importantly, however, Amir wanted students to develop a practice of thinking critically about the advice they receive from "authority figures" like himself. With time, Amir viewed his willingness to encourage such behaviors as one of his greatest strengths as an instructor.

Summary

As the data in this chapter demonstrate, GTAs' collective instructional experiences — in conjunction with their interpretations of both formal and informal feedback on their teaching — informed their evolving pedagogical knowledge, beliefs, and behaviors (i.e., teaching practice) and perceptions of who they were and aspired to be as teachers (i.e., teacher identity). GTAs' own experiences as students further informed "what" they learned about various aspects of their practices, particularly similarities and differences between their current and former educational environments and their own learning styles and those of their students. I summarize GTAs'

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primary insights about teaching in relation to their teaching environments and preparations, students as learners, and evaluation and assessment below.

Teaching Environments and Preparations

As GTAs taught their classes, they became more acquainted with their instructional environments including the quality and availability of pedagogical resources, the benefits and drawbacks of working on an instructional team, and faculty and peer attitudes towards teaching and undergraduate education. A number of participants regularly felt ill-prepared for their instructional responsibilities but were unsure how or whether to address such concerns in light of their instructional training and guidance, as well as their needs to balance multiple academic roles. Furthermore, GTAs' interpretations of the value that research universities (like the University) and their academic disciplines placed on teaching substantially informed their views on the benefits and drawbacks of pursuing faculty careers at different types of colleges and universities (i.e., research- versus teaching-centric institutions). As such, GTAs' instructional contexts substantially informed what they learned about their work and their future visions for themselves as teachers.

Students as Learners

The challenges and successes that GTAs experienced as they worked to promote and evaluate student learning and engagement shaped their insights and beliefs about the effectiveness of various pedagogical approaches, classroom exercises, and course designs (e.g., academic requirements, grading policies, learning objectives). Participants developed a deeper appreciation of the need for transparent learning objectives, preparing clear and well-thought-out discussion questions, and establishing students' understanding of basic concepts before

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transitioning to more complex material. GTAs also came to see the value of integrating relevant examples, applied learning activities, rapport building exercises, and strategies that appealed to diverse learning preferences in their classroom teaching. Participants further noticed that a critical component of improving the "teaching practice" was ongoing "practice" and preparations.

Evaluation and Assessment

The majority of GTA came to find the process of assessing student learning to be far more complex than they anticipated. Most GTAs further viewed grading and examination processes as some of the most challenging aspects of their work as teachers. Participants were particularly frustrated by their limited authority over evaluation and examination protocols and often viewed the intensity of the academic environments in which they were teaching as unnecessary and, at times, detrimental to the student experience. At the same time, GTAs' participation in evaluation and assessment efforts also led them to a number of new insights and beliefs about how to improve the equity and effectiveness of related practices and policies.

Salience of GTAs' Student Experiences

Finally, GTAs' own experiences as students were salient in a number of their insights and evolving beliefs about teaching. These insights largely pertained to GTAs' perceptions of the value placed on teaching at the University compared to their former academic institutions, similarities and differences between the learning styles of GTAs' students and their personal learning preferences, and the intensity of and high expectations among the University's undergraduate student body — particularly in terms of their academic achievement and their treatment towards their instructors. In Chapter 6, I examine instructional experiences in which GTAs' social identities became especially salient in their teaching and the ways that these

identities informed their evolving pedagogical insights, beliefs, and questions as first-time

university instructors.

Chapter 6: The Ways that Social Identity Matter to GTAs in their Teaching

In this chapter, I examine moments in which graduate teaching assistants' (GTAs) social identities and student experiences became particularly salient in their instruction. I foreground social identity in this discussion for two reasons. First, the instructional experiences that I highlight throughout this chapter each speak directly to the ways that study participants' social identities were invoked in their teaching (but these experiences do not all speak to the salience of GTAs' student experiences). Second, I discussed several examples of how participants' student experiences became salient in what they learned about teaching in Chapter 5. Accordingly, the ways that participants' student experiences were invoked in their teaching are not limited to the instructional experiences considered throughout this chapter. At the same time, participants' student experiences often became salient in many of the instructional experiences that implicated their social identities.

Table 6.1 outlines key patterns regarding when study participants' social identities became salient in overarching dimensions of their identities as teachers. These dimensions pertain to participants' emerging sense of who they are and how others perceive them, as well as who they aspire to be, as teachers. The second columns outline elements of teacher identity in which participants' social identities were particularly salient.

Table 6.1.

When GTAs' Social Identities Become Salient in their Emerging Teacher Identities

Dimensions of Teacher Identity	Elements of GTA's Teacher Identities that Made Their Social Identities Salient
GTAs' Sense of Who They Are and How They are Perceived as Teachers	• GTAs' instructional qualifications (i.e., pedagogical knowledge, skills, credibility) • GTAs' instructional style (i.e., approachability, relatability) and authority (i.e., respect from students, instructional autonomy and decision-making)
Who GTAs Aspire to Be as Teachers	• What GTAs consider to be important takeaways of course subject matter • GTAs' commitment to creating equitable, inclusive, and supportive learning conditions • GTAs' attraction towards teaching, particularly within their academic disciplines

In the sections that follow, I describe each of the patterns delineated in Table 6.1 in detail. In doing so, I demonstrate how examining GTAs' interpretations of their instructional experiences provides a useful lens to understand how their social identities and experiences as students might implicate their work, beliefs, and identities as teachers.

GTAs' Sense of Who They Are and How They are Perceived as Teachers

As GTAs participated in the practices of their academic communities, they became more aware of how their social identities informed their own and others' perceptions of them as teachers. These insights often pertained to GTAs' instructional qualifications and to their style and authority.

GTAs' Instructional Qualifications

At the start of the term, most GTAs expressed apprehension about whether students would perceive them as knowledgeable in light of the proximity of their age to that of their students. Several GTAs encountered instructional experiences that reinforced these concerns. Parker, for instance, learned from fellow GTAs that a few of his students commented that he looked very young and explained that such remarks "brought a sort of realness" to his initial concerns about instructional authority. On a separate occasion, a student remarked in front of class that he had the same shirt that Parker was wearing that day. Parker found the exchange uncomfortable, as he imagined that such informalities might lead to a loss of credibility. Jessie sensed that many of her students' "questions," such as *which* Obama election was the first time she was eligible to vote, were attempts at "mental math" to determine her age. Harper similarly believed that students pushed back on her answers to questions due to her age and graduate student standing. As a result of such experiences, Harper disclosed that "I consistently feel pretty unqualified and have some sense of an imposter syndrome while teaching." Kolby and Jakob routinely questioned how their age and graduate student status informed students' perceptions of their instructional qualifications, even though they did not recall specific incidents that reinforced these insecurities.

A number of participants expressed further apprehension in our first interviews about how various marginalized identities that they held — particularly gender, race or ethnicity, first language, (dis)ability, and/or socioeconomic status — might inform others' opinions of their instructional abilities and competencies. Over the course of the term, each of these participants recalled an instructional experience that reinforced these concerns. In one example, a student who was a White woman asked Emma — who identifies as Black and non-binary — how to

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recruit people of color for her study sample. While Emma "knew" that such interactions were "expected," the question was also a "snap back into reality:" they were not teaching in "some isolated bubble" where race would not come up because it was not a focal point of the course. The experience also left Emma questioning the role that identity might play in students' decisions to direct certain questions their way. For example, did this student approach them because Emma was Black? Or perhaps because the student also held a marginalized gender identity? Additionally, were Emma's identities the primary reason that a student who was a woman of color routinely attended Emma's office hours even though she was enrolled in a different teaching assistant's section? Emma's experiences as the only person of color on a teaching team led by a White male professor raised additional questions for Emma about how their identities inform others' views of them as an instructor. It was evident to Emma that the team viewed them as a novice given that the other GTAs were more experienced and, in turn, more skilled at structuring their classes, interacting with students, and executing their grading responsibilities. However, Emma questioned whether their instructional colleagues' opinions of their abilities as a teacher were based solely on Emma's lack of experience or whether perceptions about social identities were also at play. At the end of the term, Emma was relieved to learn that they would have another Black GTA on their teaching team the following semester so that they would have someone with whom they could debrief microaggressions they might encounter in their teaching.

Like Emma, Charlotte and Jessie described a host of occurrences that led them to believe that their instructional colleagues' views of them as teachers were closely intertwined with their gender. Charlotte, who identities as non-binary, felt that the professor only elicited and valued their feedback on topics that pertained to gender and sexuality. Jessie's instructor of record, a

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White man, consistently only accepted suggestions on course policies and exam questions from the one GTA on Jessie's team who was also a man. The two men also decided that international students should not have dictionaries for the mid-term, a decision against the wishes of all four women GTAs. As a result of such incidents, Jessie began to wonder, "Do you not think I can teach this?" By the end of the term, Jessie believed that working on an instructional team could be wonderful when everything aligned but also be one of the worst aspects of teaching due to inequities and power dynamics among team members. The four GTAs on Jessie's team who were women eventually met with the department head to express their grievances about the professor's treatment towards them. They also requested not to teach under the professor's supervision in the future and put forth recommendations on how the department could better structure teaching teams in terms of gender and leadership. Jessie further noted that in hindsight, the professor's treatment towards the women GTAs was not surprising given that nearly everyone in her cohort had "run up against" similar microaggressions, which led her to suspect that these gender dynamics were likely department- and, potentially, disciplinary-wide. Jessie's interactions with students yielded similar conclusions. For example, several of Jessie's students — each of whom were women — approached her to talk about careers in political science. These discussions led Jessie to realize that she was a role model for some students and that she herself never had a political science professor or GTA who was a woman as an undergraduate. Such conversations also prompted Jessie to contemplate the possibility of pursuing work at a research-intensive university to help grow the representation of political science faculty who were women at those institutions even though she was far more drawn to the culture of teaching-focused colleges like her undergraduate institution.

In addition to GTAs' evolving perceptions of others' reactions towards them as instructors, GTAs' marginalized identities became prominent in difficulties that they personally experienced in their teaching. For example, several GTAs' first language or learning (dis)ability presented challenges in their teaching and grading. Kai, a non-native English speaker, frequently stumbled upon words and struggled to clearly articulate course concepts. He feared that these tendencies undermined his competence, as Kai believed that students expected instructors to be more fluent and to better demonstrate their expertise when teaching. Kai also learned that he needed to exercise caution when reviewing students' work to assure he interpreted their writing correctly. Relatedly, Emma grew up in a Jamaican family that spoke a dialect of English. Emma felt the salience of this background when grading students' work, as they frequently overlooked grammar issues and misspelled words. Harper's feedback was similarly "riddled with spelling errors" due to a learning (dis)ability that made her prone to misspelling words.

Participants' socioeconomic statuses informed their evolving views of their instructional qualifications and preparations as well. As an example, Charlotte and Jakob were the first in their families to teach at a university. Unlike several of their peers, Charlotte and Jakob had few family members or friends to turn to with their questions about this work. Charlotte thought that part of the reason that teaching was "such a learning curve" was because they did not know how to "do academia" or "have any basis for how to teach." Charlotte further believed that their peers were more refined in seeking the advice they needed from the professor, stating:

> I don't have anybody that I rely upon to express these kinds of concerns to and I don't know how to frame them in a way that would not come off as just complaining, but actually requesting advice, which is what some of my peers seem to be really good at doing, is asking questions in a way that don't alienate other people, particularly the

professor . . . My mind immediately just goes to catastrophe, which I think is a very

"first-gen, class" thing. And so, when I am struggling with teaching, it comes off as very

anxious hyper critical energy . . . I don't know how to reformat that to get the feedback

that I need.

To make matters worse, Charlotte felt as though they were struggling in all areas of graduate

school. However, they also believed that they had limited alternative options at this point,

particularly due to their low-income background. As Charlotte explained:

I guess the social economic status thing pops up every now and then when I get into the

space because I think, "Well, I can't just walk away." What would I go back to? My

family can't support me. And they expected so much of me and I'd be a failure" . . . It

just feels like a masquerade, really, sometimes. And I'm worried the students can see

through me and tell that it's not working for me.

Charlotte shared that their first-generation student status was most salient at the end of the term,

which they attributed to experiencing "full blown imposter syndrome" when posing as an

"academic gatekeeper on the other side of things, when I generally have no idea what I am

supposed to be doing half the time." However, Charlotte was relieved to see that their low-

income background did not seem to raise red flags for students over the term, which Charlotte

attributed to passing fairly well as middle class.

Several GTAs' geographic origins informed their knowledge about specific course

concepts. For example, Jessie and Harper were initially concerned that their Southern origins

might undermine their competence but learned that they could leverage their knowledge of the

South as an instructional tool. As Jessie explained:

. . . sometimes, because I'm from the South, that actually gives me more credibility,

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particularly when we're talking about racial resentment politics . . . [I have] more lived

experience with it . . . [whereas students] are like, "Oh yeah, you'd know that. I've been

in [this state] my whole life. I don't know."

Harper correspondingly saw that she could draw upon her experiences in the South to provide

counterexamples when explaining class topics. Harper also realized that sharing aspects of her

personal background allowed students to know her better while also encouraging them to make

similar connections between their own lives and the course material.

GTAs who identified as international students learned that their geographic origins

presented barriers in and informed how they approached their classroom instruction. Kai and

Amir, for example, had limited understandings of what American students learned in high

school. Amir found this situation very frustrating, as he believed that a key responsibility of

history instructors was to challenge students' existing body of knowledge. Kai was astonished by

students' lack of familiarity with international traditions he assumed to be general knowledge,

such as his country's longstanding history of nomadism. In turn, Kai realized that he held an

incorrect assumption about the specificity of students' knowledge of another culture and that he

could not take students' preexisting understanding of course material for granted, especially

when unfamiliar with their prior educational preparations. Kai noted further that he considered

this insight one of his most important lessons as a teacher that term.

As someone who taught "politically sensitive things," Kolby was very intentional about

concealing the fact that English was not his first language and that he was an international GTA.

Kolby knew that some people would say he should "own" his ethnic identity, but he was also of

the belief that "you're not going to learn very well if you're a racist." As Kolby reasoned, it

would be too easy for students to dismiss him as biased — which he also acknowledged was not

completely inaccurate — if they knew he was "foreign." To illustrate this point, Kolby admitted that he would find it very difficult to grade a paper fairly that argued in favor of policies that banned people from his country from entering the U.S. He found it even more challenging to remain neutral in discussions around political warfare that plagued his country of origin stating, "I just grew up with that so embedded in me . . . my [ethnic] identity reflects a lot of my ideology, a lot of my partisanship, and I believe a lot of [students'] views on me . . ." Yet Kolby was also surprised that he exercised such caution stating, "The thing that I really learned about myself is, 'Wow, I hid it . . .' I hid it a lot more than I thought I would . . . I never used [my country] for an example . . . I've learned how to cover it up . . . "

GTAs' Instructional Style and Authority

In addition to their competence as teachers, GTAs' social identities informed their instructional style — particularly the extent to which they believed that others perceived them as approachable and as an authority figure to be respected. The great majority of participants felt that their age and graduate student status aided in their rapport building (i.e., by positioning them as more approachable and relatable than faculty) but undermined their instructional authority. Speaking to the first point, Kolby shared the following:

> I definitely believe age mattered . . . [but] only in a positive way . . . I was able to better connect with my students, gel with them much quicker, develop a comfort level with them that was really only productive and constructive, and it didn't affect me in the negative way that I thought it would, which was basically that I wouldn't be taken seriously.

However, more than half the participants also felt that students demonstrated greater respect towards instructors of record than to them. Kai and Harper, for example, noted that students were

consistently more engaged and considerate in lecture than section. Kai went on to describe

several exchanges with students that he could not see happening with the professor, such as when

one student gave him a "fist-bump" in the hallway and another student shook his hand after class

as a way to compliment his instruction that day. Kai found it hard to imagine these students

interacting with course professor in such an informal and forward manner. Harper similarly

believed that she "command[ed] a different level of respect than the actual professor of record"

based on students' lack of attentiveness in section compared to lecture and the frequency with

which students pushed back on her answers about course content and policies.

A common struggle among GTAs was how to strike balances between 1) adopting a

relaxed instructional approach and exercising sufficient classroom management, and/or 2)

building a sense of rapport with students while also establishing professional boundaries. As an

instructor, Jakob did not want to be overly stringent in the classroom. However, he often

struggled to bring students back from side conversations. With time, Jakob realized that his

tendency to join these conversations sent mixed messages on the appropriateness of such

behaviors. Jakob also came to understand that he was uncomfortable addressing issues around

student conduct given that they were practically the same age and that he was unaccustomed to

occupying a position of authority in the classroom. Jessie, Kolby, and Charlotte experienced

similar tensions as they attempted to connect and establish professional boundaries with students.

Jessie, for example, reminded students on several occasions that it was inappropriate to connect

with her on social media. Charlotte was disappointed to see that it truly was difficult to build

relationships with students while maintaining their professional distance, as a senior GTA

advised earlier in the term. Kolby wrestled with his status as "instructor versus friend," such as

the time when a male student joked to the class that he was quite content remaining in a group

that consisted of all women. Kolby wanted to laugh but felt it inappropriate to do so as an instructor. He further sensed that students thought of him in "a more hierarchical way" given the formality with which they interacted with him in comparison to other GTAs. At the same time, he was pleased that students treated him with respect. Like Jakob, Kolby found it disconcerting to occupy this new position of authority at times, stating:

> I just have to accept that I am separate from them . . . My friend is struggling with being their friend too much. Perhaps it's a good thing that I'm distanced from them . . . I'm not used to being in a room where I'm the top guy or whatever, I'm the leader of the classroom. It's really hard to sort of accept that . . .

In addition to issues of general classroom management, nearly every GTA recalled a time when a student challenged their authority over a grade they received. These interactions led participants to question how holding specific identities influenced students' behaviors towards them as instructors, as well as to believe that they would receive far more respect in such situations if they held faculty versus graduate student appointments.[21]

Participants' gender, race/ethnicity, and sexual orientation were salient in their efforts to build relationships with and establish a position of authority with students as well. A handful of GTAs felt that holding a marginalized identity distanced them from students and resulted in somewhat of an "othering" experience. As a Black GTA, Emma felt far less comfortable "being the only one" to identify as Black in one of their sections than when teaching their other section that had two Black women, as they often laughed and "just got" one another. As an international GTA teaching mostly American students, Kai sensed that his accent inhibited his ability to foster

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[21] I outline a number of examples of the ways that students challenged GTAs' instructional authority over grades in Chapter 5's section "Evaluation and Assessment."

a sense of rapport with his students. Likewise, Charlotte felt self-conscious about students' receptiveness to their sexual orientation stating:

> . . . there are some aspects of my identity I don't think that they would respond to positively . . . sexual orientation . . . I'm not ever going to really bring that up in that space . . . I wonder sometimes what they think . . . maybe [that] I am non-binary or they think I'm a real lesbo and/or non-binary. I try not to think about it.

On a related note, GTAs' gender, racial, and ethnic identities gave shape to their emerging perceptions of themselves as instructional authority figures. Every GTA who identified as a man and/or White believed that holding privileged gender and/or racial identities, respectively, aided them in these efforts. As a "White-passing male," Jakob thought he was "dealt pretty good cards" as an instructor and probably allowed to be more flexible in his instructional approach than women or people of color. Parker similarly concluded that he ran less risk of "losing control of the classroom, largely probably because I'm a White guy . . . I can be more casual with the students . . . I won't have to worry about them respecting me or talking over me." Kolby shared in the belief that as a man, he could "get away" with more as an instructor — a belief largely informed by his conversations with fellow GTAs who were women. More specifically, these conversations led Kolby to see the ways that women instructors were met with more criticism and judgement than their male counterparts when they dressed informally, revealed their age to students, and adopted lower-key instructional approaches. Kolby further concluded that the way that he was "able to get closer to the students without losing their respect" was a form of "male privilege," especially in light of the of the ways his "female colleagues have struggled against sexism and against not being taken seriously by students, especially by male students." Elaborating on this point, Kolby said:

People always say, "My favorite teacher, oh, we were really close or was funny or wasn't so hierarchical." Women who might not want to get as close or who might not want to be funny, less that risk a breakdown of respect, they might not be able to do the same things that I've been doing successfully. Women, gender, racial minorities might not be able to do this as much. It makes you wonder about who gets to enjoy the privilege that allows you to be later described as a "good teacher."

Thus, Kolby's experiences within and outside the classroom shed light on the multiple challenges facing teachers who hold marginalized identities. Yet Kolby also acknowledged that he "only experience[d] one form of privilege, which is being a man" and that his awareness of such disparities was not necessarily going to change how he taught. As he explained:

Just because I experience these privileges doesn't mean I'm not, to be honest, going to use them, but it does make me think carefully about who gets described as a good teacher and why. It doesn't necessarily change how I personally will teach, but it makes me a lot more aware of, for instance, somebody tells me, "Oh, my students say I'm too much of a hard ass," or something like that. Well, that might be because the instructor isn't allowed to do certain things that I'm allowed to do, for instance.

Amir did not have many issues establishing his authority in this classroom. However, Amir's colleague who was an international GTA and woman of color had ". . . students coming to her and saying, 'You don't know anything,' and stuff like that." Amir suspected that such mistreatment largely came down to his peer's identities and reasoned, "She also has a thicker African accent . . . [and] she's a woman, which makes her further vulnerable. And then she's Black, and all of that put together." The stark differences in respect that students demonstrated towards Amir and his peer led him to conclude that it was very important to consider how social

identity factored into instructional authority as ". . . people who have questionable authority also tend to be people from different ethnic backgrounds, who are non-White, non-Americans."

GTAs who identified as women or non-binary echoed Amir's observations when describing their experiences with instructional authority. Jessie worked on a teaching team that consisted of one man and four women, two of whom were women of color. The first weeks of the term, a more senior GTA warned the women on Jessie's team that they should be very vigilant about setting expectations with students as women and GTAs of color. When describing what she took away from this conversation, Jessie said ". . . the way that I can shut a conversation down is very different from my colleague who's Black…but I can't be so authoritative as our colleague who's a guy." As a White woman, Jessie further believed that she could be "a bit more authoritative and not run into a stereotype" as easily as a woman of color. Charlotte, who identifies as non-binary, detected differences in students' classroom conduct and participation when they presented in a more feminine manner (i.e., by wearing makeup and having more a "more peppy, feminine inflection"). Describing this dynamic, Charlotte said:

> I feel like they listen to me and respond to me more when I'm more masculine presenting. The more feminine weeks . . . they've been a little more resistant. . .I have to work a little harder to corral them…to get responses. . .I've heard from plenty of women-identifying teachers and professors that there's a dance that you have to do to maintain a position of authority in the classroom because you're already being considered less than due to your gender but then [also] being soft enough to not alienate yourself.

In light of students' behaviors, Charlotte began to tailor their attire for class based on what they wanted to accomplish that day. Towards the end of the term, Charlotte noticed that students stopped taking notes and were on their phones more frequently in section. Charlotte

acknowledged that students might be bored or exhausted at that point in the term but suspected that gender was likely at play as well. Relatedly, Harper shared that students were very disrespectful towards her when they learned that they performed poorly on the midterm exam. As Harper reflected on this exchange, she began to question whether students would have treated a faculty member or a man in the same way.

Who GTAs Aspire to Be as Teachers

In addition to witnessing how their social identities shaped "who I am," GTAs developed greater awareness of how these identities informed their beliefs regarding "who I should be" and "what I want to accomplish" as a teacher. These aspirations mostly pertained to what GTAs wanted students to learn and the conditions they wanted to create to promote such learning. In the paragraphs that follow, I describe successes and challenges that GTAs encountered in their efforts to advance these aims. In doing so, I illustrate how these experiences yielded new insights for GTAs regarding the pedagogical beliefs, norms, and expectations of their academic communities and how this learning/participation ultimately shaped GTAs' evolving beliefs, behaviors, and perceptions of themselves as university instructors.

What GTAs Want Students to Learn

Participants' instructional experiences yielded rich insights for GTAs about how the identities that they hold, their own educational experiences, and the contexts of the subject matter, disciplines, and/or academic institutions in which they were teaching informed "what and how" GTAs wanted their students to learn. These aims largely pertained to 1) developing a deeper understanding of and appreciation for the academic discipline, 2) gaining a better grasp of

the social justice and political implications of the subject matter, and 3) cultivating critical thinking skills and an applied understanding of the subject matter.

To Better Understand and Appreciate the Academic Discipline. As they engaged in the practice of teaching, nearly every GTA expressed renewed and, at times, stronger commitments to fostering students' knowledge of and appreciation for their academic disciplines. Kolby and Jakob, two GTAs in political science, provide particularly illustrative examples of this evolving commitment. The more that these GTAs worked and taught as political science instructors, the more they aspired for their students to develop an interest in politics and to "learn to think like political scientists." At the middle of the term, Kolby's primary aims for students were to become "better at processing political information," such as when reading the news, and to take away key concepts like "just because we see an election doesn't mean it's a democracy." Kolby noted further that he would find it especially fulfilling if students developed an interest in politics and a small subset felt that "this class kind of motivated me to become a political scientist." As part of this learning, Kolby aspired for students to understand how political scientists thoughts about various concepts different than scholars of other disciplines. To make such distinctions, Kolby was "constantly talking in terms of this is what political scientists do, this is what political scientists think." Kolby largely attributed these efforts to his interdisciplinary training and research, as both an undergraduate and graduate student, which underscored important differences to him in

> . . . how historians think . . . how [scholars in] philosophy and sociology think . . . I just
> have all this information about other [disciplinary] identities as well. So I know what
> makes political scientists different. [Students will] be like, "Really, in Arab states I feel
> like money and trade was a lot more important." And then immediately I'll be like, "Well

that's true if you ask an economist." Right? So I'll let them know there is a home for that. "There are groups of people that think that, but that is not political science" . . . I tell them that's another identity.

Over time, Kolby came to see his drive to differentiate how "political scientists" thought about particular ideas as "almost in my blood" and his knowledge of such differences as one of his key strengths as a political science instructor.

Jakob wanted students to develop a better understanding of course concepts as well but, even more so, to *like* learning about the material. Like Kolby, Jakob continuously encouraged students to grapple with and critically assess course concepts "like a political scientist." He also referred to himself and students as "political scientists" as a way and to bolster their confidence in their own thinking about class and in him as a "political science teacher." Jakob felt strongly about the latter point after taking a political science course taught by a faculty member outside his discipline and feeling that he knew more about the subject matter than the instructor.

To Better Grasp the Social Justice and Political Implications of the Subject Matter.
GTAs' experiences (re)ignited their commitments to help students better grasp the social and political implications of issues addressed in their courses. Participants often attributed these renewed motivations to greater appreciation for the importance of viewing course concepts through a social justice lens and awareness of the skills they needed to cultivate in order to teach in this way. Harper, for instance, credited her participation in the diversity and inclusion teaching certificate for her heightened awareness of the course's race and ethnicity component and how she could use teaching as a vehicle to have social impact in her work as an academic. However, she struggled to translate practices she learned in the certificate to her own instruction and felt insecure about her abilities to facilitate conversations around race in an inclusive and informed

manner. As Harper explained, the last thing she wanted to do was turn students off to the topic by "being so harsh" or making comments like "this is a bad statement because it's racist." These limitations led Harper to continually question how she could acquire more pedagogical knowledge and skills to hone her abilities to be a more DEI-centric teacher.

A common concern among political science and history GTAs was how to emphasize the social justice and political implications of the subject matter in light of disciplinary beliefs around the appropriateness of sharing one's political opinions as an instructor. Kolby and Jessie, two political science GTAs, received multiple messages from departmental faculty and peers that it was inappropriate for instructors to share their political views in the classroom. Speaking to this tension, Kolby described an occurrence in which a student repeatedly pushed him to acknowledge the benefits of a then-presidential candidate. Kolby agreed with many of the student's points but felt it inappropriate to share his opinion on the matter as instructor of the class. Describing what he took away from the experience, Kolby said:

> What comes to mind immediately is how much I should be revealing my own political opinions . . . I'm completely on the fence about it. It's really hard to do comparative politics without revealing your opinion or without making some sort of value judgment . . . I am thinking about [whether] I even want to present myself as some neutral. . .I don't think they think I'm neutral . . . I don't look neutral. I have an [ethnic] name. Do I want to pretend that I am? But I also don't want to alienate my conservative students . . . My professor, first class revealed all her political stances, essentially. I'm wondering if I should do that. She's also tenured and safe. So, I don't know.

Thus, Kolby not only wrestled with whether it was appropriate to share political views as an instructor but for *whom* it was appropriate based on the identities that they held. Jessie, another

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political science GTA, questioned how "who she was" informed whether she "should" reveal her political views as well. As Jessie explained, she received "mixed messages about whether or not to share political partisanship with students. Women tend to say absolutely not, men tend not to see an issue with sharing their partisanship." Like Kolby, Jessie also struggled to avoid bringing her own political anxieties to her teaching — particularly when teaching a course on U.S. politics during what seemed to be a period of history in which American politics were in a constant state of turmoil.

Over the course of the term, Kolby and Jessie both encountered experiences that prompted them to reevaluate how course designs and instruction facilitated and/or impeded students' understanding of various social justice implications. Describing one such occurrence, Kolby shared his astonishment when students began to defend the views of the leader of a right-winged political party featured in a podcast that he shared in class. As he reflected upon students' reactions, Kolby began to realize that they only understood the political terms used by that leader from a definitional perspective, or how the terms were defined in the course materials. Subsequently, students failed to grasp that the next steps from those definitions were limitations on immigration, women's empowerment, and a host of other issues. Kolby in turn concluded that as instructor, he should have dedicated more time to clarifying that it is possible to "agree with the definition of democracy but [to] disagree with how it's used" and that "people who think this way also tend to use [this definition] in a very particular way." Kolby also credited the incident for his heightened awareness of how the course neglected to address issues of power in a thorough manner and, consequently, the overall big picture of "why things are egregious" was often lost on students. Such experiences led Kolby to place greater value on encouraging students' to contemplate differences between how course concepts are *defined* versus *used,*

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particularly among certain political factions. Kolby further noted that such experiences led him to become more attuned to what he began to view as widespread shortcomings of his department, namely that faculty frequently failed to drive home the human cost of political policies and ideologies. As Kolby argued:

> Politics is inherently human, and it's all about how these things affect people. I think that people who study political science should always be grappling with that. It's a problem I have with people in my own department. They're treating people as data points, they aren't really thinking about how is this impacting people's lives, especially negatively. I think that needs to be a much bigger part of how I teach . . . [students] should leave with an awareness of there's no right or wrong answer, but also how the answer you arrive at tends to affect human lives in a very profound way.

Over the course of the semester, Kolby ultimately came to believe that it was "incumbent on a teacher to . . . imbue their students with certain values." He further contended that it was unrealistic to ask people who were passionate about politics to be neutral when teaching a political science course, stating:

> I'm not going to pretend when far right people say, "Muslims should be banned," there's two sides to every story. I want to be like, "no, that's wrong. That is wrong by every standard, that is not something you should be thinking." If somebody accuses me of liberal brainwashing, I don't think that's what I'm doing. I want to be the type of person that talks to them about that, or at the very least, gets them to seriously engage with the human cost of these things. I am thinking a lot about how much should these moral values be a part of my teaching . . .

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By the middle of the term, Kolby and Jessie had inadvertently disclosed their political affiliations through slips in conversation with their students. To both GTAs' surprise, these "slips" led to very productive classroom discussions and prompted them to reconsider whether they agreed with others in their department on the matter of instructors sharing their political partisanship to students. As Kolby reasoned, "To reveal all these things about myself to my students and to see it resonate and go really well . . . has kind of gone in the face of the advice that I've received and made me think twice about how it is that I want to approach and relate to my students." Despite these beneficial outcomes, Jessie and Kolby eventually came to agree with the predominant view in their department that it was typically best for instructors to avoid divulging their political opinions to mitigate the possibility of isolating students who held opposing political views. Yet both GTAs acknowledged that their final decisions on the matter would be highly dependent on contextual factors, particularly 1) the political ideologies of their broader campus communities and of the students in their classroom, 2) the nature of their course content, and 3) the broader sociopolitical environment (e.g., whether the course was taking place during an election year).

Jakob, the third political science GTA, firmly believed that political science instructors should avoid sharing their personal views on course topics. He based this belief on numerous observations of this approach ending poorly for other instructors. Additionally, Jakob did not want to get sidetracked by personal debates over U.S. politicians when teaching a course on international politics. He also thought that he subconsciously told himself "not to go there," as Jakob was well aware that he held more conservative views than the majority of the campus community. To avoid such diversions, Jakob routinely emphasized that "we are not discussing politics but learning to think as political scientists." The approach proved successful, which Jakob thought also created an environment in which students were more open sharing their

opinions than they might be with an outwardly liberal instructor. Jakob came to believe that his conservative views, coupled with his decision to keep those views to himself, also uniquely equipped him to "play devil's advocate" and push students to think in ways that they might be less accustomed to on a predominantly liberal campus.

The two history GTAs, Kai and Amir, expressed similar apprehension about mixing personal politics with their instruction. Kai spoke to such concerns when recounting a classroom exchange in which he explained to students how the topic under discussion was the root of eugenics and, accordingly, had "ugly implications." While Kai acknowledged that it was possible that students all agreed with this point, he was surprised that he received no push back on this statement. Such experiences prompted Kai to question whether students presumed that he held more progressive politics as an instructor in a predominately liberal discipline and institution and, in turn, were reluctant to share views that were "not in line with the mainstream liberal left that is common in universities."

Amir viewed his work as a history instructor as a very personal endeavor, particularly when he saw glaring parallels between course topics like "the history of Nazism" and the current political state of his home country. As GTA, one of Amir's key objectives was to teach students how to use history as a lens to critically analyze contemporary politics and take a stand against corrupt political systems. However, the contexts in which he was teaching presented several barriers to advancing this goal. As Amir explained, the history department was "politically aware, active, and want[ed] their students to be politically aware, active, and have their own voice and views." In contrast, from Amir's perspective, the broader university expected its instructors to remain ". . . in some sense, detached from the contemporary politics . . ." to avoid sending any messages on its behalf. To illustrate this point, Amir stated:

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I am not allowed to talk about . . . upcoming U.S. elections or support any particular

political party in my classroom or in my office hours . . . Because then it might give the

message that the University is supporting this or that candidate or a particular political

ideology . . . that is one kind of expectation [of] me, which is at times really difficult.

Amir viewed such conditions as placing substantial limitations on his abilities to teach certain

topics, such as the role of political dispensation in a Bolivian coup, to students in a transparent

and comprehensive way. Amir found the broader sociopolitical environment limiting for his

work as a history instructor as well. To illustrate such constraints, Amir shared how the U.S.

presidential administration at the time created an application that allowed students to record

instructors as a way to surveil faculty who might promote liberal ideologies in the classroom.

Such circumstances left Amir constantly questioning how to bring politics into his instruction in

a way that helped students link historical events to contemporary politics and that was also

ethical, as he further believed that using one's politics as an instructional tool could be

"repulsive" if approached incorrectly.

**To Develop an Applied Understanding of and Ability to Think Critically About the

Subject Matter.** GTAs' social identities became salient in their evolving beliefs about "what

really mattered" in terms of student learning, particularly with respect to students' abilities to

think critically and in applied ways about the subject matter. Jakob, for example, learned that he

had "different expectations than faculty do, particularly my much older generation of professors"

regarding "why" students should learn course concepts. From Jakob's purview, faculty in his

department placed too much emphasis on learning concepts "for this course" when they should

encourage students to contemplate the subject matter *beyond* this course and in relation to current

events. Specifically, Jakob wanted students to continue to think about his course outside of class

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because they were truly "worried about world politics" — not out of concern about all the work they needed to complete for section. Jessie and Charlotte echoed Jakob's views on the importance of helping students make connections between the course content and social and personal matters. Jessie found great fulfillment in watching the ways that teaching political science could have "real" implications, such as by helping students understand "how the political system and voting work." As Jessie explained, she was rarely afforded this perspective as a researcher and would often question how her work as a political scientist would actually help people. Charlotte took issue with the instructor of record's insistence to quiz students on what Charlotte considered "obscure concepts" rather than help them learn something that "would stick with them for a while," such as "why sleep is important." Charlotte's disciplinary identity and graduate instructor status shaped their sentiments towards such matters as well, stating:

> . . . people remember things more when they're connections that are made explicitly between the material, and that's not happening in this class. As a women's studies major, I find myself wanting to pull that stuff in all the time…[but] there's only so much I can say and there's only so much authority I have . . .

In addition to "what" students should learn, Charlotte's learning experiences in women's studies as a student informed their beliefs regarding "how" such learning should occur. For instance, Charlotte intensely disagreed with how lecturing was the predominant mode of instruction in psychology courses and how this approach positioned instructors as "all-knowing authority figures." As Charlotte explained:

> . . . when I think about how classroom discussion should be done, my mind immediately goes to a women's studies model where everybody's in a circle and it's very discussion

focused . . . creating and interacting with knowledge with a group setting, with a bunch of minds and not just professor-student.

In addition to placing unfair pressures on instructors to know "the answer," Charlotte argued that teaching models in psychology required students to memorize "useless facts" at the expense of cultivating useful skills like critical thinking. From Charlotte's perspective, it was far more valuable for students to learn to "pull things apart and critique them" — a skill Charlotte had honed in their women's studies courses. Yet Charlotte was concerned that teaching these skills in their current course would disadvantage students on exams that required them to identify the "right" answer. Charlotte elaborated on these beliefs when saying:

I think about my disciplinary identity when I'm in these spaces. I think about how psychology requires you to have the answer, one answer, and that answer usually is contingent on me knowing it. A student will ask a question, and I need to have it ready for them. Women's studies isn't like that. Women's studies lets you ask a question and then we all create the answer together . . . I can't really do that so much in this kind of space.

By the end of the term, Charlotte decided that psychology as a discipline conditioned students to learn in "black and white" and, as such, it was probably best to lead with the "right" textbook answer and then elaborate with nuance. However, Charlotte only became more confused about whether or not to draw upon their training in women's studies when teaching in psychology. Charlotte was particularly perplexed by the mixed messages they received on this matter. For example, the instructor of record asked Charlotte to lead a class on gender and sexuality — topics deeply rooted in women's studies — only to cancel that session. Charlotte was especially taken aback by a student's comment on their final evaluations that Charlotte's "feminist rants

[were] not relevant in this class." Such comments led Charlotte to conclude that as an instructor they could not simply "turn off" and "deny this entire other aspect of [their] academic existence."

Parker's instructional experiences reinforced his commitment to fostering students' critical thinking as well. Part of this motivation stemmed from year-end student feedback, which indicated to Parker that he promoted too much "low effort learning" by teaching in ways that students found enjoyable and comfortable rather than challenging or stimulating. Parker was very troubled by this insight, as he aspired to challenge and stimulate students' thought processes much like the professors he most admired who had a knack for connecting students' intrinsic interests to their broader learning goals. Parker planned to adjust his instruction in several ways based on this insight, including polling students on topics they viewed as most important and interesting and then using their curiosity as a path to guide his instruction. He also intended to take a more "directing" role when deciding main ideas to address in class as opposed to "covering everything." Yet Parker suspected that it would be difficult to teach in a way that was so responsive to students' interests in the capacity of GTA, particularly in light of requirements that he work under a faculty supervisor and prepare students for exams over which he had little input.

The Learning Conditions GTAs Want to Create

From the onset of the term, participants' social identities and student experiences informed their sensitivity towards issues of equity, inclusion, and emotional support. These social identities and student experiences remained salient when such concerns arose in GTAs' teaching, particularly in their interactions with students who encountered hurdles that they had also experienced as members of marginalized groups and/or students. Moreover, this sensitivity

implicated GTAs' teaching practices in different ways, ranging from developing a "greater awareness" of such issues to "taking action" to actually address these concerns.

Equitable Learning Conditions. Many participants' concerns pertained to how to best accommodate and serve as a champion for underserved and marginalized students. For example, the five GTAs who identified as low-income and/or first-generation students were all sensitive to barriers facing students in similar situations. However, these GTAs also expressed uncertainty about how to actually address such challenges in their role as instructor. Harper spoke to her own challenges as a low-income student who "didn't grow up with much access, I would say, to broader resources," particularly when attending a private undergraduate institution that primarily enrolled students from wealthier families. Describing this situation, Harper said:

> I had very little resources and worked many jobs to get through college. And that was always something that I felt separated me from some of these people that I went to college with . . . I'm much more sympathetic perhaps to [students'] challenges, whether personal or scholastically and I really appreciated in those moments the students have opened up or have emailed to say, "Something's going on. This thing is going to be late."

Harper also aspired to provide students "from all different walks of life" with a rigorous academic experience, something she always sought as a student. However, Harper found herself repeatedly "wrestling with equalizing this environment" so that students were not "penalized for not having gone to an elite private school." Harper was particularly concerned about striking a balance between "dumbing down things" and teaching "at the other end of the spectrum where nobody can really grasp what I'm saying."

Jakob was equally unsure how to teach in a way that was supportive for his underserved students while still valuable for the majority of his students who were from more privileged

backgrounds. As a first-generation student, Jakob always appreciated professors who took time to "demystify the hidden curriculum" for their students. Jakob tried to model this practice in his role as GTA by offering students advice on how to navigate the more obscure aspects of college like building relationships with faculty for future letters of recommendation. Yet Jakob also recognized that many of his students were from wealthier families and might not benefit from the same type of support that he found helpful as an undergraduate.

Charlotte, who also grew up in a low-income family, was concerned that they had developed "blind spots" about the needs of students from similar financial circumstances. As Charlotte explained:

> I have a working-class background, but for at least half of my life now I've been trying to emulate my middle-class peers in educational contexts . . . I don't know how to be attentive to the thing that I've turned my back on for a while.

The last thing that Charlotte wanted to do was create "just a middle to upper class space, which was not helpful to anyone." At the same time, they were uncertain how to navigate this situation.

Jakob and Jessie, two GTAs who had (dis)abilities, were highly attuned to issues of accessibility in different classroom spaces. Jakob was also very cognizant when planning his weekly lessons that classroom activities did not prohibit one of his students who used a wheelchair from participating in any way. Jessie was a "stickler" for assuring students' accommodation requests were met — even when the professor did not view such requests as a priority and Jessie needed to independently navigate layers of institutional bureaucracy to obtain such permissions. Jessie accordingly developed a reputation among students as "the GTA" to see if they needed such support and took pride in knowing that students viewed her in this way.

Several GTAs expressed concerns about the language barriers facing their international students and often attributed these concerns to language struggles they or their peers encountered as students. Kolby, also an international student and non-native English speaker, frequently questioned whether he "lost" his international students by talking too quickly or using advanced terminology. Parker tried to avoid using idioms in his instruction, which he knew the international students in his doctoral cohort found confusing. Likewise, Jessie often reflected on her own experiences learning a foreign language as an undergraduate when developing class exercises and assignments for her section that consisted primarily of international students.

GTAs' identities informed their beliefs regarding issues of equity that they believed they *should* be aware of as teachers as well. A particularly illustrative example of this point was Jessie's realization halfway through the term that a woman was completing all the work for her group, which consisted of three additional students who were men. Jessie was astonished that she had not detected this gender dynamic earlier, as she was intimately aware of how it felt to be "the only woman sitting at the table" in a "very male-centered" discipline. As Jessie explained, "I've definitely been the only female student in a discussion . . . in situations where I've not felt like I could participate . . . the fact that I then designed a class where that experience happened again was really disappointing . . ." Jessie realized that by focusing so much on creating conditions like small group work to benefit students who were intimidated to speak in front of class, she had neglected to see how such conditions had also unintentionally "disadvantaged at least that one female student." The experience helped Jessie realize that in order to achieve her goal of creating an equitable and comfortable learning environment, she also needed to consider how to "design my course to match that goal . . . from the assignments I give them to how I interact with them…to how I put them together to work with their groups . . . "

Inclusive Learning Conditions. GTAs' instructional experiences raised questions of identity and inclusion to them as well, particularly with respect to how they taught course content and interacted with their students. Parker and Emma shared useful examples of how holding a marginalized identity informed their sensitivity towards whether instructors taught subject matter that touched upon these identities in an inclusive and informed manner. Notably, the experiences that informed these beliefs occurred in GTAs' teaching practice and student experiences. Parker, a GTA with a history of mental illness, had an adverse reaction to the way that the course professor referred to people with psychological disorders in lecture, which Parker perceived as unprofessional and "just bad practice." Parker took it upon himself to point out the professor's misstep to students in section that day, as well as to offer them more appropriate language to use when referring to such populations.

Emma, a GTA of color, described an incident that took place in a graduate course that they were taking as a student the same semester that they were working as GTA. The professor of this course, who was a White man, used the term "energy slaves" to illustrate a course concept. Through this occurrence, Emma experienced first-hand "how uncomfortable learning can be as a minority." The incident also solidified Emma's belief that "how" a person teaches is always informed by their identities and that therefore, it was critical that professors reflected marginalized identities. The experience also helping Emma see how holding "so many marginalized identities" uniquely positioned them to understand "the ways that teaching and instruction hurt marginalized people." Emma noted further that the incident underscored the importance of instructors' language, even in a methods-based course like the one Emma was currently teaching, given that ". . . the words that we use to explain certain methods are rooted in pretty much what the university is also rooted in, a lot of patriarchy and racism . . ."

Whereas GTAs with marginalized identities voiced concern over how instructors spoke to issues associated with identities that they personally held, GTAs with privileged identities expressed apprehension over their abilities to teach issues associated with identities that they did not hold (e.g., racism, power, oppression). Jessie, a White woman, describe how a student of color reproached her after class for addressing the issue if slavery in what the student perceived to be a flippant manner. Jessie was taken aback by but also grateful for this feedback, which stressed to her that "I'm a White person talking about race and wanting to not do that poorly . . . [or] in a way that is disparaging to anyone in the room, even though most of my students are White." Jessie also came to appreciate how the language she used as an instructor could "land differently for students, especially if they're not White." Shortly after this experience, Jessie began to incorporate more diverse voices into the course reading list explaining that:

> . . . the textbook was written by a White man. The supplementary articles are written by White men. And I don't like that. So I am having them read an article by a woman who's Black [and] who's a political scientist who talks about these experiences in a much more explicit way that doesn't whitewash the experiences of the civil rights movement.

Parker's racial identity was salient when class discussions addressed the topic of race as well. In one occurrence, a student of color asked Parker, "How does race factor into all of this?" In response, Parker acknowledged that neither he nor the professor, a "75-year-old White guy," were in the best position to speak to issues of race. He conceded further that "the field look[ed] a lot like him" and had not focused enough on those questions. Although unsure "how to solve this problem," Parker felt "more aware of it" in his teaching. Like Jessie, Parker became more vigilant about not privileging White perspectives on course topics as well. Amir voiced similar concerns when it came to teaching issues of gender, diversity, and inclusion. He continually

pushed himself to teach in a way that encouraged students with diverse identities and backgrounds to share opposing views on these topics. However, as a heteronormative man, Amir was frequently anxious about "what to say next" when facilitating these discussions, particularly in light of other GTAs' warnings regarding how "easily students were offended."

Much like their experiences teaching triggering or sensitive subject matter, participants' social identities informed their intentionality around and, at times, approaches to interacting with their students in an inclusive manner. GTAs' identities manifested in and implicated their teaching practices in these exchanges in different ways, and such differences were once again associated with holding marginalized versus privileged identities: whereas GTAs who held marginalized identities typically aspired *to prevent* creating non-inclusive environments that they had experienced as students, GTAs who held privileged identities often feared that these identities might *prevent them* from establishing such conditions.

Kolby, Emma, Jessie, and Charlotte's instructional experiences provide helpful examples to illustrate how their experiences as students and identification *with* marginalized identities — personally or vicariously[22] — compelled them to take specific actions to create a more inviting and respectful classroom space. As an undergraduate, Kolby was often intimidated to engage in class discussions because he was not White. Now a GTA, Kolby wanted to create an environment "where women can talk, where a non-White student can talk." As the term unfolded, Kolby noticed that he was very vigilant about how the class treated a woman of color from his home country. Kolby wanted to "allow for voices like hers to be heard" and for the student to know that "her GTA will have her back." Kolby was also consistently irritated by another student who "just act[ed] like a White man" in the ways that he overshared and acted so

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[22] A few GTAs indicated that their awareness of various issues of inclusion stemmed from someone close to them holding a marginalized identity and experiencing a non-inclusive environment as a student.

aggressive and self-assured in class. At first, Kolby considered discussing the concept of

"positionality" — a topic frequently discussed in meetings that he attended through the

University's graduate student union — with that section as a way to emphasize that "men tend to

have certain social privileges." However, he decided against this approach after a faculty

member advised that it might tokenize marginalized students. Kolby agreed and reasoned, "The

women might feel really picked upon . . . [and] if I talk about White privilege, the one Black

student in my class might feel like, 'Oh shit.'" Instead, Kolby routinely tried to hold space for

women and his more reserved students to participate with strategies like inviting them to speak

first when multiple hands were in the air. Elaborating, Kolby said:

> . . . I'm an expert at picking up any sort of tremble in your voice, any hint of anxiety . . . I
>
> can also see them preparing themselves to raise their hand because I used to be the very
>
> nervous student. If you're really confident, I'll feel like I can push back . . . Whereas if I
>
> can tell that you are really putting in a lot of effort to bring yourself to say something,
>
> then I'll be super encouraging of what you just said, even if it's totally wrong . . .
>
> I'm also very liberal with how I grade people who I can tell are very shy because I don't
>
> want to punish them for their shyness.

Like Kolby, Emma was "definitely the student who does not like speaking up in class." As GTA,

Emma encouraged all students to participate but also wanted to accommodate more reserved

individuals like themself. As such, Emma gave students the option to post their questions and

comments to an online form as an alternative way to earn participation points. GTAs'

experiences as students and holding marginalized identities informed their commitments to

referring to students in a respectful manner as well. Kolby, for example, shared further that much

of his reluctance to participate as a student stemmed from instructors frequently mispronouncing,

and asking him to repeat, his given name. With this in mind, Kolby wrote down the pronunciation of students' preferred names the first day of class. He also taught students how to pronounce *his* name and told them, "The best thing you can do is pronounce my name correctly. The second-best thing is to pronounce it incorrectly…The worst thing is [to] never call me by name for the whole semester, like 'Hey, man.'" As Kolby explained, "I need them to know how to say my name." As someone who identifies as nonbinary, Charlotte believed it very important to acknowledge gender diversity in the classroom and required students to include their pronouns on their nametags. Relatedly, Jessie attributed much of her commitment to gender diversity to the discrimination her twin sister faced as a non-binary student as an undergraduate at a conservative institution. The first day of class, a student approached Jessie to share their gender pronouns. Jessie assured the students that she was going to ask for students' pronouns anyways, which the student seemed reassured and somewhat surprised to hear. Jessie also made a point to pronounce students' names correctly, and a student of color told Jessie that she sincerely appreciated these efforts. Jessie shared that experiences like these only reinforced her beliefs regarding the importance of inclusive teaching.

Participants who identified as White, a man, and/or gender- or heteronormative also voiced concerns about the inclusiveness of their classroom interactions, particularly how holding such privileged identities might exacerbate such issues. Additionally, these GTAs often expressed greater uncertainty than participants who held marginalized identities around "how" to improve the inclusiveness of their teaching practice. Kai, for example, questioned whether his appearance as a White, binary-presenting man in a predominately male discipline influenced whether students approached him and engaged in class. Kai attributed these suspicions largely to previously discussed events in which students who were men displayed very masculine

behaviors towards him (i.e., via handshakes and fist-bumps) and the reluctance of his few women students who were women to participate in classroom discussions. However, Kai was at a loss with how to address such gender dynamics and stated, "[gender is] not something I can shed. I'm who I am." Kolby similarly concluded that there was only "so much" he could do around gender issues and women's reticence to participate in class. Yet such sentiments did not stop Kolby from constantly asking himself the following whenever participation was low among women: "Is the environment a little bit more toxic today? Am I sort of being blindly selective and unaware of how I'm influencing these things?" Kai, Kolby, and Amir further questioned whether their identities as heteronormative instructors influenced who participated and when.

In addition to their challenges with student participation, participants partially attributed their inadequacies to refer to students in an inclusive manner to holding privileged identities. Three GTAs, each of whom identified as White, recalled occurrences where they felt uncomfortable pronouncing the names of students of color. Denoting this point, Charlotte said:

> I'm a White person . . . some of the students have names that I don't know how to pronounce . . .So I don't even call on them . . .[if I do] I don't actually say their name. Some of the students have come up to me after class on a few occasions and they were like, "Oh, you didn't say my name today when you took attendance." And I was like, "Oh no, you're fine. I already checked you off. I saw you as you came in." So, some people are thinking about, "Oh, why didn't she say my name?" [and I'm] like, "Oh no, that's communicating the same thing that I was trying to avoid."

Charlotte was further concerned that they were creating a "very White space" for students of color given that they modeled their instruction primarily after White instructors that they had as a student. However, Charlotte was also unsure "what to do about this." Harper, a White woman,

felt awkward pronouncing the names of several students of color as well. To prevent this situation the following term, Harper planned to write students' names phonetically on her attendance sheet and to administer an exercise intended to encourage name and cultural recognition that she learned in the diversity and inclusion teaching certificate program. This exercise entailed sharing the meaning behind one's name the first day of class to establish a more respectful and inclusive learning environment early on. Parker, a White man, similarly recalled an incident in which he misspelled a student of color's name on a PowerPoint out of confusion by the use of an apostrophe in the name. The student corrected Parker's mistake in front of the class, which Parker found embarrassing but also appreciated. Through this experience, Parker became more intentional in how he pronounced students' names. He did not want to be perceived as "racist" or exclude anyone simply because they did not have a "White name."

As these collective examples illustrate, a number of participants attributed their awareness of various issues of inclusion to their experiences as students and the ways that their own and students' social identities became salient in their instruction. At times, this awareness compelled GTAs to take specific actions to improve the inclusiveness of their teaching. Yet many times, GTAs — particularly those who held privileged identities — were unsure how to actually improve these shortcomings in practice.

Supportive Learning Conditions. GTAs' student experiences and social identities shaped their views about how to best position students for academic and personal success. Half the GTAs believed that faculty and/or the broader University expected too much of students academically, particularly in comparison to their own undergraduate institutions. GTAs subsequently found themselves advocating on students' behalf for decreased workloads and less strenuous course requirements. Additionally, GTAs with histories of mental health challenges

were very cognizant of the impact of these academic demands on students' psychological well-being. Emma, for example, felt strongly about assuring the course did not "take students to their breaking point." In addition to regularly checking in on students' stress levels, Emma encouraged their students to contact them should emotional challenges arise — something Emma wished professors offered to them as an undergraduate. Emma also implemented less stringent attendance policies than their peers, such as allowing students to attend a campus protest instead of class. Emma felt such measures helped communicate that academics should not always be students' first priority. By the end of the term, Emma concluded that the University expected too much of its students and that learning should be less "punitive." Yet Emma also acknowledged that such rigor was part of the "elite" academic experience, stating:

> . . . we have such a high emphasis placed on being extremely elite and giving the students
> a lot of work and all the work being hard . . . it stresses the students out to a point where a
> lot of them cannot function correctly and to their highest abilities . . . however, more
> leniency creates less elitism. So, I am not sure how to rectify that because elitism is a
> privilege . . . and [students] will get benefits out of it, especially once they graduate . . .

The course professor did not respond well to Emma's and their peers' continual requests for decreased student workloads, which he interpreted as less work for the GTAs. The GTAs eventually raised these concerns to their department, which resulted in the instructor of record removing some assignments and the final exam. This outcome demonstrated to Emma that it was important to 1) advocate for students, even if they feel defeated when doing so, as their persistence can help students in the long run, and 2) better acquaint themself with departmental grievance processes, as those changes might have taken place earlier in the term. Jessie echoed these sentiments when sharing that a key piece of advice that she would have appreciated at the

start of the term would be to clarify what she had control to change so that she could best advocate for her students.

Like Emma, Charlotte was disturbed with how students at this university were "so apologetic for needing space to live the rest of their lives" — a mindset that plagued Charlotte throughout their undergraduate years. Charlotte tried to support students in ways that they also found helpful as an undergraduate, such as by offering extensions on assignments if challenges arose in students' personal lives. Charlotte was also routinely "at odds with the professor and making sure that we're not having students do unnecessary assignments, not wasting their time." Charlotte expressed such frustration to their peers but not the instructor of record. As Charlotte explained, they and the course professor were on "rocky grounds" ever since the professor undermined Charlotte's authority over matters of attendance. Specifically, at the beginning of the term, the professor granted GTAs complete jurisdiction over attendance policies for their sections. Charlotte accordingly adopted a very flexible policy, which they always appreciated as a student. As part of their policy, Charlotte allowed students to miss one class to attend a campus protest. When the professor learned this information, she made Charlotte inform students who recently attended a protest that their decision to do so would actually count as a class absence. This experience left Charlotte feeling very reticent to voice any concerns directly to the professor, as well as wanting to establish a better sense of rapport with future instructors of record so that they felt more comfortable in similar situations moving forward. Like Emma, Charlotte eventually concluded that faculty at this institution demanded too much of their students and that Charlotte would not hold their students to such high expectations should they pursue the faculty route. Yet these experiences also reminded Charlotte why they pursued a PhD

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in the first place by demonstrating how their research on mental and physical well-being could truly benefit students.

Jakob was very committed to fostering students' psychological well-being as well. Unlike some instructors who merely "tuck it" in their syllabus, Jakob routinely reminded students that their mental health was "something that's really important that you shouldn't discard." In addition to openly sharing his own mental health setbacks with students, Jakob pushed himself to recognize that "life happens" when personal challenges affected students' academic work.

This receptiveness to students' mental health challenges also caused problems for GTAs. By the end of the term, half of the GTAs recognized the need to set firmer boundaries around their availability outside of class. Harper, for instance, was taken aback by the emotional support that she routinely provided to her students. She also looked forward to teaching upper-level students the following term, who she hoped would be more self-sufficient. A key takeaway for Emma was that overextending themself to meet with students most days of the week only undermined their efforts to be a successful GTA. Charlotte was similarly surprised by the unforeseen amount of "emotional labor" entailed in their work as an instructor, particularly their "constant communication" with students. Like Emma, Charlotte learned that it did not benefit them to give 100% of themself to their teaching and that they needed to be rested to avoid burnout and to be present for their students.

GTAs' Attraction Towards Teaching, Particularly Within their Academic Disciplines

In our final interview,[23] participants shared their concluding thoughts about their overall sentiments towards teaching. GTAs' disciplinary identities were especially salient in these

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[23] Final interviews took place several weeks after GTAs' teaching terms concluded.

conversations, as participants' affinities towards teaching rested heavily on their interpretations of their instructional experiences as teachers within specific academic disciplines. Illustrating this point, every GTA indicated that their passion towards and/or knowledge of the subject matter that they taught as instructors "of this particular course, in this particular discipline" were key determinants of their overall sentiments towards teaching. The vast majority of GTAs also found it very fulfilling to observe themselves and their students acquire a greater command of the subject matter and/or appreciation for their broader academic disciplines. Several GTAs believed that teaching contributed to their development as academic scholars within their respective disciplines as well. Harper, for example, came to see teaching as a "rite of passage" that afforded her greater credibility among academic colleagues and stated:

It's not just me being better at that in a classroom setting, but I can see how me working through these different ideas in front of the students, with the students, has contributed to how I communicate with my peers, or how I write.

Harper was pleased that students demonstrated a much stronger grasp of the subject matter, particularly the race and ethnicity component of the course, on their final exams. She was also delighted that several students indicated on their year-end evaluations that they aspired to pursue further studies in the discipline and take another class with her. These comments renewed Harper's desire to build mentoring relationships with such students as well. Kolby was surprised by the salience of his disciplinary identity in his work as GTA saying:

Disciplinary identity was something that I did not anticipate mattering, but it mattered a lot . . . Even when [students] would come up with something, even if I respect it, I would say, "Well, that's more anthropological research or more sociological research, or you'll find this in political theory, political science. This is kind of what we do." And I was kind

of speaking in this tribalistic way that almost made me feel uncomfortable at times, like, "Wow, I did not realize I thought of myself as an embedded member of this community to the extent that I actually turned out to do."

Like Harper, Kolby found it very rewarding to observe his growth as a political science teacher and scholar. By the end of the term, he was "almost always was able to answer questions, able to come up with examples, able to reference students to certain articles." Kolby also took great pride in his ability to present political science topics in an engaging manner, an attribute that he always sought in professors, and to foster an interest in politics among students who were initially apathetic towards the material.

Disciplinary identity was very salient in other GTAs' attractions towards teaching as well. Kai, for example, considered teaching "a highlight of the term" given his passion for the subject matter. As Kai shared, ". . . it was a class like this that made me become a historian . . . I like transmitting the same information, seeing the 'spike' in other people . . . reading about it and talking about it in class is something I find fun." Kai's desire to pass on a "sense of marvel" about history was also a key motivator to pursue his doctorate.

Amir received great pleasure when he saw "lightbulbs go off" among undergraduates learning the material for the first time as well. He especially enjoyed teaching students who were passionate about history and helping them think critically about the material. As a result, Amir concluded:

> . . . teaching is the part of academics which is not gloomy. If I were to be in academia, I need to teach. Otherwise, it's pointless for me. Just doing research and publishing the research and attending conferences. . .That's not the whole academic experience that I want for myself . . . I enjoy teaching and that to me is a really crucial part of being in

academics.

Jakob liked "everything" about teaching, particularly the moments when students said, "Oh, I get it!" and witnessing his own growth as a scholar. Echoing these sentiments, Jessie shared that she was really looking forward to teaching before she began her work as GTA and felt the same once the semester concluded. Jessie especially loved how she learned more about and developed a deeper appreciation for her discipline every time she taught it.

Whereas most GTAs expressed a greater affinity towards teaching and their academic disciplines by the end of the term, Charlotte was increasingly turned off to their work as an instructor and the broader discipline of psychology. As a dual-degree student in psychology and women's studies, Charlotte had always felt that women's studies "made psychology bearable." Charlotte's experience as GTA only solidified this belief. They intensely disagreed with the pedagogical models, aims, and beliefs that characterized psychology courses. Charlotte also struggled to transition from a student to a teacher mindset, explaining:

> I still don't know how I feel about teaching, and I still don't know if I desire to teach in
> the future. I had the inclination on the first day to go and sit in the seat facing the
> whiteboard and not go to the podium. So, I think I was still in a student mindset.

Despite their reservations about teaching, Charlotte opted to teach a women's studies course the following term. As Charlotte reasoned, "If I don't feel great about next semester, then I think I'm going to have some substantive evidence to determine that maybe teaching isn't for me or maybe it is, but only in certain circumstances." Charlotte further suspected that they would follow the footsteps of many doctoral students in their program who started in psychology and worked their way towards (and remained in) women's studies. Disciplinary identity was less conspicuous in

Parker and Emma's concluding thoughts about teaching and themselves as teachers. Notably, these GTAs were somewhat ambivalent about pursuing future careers as university instructors.

Summary

My assessment of the literature suggested that GTAs' social identities and student experiences inform how they perceive themselves and approach their work as teachers. The data from this study support this presumption, as these social identities and student experiences were present in GTAs' teaching practices (i.e., pedagogical behaviors, decisions, beliefs) and identities (i.e., who I am and aspire to be as a teacher.)

GTAs' Sense of Who They Are as Teachers

Experiences that prompted GTAs' reflection on their social identities and student experiences were often associated with their evolving sense of instructional authority, which took various forms including GTAs' 1) pedagogical knowledge and competence (i.e., the extent to which I am an authority on this subject matter, this discipline, these students), 2) treatment from students (i.e., the extent to which I am perceived as an instructional authority to be treated with respect), and 3) instructional autonomy and decision-making (i.e., the extent of my instructional authority over course materials, policies, and grading).

To recap these points in greater detail, participants frequently questioned how their identities like age, race, and gender informed their actual and others' perceptions of their instructional qualifications. GTAs' disciplinary identities and prior educational training also impacted the degree to which they saw themselves as authorities on "this subject matter and within this discipline." The ways that GTAs perceived some identities in their teaching changed over time and often as a result of seeing how such identities could serve as assets rather than

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hindrances in their work as teachers. The most prevalent example of this shift was GTAs'

realization that their age and student status enabled them to relate to students in ways less

accessible to faculty and that these identities did not seem to undermine their competence to the

extent that they anticipated. Other GTAs saw that they could leverage their Southern origins,

which they initially feared would diminish students' perceptions of their educational

preparations, as instructional tools to illustrate course concepts.

GTAs' social identities heavily informed their sense of instructional authority in terms of

the respect that they received from students and their input over academic policies and decisions.

GTAs who held both marginalized and privileged identities also concluded that it was easier for

instructors who were White and men to establish themselves as authority figures to be treated

with respect. Working in a graduate student (rather than faculty) capacity also limited GTAs'

authority to adjust course policies and requirements to teach in ways they believed were more

advantageous for students' academic and personal success.

Who GTAs Aspire to Be as Teachers

Participants' beliefs regarding optimal student learning outcomes and conditions, as well

as their commitments to advancing such aims, further invoked their social identities and student

experiences. For example, GTAs' disciplinary, racial/ethnic, and political identities were

prominent as they worked to promote students' understanding of course concepts through a

social justice lens. Participants further recalled their educational journeys when describing their

fulfillment at observing students' growing command of the subject matter and appreciation for

their academic disciplines.

The challenges that GTAs encountered as students and/or as a result of holding

marginalized identities informed their awareness of barriers facing students in similar situations.

For instance, participants from lower-socioeconomic backgrounds felt it important to teach in ways that positioned their low-income students for success and accounted for inequities in students' academic preparations. Yet these GTAs were also concerned that tailoring their instruction towards their low-income students would be of little benefit to the majority of their students, who tended to hail from wealthier families. Likewise, GTAs with histories of mental illness were very attuned to the toll of the University's intense academic environment on students' psychological well-being.

Additionally, the nature of GTAs' social identities implicated their teaching practice in distinct ways. A prominent example of such differences was how participants with marginalized verses privileged identities approached issues of inclusion. Whereas GTAs who held marginalized racial and gender identities frequently "took action" to remove threats to or rectify issues around classroom inclusion, participants who identified as White, a man, and/or heteronormative often neglected to make such changes in their instructional practice out of uncertainty about "what to do" in these situations. Relatedly, GTAs learned that sharing identities with students helped position them as relatable and approachable but that holding an identity shared by few in the classroom often led to somewhat of an "othering" experience that distanced them from students. Hence, GTAs' current and former educational contexts — their teaching environments and appointments, the undergraduate student body and experience, their own students experiences — also had a substantial influence on their sensitivities towards and efforts to create equitable, inclusive, and supportive learning conditions. GTAs' disciplinary identities and own experiences as students, particularly the extent to which they enjoyed teaching and learning in certain educational environments, were also very influential on their overall sentiments towards teaching. The findings presented in Chapters 5 and 6 collectively

demonstrate that when study participants participated in/learned about teaching practice, they also learned about themselves as instructors. Furthermore, GTAs' social identities and student experience shaped these insights. As such, learning about teaching practice and (re)constructing one's identity as a teacher seem to be interconnected processes shaped by one's social identities and own educational experiences. Yet the nature of this linkage, particularly the process by which movement *towards* identity *from* practice occurs, remains murky.

In Chapter 7, I examine *how* (i.e., the process by which) study participants' learning/participation implicated their practices and identities as teachers. I particularly consider how "what" these GTAs learned about teaching (i.e., learning about teaching practice) was linked to and, ultimately, contributed to their emerging views of themselves as university instructors (i.e., implications of learning on teacher identity). I also consider how the contexts in which study participants were teaching, as well as their social identities and student experiences, informed this association between teaching practice and teacher identity.

Chapter 7: Conceptualizing Learning About Teaching and Becoming a University Instructor

In this chapter, I conceptualize the process by which graduate teaching assistants (GTAs) learn about teaching and themselves as teachers. This conceptualization is based on my analysis of the study findings, which indicated that the associations between GTAs' learning about teaching and their personal practices and identities as teachers were more complicated than accounted for in my original conceptual framework. This discussion sets the groundwork for a revised conceptual model that illustrates how I now understand this process, which I present in Chapter 8.

Entering Characteristics and Beliefs

As indicated in participants' introductory biographies in Chapter 4, GTAs entered their teaching semesters with preexisting beliefs about teaching, students and their learning, and evaluation and assessment. GTAs also expressed views about themselves as teachers, including their instructional qualifications and style, aspirations as instructors, and affinities towards teaching. These beliefs were shaped by a number of factors, including GTAs' student experiences, social identities, and life experiences (e.g., personal backgrounds and relationships, professional experiences).

According to their responses on the intake form (see Appendix A),[24] six of the participants were very interested in teaching both during and after their doctoral studies (as indicated by Likert ratings of nearly all fives on both of these items). Three participants had markedly less interest in teaching at the onset of the term (as indicated by Likert ratings in the two to four range on both of these items). Thus, GTAs had different levels of interest in teaching before they engaged in this work.

Lave and Wenger's (1991) concept of "legitimate peripheral participation" provides a framework to illustrate the ways that GTAs' initial and ongoing engagement in teaching practice occurred in various forms and at different levels of participation. Specifically, legitimate peripheral participation refers to "the relations between newcomers and old-timers, and about activities, identities, artifacts, and communities of knowledge and practice. It concerns the process by which newcomers become part of a community of practice" (Lave & Wenger, 1991, p. 29). Legitimacy of participation signals that some forms of participation are more central to a community of practice than others. Elaborating upon this point, Lave and Wenger state:

> Peripherality suggests that there are multiple, varied, more- or less-engaged and -inclusive ways of being located in the fields of participation defined by a community. Peripheral participation is about being located in the social world. *Changing* [original italics] locations and perspectives are part of actors' learning trajectories, developing identities, and forms of membership. (p. 36)

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[24] Two of the items on this form asked applicants to indicate the extent to which they wanted to teach during and after their doctoral studies. Participants indicated these sentiments using a Likert Scale from 1 as "very little" to 5 as "very much."

Thus, shifting perspectives is a central feature of legitimate peripheral participation; this feature is grounded upon the assumption that individual learning, identity construction, and membership formation are continuous processes. Lave and Wenger (1991) note:

> The partial participation of newcomers is by no means "disconnected" from the practice of interest. Furthermore, it is a dynamic concept. In this sense, peripherality, when it is enabled, suggests an opening, a way of gaining access to sources for understanding through growing involvement. (p. 37)

In this study, GTAs were learning about teaching as newcomers to this practice. The peripherality of their participation provided access to the practice of university instruction, and they continued to learn about teaching as they participated in this practice. Lave and Wenger (1998) further advise that legitimate peripheral participation provides a means for self-evaluation as newcomers reflect on their own effectiveness in and contributions to their respective communities of practice as they engage in the social practices of those communities. Thus, in addition to learning about teaching, working from a space of peripherality provided study participants an avenue to learn about themselves as teachers.

Learning About Teaching and Self as Teacher

As individuals participate in and learn about the practices of the communities in which they engage, they also learn about themselves as participants in those practices. Wenger (1998) explains that learning entails "constructing identities in relation to these communities" (p. 4) because learning "changes who we are and creates personal histories of becoming in the context of our communities" (p. 5). Thus, from a situative perspective, learning is the vehicle for the (re)formation of practices and identities. When applied to the study of graduate student instruction, instructors (like GTAs) correspondingly learn social practices (like teaching) and

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construct professional identities (like teacher identities) through their participation in the practices of social communities (like their academic departments and disciplines).

Learning About Teaching and Self as Teacher in Practice Communities

Handley et al. (2007) illustrate the reciprocal relationship among the constructs of participation, identity, and practice (see Figure 2.1 on p. 57) that demonstrates the situative view that "it is *through* [original emphasis] participation that identity and practice develop (p. 175)." According to Handley et al. (2007), "Participation enables or constrains opportunities to develop identities and practice, including linguistic practices. Conversely, changes in an individual's identity and practice may influence the search for new participatory opportunities" (pp. 175-176). Thus, Handley et al. echo other scholars' (e.g., Lampert, 2010; Sachs, 2005) assertions that teaching practice and teacher identity interact. Consistent with the work of Handley et al. (2007), I found a recursive relationship between participation, teaching practice, and teacher identity. As the GTAs in this study participated in the teaching practices within their academic disciplines and institutions, they learned about these practices and themselves in relation to these practices. Handley et al.'s model further presumes that shifts in a person's identity and practice shape how that person participates in or learns about a practice. Likewise, the insights that study participants gained about their own practices and identities as teachers informed how they experienced and perceived their instructional work (i.e., participation in practice.)

Handley et al. (2007) further claim that participation occurs across multiple communities of individuals who engage in a particular practice and that some of these communities are more central to their participation in practice than others. Wenger (1998) conceptualizes communities of practice as groups of practitioners who engage in a shared practice over an extended period. Wenger explains that such communities comprise "a complex social landscape of shared

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practices, boundaries, peripheries, overlaps, connections, and encounters" (p. 118). Likewise, Wenger-Trayner and Wenger-Trayner (2015) describe communities of practice as "mini-cultures" (p. 17) defined and differentiated by boundaries that "arise from different regimes of competence, commitments, values, repertoires, and perspectives" (p. 17). These authors note further that working across the boundaries of various communities of practice holds rich potential for learning, because this work compels participants to reexamine their beliefs and values about knowledge as they consider areas of overlap and disagreement across these communities.

As newcomers to the practice of university instruction, the GTAs in this study began their teaching terms working at the periphery of and across the boundaries of multiple teaching communities. These teaching communities were linked throughout and embedded within the more encompassing landscape of university instruction. As Handley et al. (2007) projected, I found that some of these communities were more central to GTAs' participation (e.g., groups of instructors within the academic departments in which they were teaching) than others (e.g., teaching communities affiliated with the university's teaching center and GTAs' broader academic disciplines). Notably, participants' insights about teaching also reflected what they learned about their instructional environments (e.g., the pedagogical norms and expectations of their academic departments, attitudes towards teaching and undergraduate education among faculty in a research university setting).

Despite these parallels, few elements of GTAs' teaching "communities" resembled Wenger's (1998) conceptualization of a community of practice as a coherent "unit" (p. 72) characterized by coordinated and "dense relations of mutual engagement" (p. 74) in an explicit practice. Apart from GTAs' instructional teams and pedagogy courses, both of which tried to

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socialize participants to specific instructional practices and beliefs, GTAs were not mentored to and did not conduct the work of university instruction in clearly defined, cohesive communities. Rather, GTAs' instructional communities were largely amorphous and undefined. Furthermore, GTAs engaged in few forms of coordinated learning about teaching like organized communal discussions about pedagogy or student learning. Given this lack of alignment, I refer to the communities in which GTAs taught as "practice communities." In doing so, I acknowledge that instructors within and across academic fields shared some instructional practices but that practice communities were also often ill-defined and seldom taught newcomers (like GTAs) about their practices in an intentional or cohesive way.

Learning About Teaching and Self as Teacher Through Instructional Experiences

Based on my conceptual framework, I expected that GTAs would learn about the work of teaching and themselves as teachers as they participated in the teaching practices of their academic communities. Through this study, I found that this participation took the form of instructional experiences which included, but were not limited to, the following: 1) engaging in the acts of teaching and grading, 2) reflecting on one's work as a teacher, both independently and with colleagues, 3) participating in teaching preparation courses, 4) observing faculty and fellow GTAs' classroom instruction, and 5) working on instructional teams under the supervision of course instructors and with departmental course coordinators.

Participants' insights about teaching primarily pertained to the following areas of their teaching practices: 1) teaching environments and preparations (i.e., teacher training programs, instructional consultations and teams, attitudes towards teaching, instructional preparations); 2) students as learners (i.e., student learning, student engagement and conduct, students' academic characteristics); and 3) evaluation and assessment (i.e., complexities of assessment, grading

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process and environment). As participants learned about teaching as a set of practices, they simultaneously learned about themselves as teachers. These insights largely pertained to GTAs' emerging perceptions of their pedagogical qualifications and aspirations, instructional style and authority, and overall attraction to teaching. GTAs' evolving views of themselves as instructors also informed what they learned about teaching practice, including the behavioral (i.e., instructional decisions, approaches, interactions), cognitive (i.e., learning, beliefs, and attitudes), and affective (i.e., emotional, relational) elements of this work. Thus, in addition to reconstructing their identities as teachers *through* participation in teaching practice, participants' identities as teachers gave shape *to* what they learned about this practice. Learning about oneself as a teacher was therefore both a product and a part of GTAs' learning about teaching (much like GTAs' learning about teaching was both a product and a part of their participation in practice).

Learning Processes at Play

From a situative perspective, learning is the mechanism or catalyst by which GTAs become teachers. Yet learning is also a complex process, and the data from this study suggest that several processes underpinned participants' learning about teaching and about themselves as teachers. Accordingly, one way to better understand how GTAs' participation in/learning about teaching practice implicated their instructional work and identities is to disentangle how this learning occurred. To do so, I examine three processes of learning — identification-as-learning, socialization-as-learning, and reflection-as-learning — that informed how GTAs perceived their instructional experiences. In doing so, I demonstrate how taking a deeper and more nuanced approach to examining these distinct, albeit interrelated, learning processes can help clarify what was happening for GTAs as they moved through their instructional experiences and learned about teaching and themselves as teachers.

Identification-as-Learning. A key concern of this study was to understand how and why GTAs identified or dis-identified with a university instructor identity as a result of their first postsecondary teaching experiences. Wenger's (2014b) and Wenger-Trayner and Wenger-Trayner's (2015) concept of "modes of identification" refers to three processes (i.e., engagement, imagination, and alignment) by which individuals interpret and begin to understand themselves in relation to landscapes and communities of practice. In this section, I explain how these modes of identification can help clarify the process by which GTAs did or did not construct identities as teachers as they learned about the work of teaching in their respective practice communities.

Engagement. The first mode of identification, engagement, refers to the process by which individuals gain direct exposure to and concrete experience with "regimes of competence" or what practitioners "need to know and understand to conduct routine work, solve challenges, continue to grow, and act as recognized members of that particular practice" (Wenger, 2014b, p. 180). Specifically, such competence encompasses practitioners' abilities to: 1) comprehend what is valued by and the work of a community of practice, 2) collaborate with fellow members of that community, and 3) use the resources made available to the community. As opposed to an individual trait, competence is socially determined; it represents something that other members of a community of practice recognize as competence (Wenger-Trayner & Wenger-Trayner, 2015).

The concepts of engagement and regimes of competence offer insight on how GTAs' participation in the practices of their teaching communities informed what they learned about the regimes of competence in these communities. Indeed, as GTAs taught, they became aware of disciplinary, departmental, and institutional practices (e.g., course designs, materials, and policies; teaching models; instructional roles and responsibilities) and beliefs (e.g., what "good

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teaching" looks like, the value of teaching as an academic activity, expectations of pedagogical

knowledge and skills) that were recognized and reflected by faculty, instructional consultants,

and fellow GTAs. Participants interpreted these practices and beliefs as symbols of what they

were expected to know and understand, as well as how they should approach their own teaching,

to become effective instructors within those academic spaces. In this way, participants became

acquainted with their associated regimes of competence.

Identification represents the extent to which individuals identify with, participate (or

choose not to participate) in, and consequently hold themselves accountable to the regimes of

competence of specific communities of practice (Wenger-Trayner & Wenger-Trayner, 2015). In

this study, the process of identification played a critical role in the degree to which GTAs were

accountable to the regimes of competence reflected by their teaching communities. Wenger

(2014b) describes the association between learning about regimes of competence and forming an

identity as a member of a community of practice as follows:

> Learning can be viewed as a process of realignment between socially defined competence
>
> and personal experience — whichever is leading the other. In both cases, each moment of
>
> learning is a *claim to competence* [original italics], which may or may not be embraced
>
> by the community. This process can cause identification as well as dis-identification with
>
> the community. In this sense, identification involves modulation: one can identify more
>
> or less with a community, the need to belong to it, and therefore the need to be
>
> accountable to its regime of competence. Creating an experience of knowledgeability (or
>
> lack of knowledgeability) involves a lot of identity work. (p. 181)

Such modulation was quite apparent in participants' instructional experiences. Through the

process of engagement, GTAs were exposed to, gained knowledge about, and experienced

regimes of competence present in their teaching communities like the pedagogical practices, beliefs, and competencies modeled by faculty and fellow GTAs. This engagement in practice successively informed the extent to which GTAs identified with and aspired to be accountable to these regimes of competence (discussed in more detail in a later section of this chapter).

Imagination. Imagination, the second mode of identification, pertains to the ideas people construe about the experience of working in and whether they belong to different communities of practice. Wenger (2014b) alludes to such imagination when stating that in addition to acquiring knowledge as skills, learning from a situative perspective pertains to "becoming a certain person — a knower in a context where what it means to know is negotiated with respect to the regime of competence of a community" (p. 181). Wenger-Trayner and Wenger-Trayner (2015) state further that a person's experience of a practice does not always mirror that community's regime of competence given that "members of a community have their own experience of practice, which may reflect, ignore, or challenge the community's current regime of competence" (p. 14). Moreover, a community of practice's regime of competence is fluid in that it is influenced by but also influences personal experience and "lives in the dynamic between individuals' experience of it and the community's definition of it" (p. 14).

This "dynamic interplay of experience and competence" (Wenger-Trayner & Wenger-Trayner, 2015, p. 15) was very present in participants' instructional experiences. Through their teaching, GTAs formed generalized views of what they needed to know, to believe, and to do to become effective teachers in their respective academic communities. These views were based on a constellation of instructional experiences that entailed observing instructors and engaging with the teaching practices in their academic departments and institution. Such experiences seemingly led GTAs to conjure images of themselves as instructors by evaluating their own pedagogical

knowledge and approaches, aspirations and beliefs, and qualifications and style against the criteria represented in their teaching communities' regimes of competence. In doing so, GTAs simultaneously constructed images about the work of university instruction and themselves in relation to this work by visualizing and making a complex set of practices, values, and beliefs more concrete.

In addition to regimes of competence, GTAs' instructional experiences exposed them to paradigmatic identity trajectories reflected by other instructors in their practice communities. Wenger (2014a) defines these paradigmatic identities as identity trajectories that "embody the history of the community through the very participation and identities of practitioners" (p. 135). From Wenger's perspective, "exposure to this field of paradigmatic trajectories is likely to be the most influential factor shaping the learning of newcomers" (p. 135) because it is through the lived examples of trajectories available to members of that practice that newcomers begin to envision and negotiate their own identity trajectories. GTAs' observations of faculty informed their beliefs regarding the identity trajectories available to them, or the "types" of teachers they could become in their academic disciplines (e.g., what they would be expected to teach and how) and at a research university (e.g., the extent to which they would be able to prioritize teaching in their work as academics). GTAs' exposure to these paradigmatic identities appeared to shape their evolving visions of who they did and did not want to become as teachers, the communities in which they aspired to teach, and what they hoped to accomplish in their instructional work.

As part of this process of imagination, several GTAs began to negotiate their own identity trajectories as researchers versus teachers. These negotiations recall my earlier reference to Baker and Lattuca's (2010) assertation that:

When a student's role prioritization matches that of the community, the student is likely

to be willing to internalize those roles (and corresponding priorities), thus influencing

their identity development. Doctoral students may also perceive that they need to shed

past identities (e.g., practitioner, artist, activist) that appear to conflict with the adoption

of new identities (e.g., researcher, teacher)" (p. 819).

Several of the GTAs in this study anticipated that they would be required to "shed" their

identities as teachers or researchers based on where they pursued academic careers (e.g., a

research- versus teaching-focused university) and/or to truly excel in either of these academic

activities.

Alignment. The third mode of identification, alignment, represents the extent to which

participants' personal activities, beliefs, and behaviors align with those of their broader

communities of practice. Importantly, alignment is "not merely compliance or passive

acquiescence; it is not a one-way process of submitting to external authority or following a

prescription" (Wenger-Trayner & Wenger-Trayner, 2015, p. 20). Rather, alignment refers to a

two-way process of exchanging and integrating viewpoints and coordinating behaviors to obtain

intended outcomes. GTAs experienced varying levels of alignment between their own

instructional practices and identities and those reflected by their practice communities, which

apparently implicated GTAs' identification as teachers in general and within these communities.

GTAs who detected a strong degree of alignment between their own pedagogical

knowledge, beliefs, and approaches and those recognized and valued by their practice

communities tended to renew their commitment to and express greater efficacy about those

elements of their teaching practice. Such alignment reinforced aspects of GTAs' teacher

identities as well, including their instructional qualifications, teaching style, and affinities toward

teaching. Illustrating this dynamic, the six GTAs who expressed the greatest enthusiasm towards

teaching at the end of the term perceived high levels of alignment between many facets of their own pedagogical knowledge, skills, and values and the regimes of competence associated with teaching in their respective academic disciplines. For example, each of these GTAs indicated that through practice, they had acquired a strong command of course subject matter and increasingly saw themselves as experts in their fields from promoting students' knowledge of and appreciation for their academic disciplines.

GTAs reacted in variable ways when they experienced low alignment between their own instructional practices and identities and those common to their practice communities. In some instances, such misalignment reaffirmed elements of GTAs' instructional practices and identities. Indeed, wrestling with, (re)formulating, and working against various pedagogical norms, beliefs, and behaviors in their academic departments led several GTAs to form stronger opinions about how they wanted to approach, what they intended to accomplish, and who they wanted to become in their work as teachers. An example of this dynamic was when each of the five participants in history and political science articulated new or renewed objectives to advance students' understanding of the social justice implications of course subject matter. These GTAs often attributed these convictions to their realization that course materials and/or traditional forms of instruction in their academic disciplines neglected to address social justice issues in a thorough and informed manner. As such, GTAs' evolving awareness of the shortcomings of existing teaching practices shaped their beliefs about what students in their courses should learn, as well as their responsibilities and optimal approaches to provide that education.

Other cases of misalignment helped GTAs clarify their fit with different instructional environments and distill what mattered to them and their futures as university instructors. For instance, a handful of GTAs concluded that they were better suited to teach in teaching-focused,

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rather than research-intensive, universities based on their observations of faculty attitudes towards teaching and the structure of the University's undergraduate experience. Low levels of alignment also appeared to lead some GTAs to increasingly dis-identify as university instructors during the study period. Three participants — Emma, Parker, and Charlotte — identified multiple areas of misalignment between the regimes of competence reflected by their teaching communities and their own scholarly knowledge and interests, beliefs about optimal learning conditions and outcomes, and views on effective teaching models. Notably, at the end of the term, these participants were also the least drawn to their current work as GTAs and the least certain about pursuing a post-graduate career that involved teaching.

Complementarity Among Modes of Identification. It is through the modes of engagement, imagination, and alignment that individuals' identities begin to reflect their participation in practice (Wenger, 2014b). As Wenger-Trayner and Wenger-Trayner (2015) explain, each mode can lead to identification or dis-identification with a landscape of practice. These scholars further note that although they can exist independently, the three modes of identification are most effective, or have the greatest influence on a person's level of identification with a practice, when combined. For example, GTAs who experienced alignment without imagination might passively organize themselves in accord with ineffective regimes of competence and, in doing so, extinguish instructional innovation. GTAs who only drew upon their imagination and did not engage in the actual act of teaching would similarly learn little about how to do or how they experienced this work. Likewise, GTAs who neglected to engage in, struggled to imagine themselves as part of, and experienced little alignment with (i.e., experienced low complementarity across all three modes in relation to) the regimes of competence and paradigmatic identities in their practice communities would be unlikely to

identify with those communities. For these reasons, Wenger-Trayner and Wenger-Trayner contend that "Becoming productive in a landscape depends on one's ability to leverage the complementarity of these processes" (p. 22).

The complementarity of these modes of identification in GTAs' instructional experiences appeared to implicate their evolving practices and identities as teachers as well. As previously mentioned, each of the nine participants began their teaching semesters as newcomers at the periphery of teaching practice. Arguably, six of the participants had higher levels of identification with this practice given their substantial interest in teaching both during and after their doctoral studies. Three instructors demonstrated lower levels of identification in that they had minimal motivation to teach during or after their doctoral studies.

At the end of the term, the six GTAs who were the most inclined to continue working and growing (i.e., constructing identities) as teachers were the same participants who exhibited the most interest in teaching at the start of the semester. However, these GTAs also reported high levels of complementarity across the three modes of identification in that they 1) engaged in and learned about the regimes of competence in their practice communities, 2) imagined or began to see themselves as instructors within their practice communities, and 3) experienced substantial alignment between their own pedagogical knowledge, beliefs, and behaviors and those reflected by fellow instructors in their practice communities. Thus, experiencing high levels of complementarity with many facets of one's instructional practice communities was associated with increasingly identifying as teachers within those communities.

Correspondingly, the three participants who were the least enthusiastic about their current and future work as university instructors at the end of the semester were the same individuals who demonstrated lower levels of interest in this work at the onset of the term. Over the course

of the semester, these GTAs also experienced little complementarity across the three modes of identification in relation to their instructional work. Although these participants engaged in the practice of teaching, they often saw little alignment between their own instructional qualifications, beliefs, and approaches and the regimes of competence in their academic departments. This lack of alignment presented barriers to these GTAs imagining or seeing themselves as teachers in general and/or within their respective academic communities and, consequently, constructing identities as teachers within those practice communities.

In sum, the GTAs who demonstrated the highest levels of identification with their roles as university instructors continued to construct teacher identities. Conversely, the GTAs who were initially less drawn to teaching were less likely to construct such identities. Initial attraction to teaching seemingly contribute to GTAs' teacher identity construction, and it is plausible that participants' sentiments towards teaching remained largely consistent given the limited amount of time that passed over their teaching semester. However, the level of complementarity that GTAs experienced across the three modes of identification in relation to regimes of competence and paradigmatic identities also emerged as a critical influence on the construction of their teacher identities.

Such complementarity implicated the extent to which participants identified with specific practice communities as well. Some participants, for example, attained high levels of complementarity by integrating their visions of themselves as instructors into their teaching practice in ways that complemented the regimes of competence specific to their academic disciplines. I refer to the three political science GTAs to illustrate this point.

As each political science GTA *imagined* who they wanted to become as political science instructors, they increasingly believed that it was their responsibility to help students learn to

"think like political scientists" and/or cultivate deeper appreciations for the discipline. Each of these participants also identified strategies to *engage* in their teaching practice in ways that *aligned* with these images of themselves. In doing so, these GTAs experienced a high degree of complementarity between their own pedagogical aims and the regimes of competence in their academic departments (i.e., what political science instructors need to know and do to advance students' understanding of and interest in this discipline). Such complementarity appeared to reinforce these participants' images of themselves as political science instructors and, in turn, identities as teachers in their disciplinary practice community.

Likewise, low levels of complementarity seemingly prevented GTAs from constructing identities as teachers in particular practice communities. The challenges that Charlotte experienced as a dual-degree student in women's studies and psychology provide a descriptive example of such occurrences. A GTA in psychology, Charlotte was far more attracted to pedagogical models, norms, and beliefs common to women's studies classes than those in psychology courses. Over time, Charlotte began to envision themself as a women's studies, rather than a psychology, instructor. Yet Charlotte struggled to reconcile this image with their current instructional practice in lieu of what they perceived to be stark differences between the two disciplines' regimes of competence. This lack of complementarity between Charlotte's modes of imagination (and vision of themself as a women's studies instructor) and engagement and alignment (as they worked within the pedagogical norms and expectations in psychology) led them to increasingly dis-identify as a psychology instructor. However, this process of identification also prompted Charlotte to increasingly contemplate the possibility of becoming an instructor in a different disciplinary practice community.

Charlotte was not alone in this experience. Other GTAs identified less with the regimes of competence and paradigmatic identities in their existing than adjacent practice communities, or instructional communities within the broader landscape of university instruction but outside GTAs' current teaching practice. Wenger's (2014b) view of "identity as multi-scale" (p. 185) offers perspective on this dynamic:

> Our identities are constituted at multiple levels of scale all at once. For instance, teachers can identify (or dis-identify) with the teachers in their school, district, region, discipline, country, and even with all teachers in the world. Identification is in some sense a scale-free process through which identity embraces multiple levels of scale. Resonance may be stronger at some levels than others; with some levels we may actively dis-identify. Nevertheless, through the combination of engagement, imagination, and alignment many levels of scale do enter into the constitution of identity. (pp. 185-86)

One example of how GTAs' teacher identity construction occurred at multiple levels of scale was several participants' realization that they would rather teach at a teaching-intensive than research-focused institution. These GTAs' observations of their local teaching environments circumscribed the construction of their identities as future instructors at a research university but also compelled them to contemplate the possibility of becoming a teacher in a different type of postsecondary institution (i.e., an adjacent practice community). As such, conceptualizing identity as multi-scale helped bring clarity to how GTAs' experiences occupying boundary positions that spanned multiple practice communities could lead them to gradually dis-identify with some of these communities and to increasingly identify with others.

Socialization-as-Learning. Baker and Lattuca (2010) assert that a common oversight of most conceptual and empirical studies of doctoral education is the tendency to examine doctoral

students' learning and socialization processes separately. They argue that this bifurcated approach neglects to consider how doctoral students develop scholarly knowledge and identities in tandem as they learn and are socialized to the academic practices and norms of their respective scholarly communities. My analysis of the study data highlights this bifurcation by making explicit the relationship between learning and socialization in GTAs' instructional experiences.

Study participants became socialized to the practice of university instruction through a variety of learning experiences, including their prior educational and current instructional experiences. As they prepared to teach, GTAs learned about and were thereafter socialized to pedagogical histories, values, and norms within their academic disciplines and institution. This learning and socialization therein acquainted GTAs with regimes of competence and paradigmatic identities that communicated what it meant to be a teacher in their academic departments, discipline, and institution. In instances where participants chose not to "learn" the teaching practices of these academic communities, such as by ignoring or rejecting their pedagogical norms and values, they also halted the process of becoming socialized to these practices. Consequently, the extent to which GTAs were socialized to various elements of their teaching practice rested upon the degree to which they learned about such practices. In other words, GTAs became socialized to a teaching practice community *because* they were learning about teaching. GTAs' socialization to teaching practice subsequently *was* a learning process in that it was both part of and an outcome of GTAs' participation in (i.e., learning about) teaching practice.

Reflection-as-Learning. Wenger (1998) states that it is the creation and negotiation of meaning through participation in practice that "makes people and things what they are" (p. 70). From this perspective, learning occurs as a person reflects upon and participates in social

practices. Hence, much like identification and socialization, meaning-making through reflection *is* a learning process. The meaning that GTAs ascribed to certain instructional experiences through the process of reflection informed why these experiences remained with and, successively, resulted in some new insight for them about teaching or themselves as teachers. As GTAs reflected on their instructional experiences, they also realized that their student experiences and social identities frequently underpinned their pedagogical motivations, values, and concerns (i.e., "what mattered" in their teaching, who they aspired to be as instructors). Accordingly, these sociocultural factors became salient in GTAs' teaching as they reflected upon and ascribed meaning to certain instructional experiences, which seemed to inform "what" they took away from such occurrences. That is to say, one determinant of "when" an instructional experience has a significant or detectable influence on GTAs' learning appears to be when an experience invokes their student experiences and social identities.

  Student Experiences. Wenger's (2014a, 2014b) discussion of the temporal dimensions of identity offers insight on how GTAs' contemplation on their educational experiences influenced their teaching-related learning, practices, and identities. He argues, "We define who we are by where we have been and where we are going" (2014a, p. 133), and specifically conceptualizes learning as a person's travels through various communities and landscapes of practice (2014b). Through these travels, a person's identity "accumulates memories, competencies, key formative events, stories, and relationships to people and places" that, in turn, shape their aspirations and images of their future selves (Wenger, 2014b, p. 185). Hence, people's past and current learning experiences within and across communities and landscapes of practice give direction to who they become in relation to those practices. In the case of the study participants, GTAs' past and

current learning experiences as students informed how they began to perceive themselves as teachers within their academic communities.

Study participants' educational experiences became salient in various ways as they participated in, assigned meaning to, and reflected on their teaching practice. GTAs' educational backgrounds informed their assumptions and beliefs about their students' academic characteristics (e.g., learning styles, academic preparations and privileges, treatment towards their instructors) and teaching and learning in general (e.g., optimal teaching models, instructional approaches, learning outcomes and conditions). Participants' experiences as students also influenced their emerging conceptions of themselves as instructor, particularly with respect to their 1) instructional competencies and abilities (e.g., in terms of prior training in course subject matter, experience as a student in discussion sections, previous instructors' pedagogical knowledge and skills, pedigree of undergraduate institution), and 2) aspirational teaching style (e.g., based on instructional approaches they did and did not appreciate as students).

Participants' student experiences were further salient as they learned about different learning preferences and teaching environments. For instance, a few GTAs developed greater awareness of and appreciation for diverse learning styles upon realizing that their students' learning preferences differed from their own. Additionally, participants who attended undergraduate institutions other than research universities were often taken aback by the University's heavy reliance on graduate student instruction, the size and structure of its undergraduate classes, and faculty and doctoral students' attitudes towards teaching and undergraduate education. These GTAs' reflections on their experiences within and across

different academic communities — both as students and teachers — subsequently shaped their evolving perceptions of the optimal teaching environments for them as postsecondary instructors.

Social Identities. As participants contemplated their instructional experiences, they identified numerous connections between their social identities and the meaning they ascribed to various facets of this work.[25] Participants frequently questioned how their age, race, gender, and graduate student status informed others' views of their credibility and authority as instructors. A common belief among GTAs, irrespective of their own racial and gender identities, was that instructors who were men and/or White could more easily establish themselves as authority figures to be treated with respect than women or people of color. GTAs also found that holding the same identities as students facilitated their rapport building efforts, whereas holding identities shared by few people in their classrooms distanced them from students.

Participants' social identities were further salient in their reflections on and evolving conceptions of their pedagogical interests, beliefs, and aims. Disciplinary identity, for instance, was notably prominent in GTAs' contemplations of the level of alignment between their own pedagogical interests and beliefs and those of the academic disciplines in which they were teaching. These insights consequently informed the extent to which they began to see themselves as instructors in those spaces. Participants' social identities were also salient as they considered and assigned meaning to various pedagogical outcomes, such as better grasping the social justice and political implications of the subject matter. Relatedly, several GTAs found substantial meaning in advocating on the behalf of students who held the same marginalized identities as them, particularly around issues of educational equity, inclusion, and support. GTAs also interpreted these experiences in certain ways based on how they identified at that time. These

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[25] For an in-depth discussion of the ways that study participants' social identities became salient in their teaching, see Chapter 6.

findings recall Handley et al.'s (2007) assertation that a critical assumption underlying a situative perspective is that participation is a personally meaningful activity that "involves 'hearts and minds': a sense of belonging (or a desire to belong), mutual responsibilities, and an understanding of the *meaning* of behaviours and relationships" (p. 181, emphasis in original). Likewise, "what" GTAs learned about their work as teachers as they reflected on and made meaning of this work was intricately interwoven with their identities as a whole person and what they found personally meaningful as a result of holding such identities.

Instructional Agency and Power

My synthesis of the literature on teacher identity, graduate student instruction, and situative learning theory indicated that learning the work of teaching is a sociocognitive activity that occurs as GTAs participate in and exercise agency in response to the teaching practices of their academic communities. Based on these findings, I began this study under the presumption that 1) what GTAs learned about teaching through their instructional experiences would inform their agency as teachers, and 2) that such agency would play an important role in determining how GTAs approached and perceived themselves in relation to their instructional practice.

The study data confirmed but also complicated the association between GTAs' learning about teaching, agency as teachers, and instructional practices and identities. Analyzing the data through a sociocultural lens demonstrated that GTAs' insights about teaching and themselves as teachers implicated the agency that they enacted as teachers and, consequently, their resultant instructional practices and identities. However, my analysis further demonstrated that acquiring a deep understanding of participants' teaching-related learning, practices, and identities necessitated a close examination of power dynamics present in GTAs' instructional experiences.

In the paragraphs that follow, I conceptualize what GTAs learned about their instructional agency from both sociocultural and sociopolitical learning perspectives. I prioritize a sociopolitical perspective here because this framing allowed me to closely assess the influence of power dynamics and social discourses in GTAs' instructional experiences on their emerging sense of agency, particularly as a result of invoking GTAs' social identities.

Sociocultural and Sociopolitical Perspectives on Agency

In her dissertation on how adjunct faculty learn the work of teaching, Bolitzer (2017) drew upon sociocultural perspectives of agency to define the construct as:

> an intentional behavior exhibited by individuals as they work towards a specific goal within the constraints of larger social structures (Elder, 1994; Hitlin & Elder, 2007; Paternoster & Pogarsky, 2009) . . . This concept posits that individuals are capable of making choices, rather than simply being objects that are acted upon by larger social forces or particular situational stresses (Thoits, 1994). (pp. 76-77)

Bolitzer's conceptualization of agency aligns with a situative perspective of learning, which suggests that it is through actively participating and exercising agency in social practices (e.g., teaching) that newcomers to that practice (e.g., GTAs) come to form their own practices and identities as members of that practice (e.g., as teachers). By referencing the constraints of larger social structures and forces, Bolitzer's definition also touches upon the influence of power on individual agency.

However, sociocultural perspectives offer limited insight on the relationship between individual agency, environmental power dynamics, and identity construction. Speaking to this point, Handley et al. (2007) argue that a primary shortcoming of the situative learning literature

is a lack of attention to the influence of personal agency and environmental factors on identity development. Specifically, Handley et al. contend that:

> Perhaps surprisingly, given the emphasis on identity, there is little elaboration in the situated learning literature of how identities develop and are shaped by social and contextual influences as well as individual agency, except to reject the idea that it is purely a process of imitation (Lave and Wenger, 1991: 95). This central omission weakens the explanatory power of situated learning theory, leaving researchers ill-equipped to construct empirical narratives of how and why identities change. (p. 177)

Situative learning theorists address this critique in several ways. Wenger (2014b) explains that one way that individuals exercise agency is through the process of modulation, or the extent to which a person identifies with and holds themselves accountable to the regimes of competence in their communities of practice. Wenger-Trayner and Wenger-Trayner (2015) further engage questions of agency and power in their description of the political nature of landscapes of practice. As they explain, individuals within communities of practice hold different views on what qualifies as competence. These individuals also operate in hierarchies, and their positioning within these hierarchies determines their authority over what is adopted and recognized as competence within these communities. Wenger-Trayner and Wenger-Trayner go on to state that these power structures allow existing members of communities of practice to reject challenges to competence, which can result in the marginalization of newcomers to that community and in the disregard of practices and ideas.

In accord with these points, Wenger (2014b) asserts that issues of power are "inherent in a social perspective on learning" (p. 188) and that "power and learning are always intertwined and indeed inseparable" (p. 190). Yet Wenger further acknowledges that the theory of

communities of practice "takes learning as its foundation and its focus, not power" (p. 188). The absence of the power lens in situative learning theory became more apparent in my examination of the study data, which indicated that understanding GTAs' learning and agency as teachers necessitates an investigation of power. For this reason, I turned to sociopolitical theory in my analysis.

A primary focus of sociopolitical learning theory is the association among learning, agency, and power. As McKinney de Royston (2013) explain:

Identity involves becoming a member of a community . . . [and] an individual's acquisition and alignment with particular bodies of knowledge, goals, and practices valued by that community. Identity is not purely the property of the individual nor purely attributed to the social world and others, but is (re)created over time through an individual's agency in making meaning of and becoming aligned with communities through engaging in social practices (Nasir, 2002). In a sociopolitical analysis, we consider the kind of identities to which one has access and performs — by virtue of their access to certain kinds of cultural practices (via race, social class, institutional affiliations, and so on) and their positioning within these practices. (pp. 269-70)

Like sociocultural learning theory, sociopolitical perspectives of learning conceptualize identity construction as a personal and social activity that occurs as individuals exercise agency in response to the meaning they make through their participation in communities of practices and the extent to which they align themselves with those communities. However, researchers who conduct sociopolitical analysis also place explicit emphasis on the implications of power dynamics, social discourses, and racialization on identity construction.

Scholars like McKinney de Royston and Nasir (2017) and Nasir, Scott, Trujillo, and Hernández (2016) integrate sociopolitical perspectives with multilevel models to expand the social context of teaching and learning beyond academic settings and participants (such as university classrooms and instructors) to include the broader political terrain in which these activities take place. These expanded models subsequently attend to how the co-constitutive (i.e., iterative and interactive) nature of these contextual levels transmits social discourses and dynamics of power to the spaces in which learning and development occur and then mediate these processes. As McKinney de Royston and Nasir stipulate, it is necessary to conceptualize learning as more than "a cultural process that occurs through interaction" and to "consider the full sociality and socialization dynamics of learning as a process that is influenced simultaneously by micro- and macro-level discourses and positionings" (p. 81). In line with this aim, McKinney de Royston and Nasir (2017) put forth a multilevel sociopolitical framework (see Figure 7.1) to examine the "ecological, cultural, and racialized nature of learning and development, and the affordances and constraints environments provide for identity and learning" (p. 260). The model conceptualizes learning ecologies as "racialized" by emphasizing how racial discourses are enacted across multiple contextual levels to mediate learning and development.

The arrows between levels portray the "co-constructive, bi-directional nature of human learning and development that is indelibly ensconced within dynamics of power" (p. 262). The social level of the model represents broader societal attitudes, cultures, and ideologies, including dominant discourses about "socially constructed categories of distinction, such as race, gender, class, etc., that articulate what is 'normal,' valued or appropriate in our society" (McKinney de Royston & Nasir, 2017, p. 262). Discourses constructed at the social level are then transmitted to

institutional, cultural, and individual levels through organizational structures, practices, and

beliefs.

Figure 7.1.

Multilevel Sociopolitical Framework
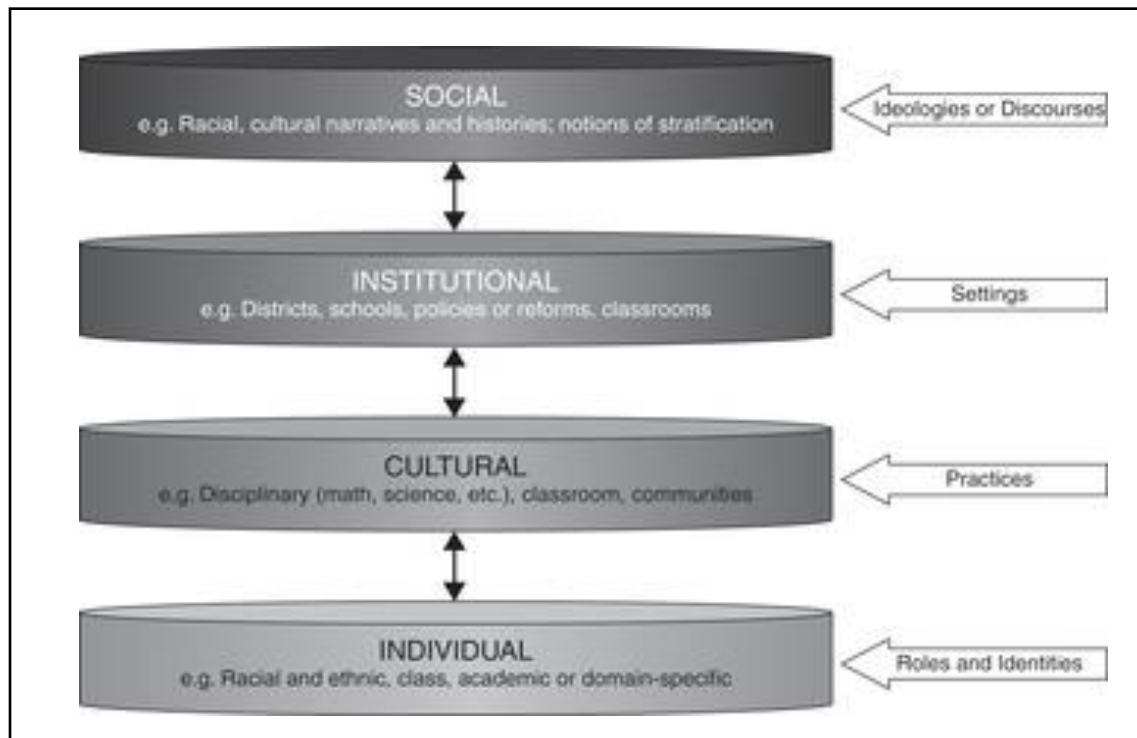
Note: Model of multiple sociopolitical levels. Reprinted from "Understanding Race as a Key Feature of Learning and Developmental Processes in Schools," by M. McKinney de Royston & N. Nasir, 2017. In N. Budwig, E. Turiel, & P.D. Zelazo, (Eds.), *New Perspectives on Human Development*, pp. 258-286. Cambridge University Press. Copyright 2017 by Cambridge University Press. Reprinted with permission.

Agency and Power in the GTA Experience

By incorporating a sociopolitical lens, I was able to examine how power dynamics contributed to racialized discourses and how such discourses mediated study participants' learning and identity development. This framing revealed that GTAs' participation in the social practices of teaching was situated within a complex learning ecology consisting of multiple, intersecting contextual levels. These levels transmitted social discourses that shaped the power dynamics within the spaces in which participants were learning about teaching (e.g., in interactions with students inside and outside the classroom, in meetings with their instructional teams, in pedagogy courses). Study participants also held different levels of instructional

autonomy based on their teaching teams and academic departments. Thus, the structures and contexts in which participants were teaching had a substantial influence on GTAs' instructional agency, or their beliefs about their abilities to respond or act in certain ways as teachers.

How Sociocultural Concepts Function in Relation to Power. As part of my analysis, I offer a sociopolitical interpretation of several concepts from situative learning theory that speak to GTAs' instructional agency: legitimate peripheral participation, generational encounters, and the modulation of identification. Examining how these concepts function in relation to power allowed me to conduct a more detailed evaluation of how power dynamics in GTAs' practice communities implicated their agency and, ultimately, practices and identities as teachers.

Legitimate Peripheral Participation. As previously established, GTAs entered their teaching semesters as newcomers working at the periphery of the practice of university instruction. Lave and Wenger (1991) explain that in addition to providing a rich space for learning, legitimate peripheral participation can serve as "a source of power or powerlessness" (p. 36) as existing members (such as faculty) confer "legitimacy" to newcomers (such as GTAs) as they participate in their communities of practice (like teaching). Lave and Wenger describe these "relations of power" in terms of:

> a place in which one moves toward more-intensive participation, peripherality is an empowering position. As a place in which one is kept from participating more fully — often legitimately, from the broader perspective of society at large — it is a disempowering position. (p. 36)

One way that power dynamics operate within and across contextual levels is through the academic standards and expectations, curriculum, policies, and environments that social actors in various positions of authority create (McKinney de Royston & Nasir, 2017). Similar power

structures implicated GTAs' perceptions of the extent to which they were granted "legitimacy" as newcomers to the practice of university instruction, particularly in terms of their pedagogical decision-making, knowledge, and authority. As graduate students, GTAs held minimal authority over course designs, policies, grading, and exams in comparison to their instructors of record who, as faculty members, occupied higher ranks in institutional hierarchies of power. As a result, GTAs were often obliged to be accountable to teaching models, learning outcomes, course policies and procedures, and grading practices with which they did not identify because as graduate students, they lacked the power to reject such practices. Instructors of record also frequently dismissed participants' recommendations on ways to improve existing teaching practices. Such rejections often left GTAs feeling powerless and, at times, incompetent in their instructional roles.

Such findings emphasize the influence of power on participants' evolving sense of "legitimacy" as instructors. These examples also call into question Wenger's (2014b) assertion that "The pairing of identity and community is an important component of the effectiveness of power. Identification with a community makes one accountable to its regime of competence and, thus, vulnerable to its power play" (p. 189). All GTAs — irrespective of their level of identification with their practice communities — were vulnerable to dynamics of power in these communities.

Another way that power dynamics and racialization manifest in learning environments is in the extent to which various social and cultural groups are recognized and privileged in the activities that comprise practice-based communities (see McKinney de Royston & Nasir, 2017). Issues of power and racialization were evident in participants' perceptions of predominant academic values in their practice communities, particularly in terms of what instructional

authorities prioritized and emphasized in their course curriculum and delivery. Illustrating this point, a number of GTAs commented that faculty members often neglected to thoroughly attend to issues of social justice, race, and oppression in their classroom instruction or course materials. The majority of participants further believed that institutional policies and practices catered primarily to the academic and social norms of White students from privileged backgrounds. Yet GTAs felt powerless to redress many of these issues, as they had little to no oversight over course curriculum, student enrollments, or academic resources available through the University.

Framing my analysis from a sociopolitical perspective also uncovered connections between participants' beliefs around "who" was granted legitimacy as instructors and the social groups to which those individuals belonged. Social and racialized discourses around categories of distinction like gender, race/ethnicity, socioeconomic status, and sexual orientation had a significant influence on participants' conceptions of their actual and perceived pedagogical knowledge, qualifications, and authority. As an example, a number of participants reported that faculty members' willingness to accept suggestions from them or fellow GTAs rested heavily on GTAs' and faculty members' gender and racial identities. Relatedly, a few GTAs sensed that students' opinions of their instructional competence were based in part on their geographic origins and/or the pedigree of their undergraduate institution. Social discourses and power dynamics also underpinned GTAs' interpretation of the treatment that they received from their students. Epitomizing this point, all participants — irrespective of race or gender —believed that instructors who were White and/or men faced fewer barriers establishing themselves as authority figures to be treated with respect than GTAs who were women and/or people of color.

McKinney de Royston and Nasir (2017) contend that race functions as a constant and dominant discourse that shapes societal structures through interpersonal and institutional

interactions. The examples discussed throughout this section support and expand upon this assertion. Social discourses, particularly those around race and gender, manifested in many areas of GTAs' teaching practices. These discourse also shaped GTAs' conceptions of various social identities as sources of power or powerlessness, and such beliefs implicated the agency that GTAs were willing and/or able to exercise in their teaching. Collectively, this research suggests that participants' perceptions of their instructional agency were closely tied to their social identities and sense of instructional authority. This finding recalls my discussion in Chapter 6 of the salience of GTAs' social identities in various facets of their instructional authority, including their pedagogical decision-making, instructional qualifications, and perceptions of the respect that they received from students.

Generational Encounters. Wenger's (2014a) concept of "generational encounters" (p. 136) speaks to power dynamics present in GTAs' instructional experiences as well. More than an exchange of perspectives, Wenger describes generational encounters as "an interlocking of identities, with all the conflicts and mutual dependencies this entails; by this interlocking, individual trajectories incorporate in different ways the history of a practice" (p. 136). Wenger proceeds to explain that encounters between generations can lead to both the continuity and discontinuity of practices.

In this study, the implications of such encounters were evident in a number of GTA and faculty interactions around matters of equitable grading policies, inclusive teaching practices, and supportive learning conditions. Differences in generational perspectives were especially apparent in GTAs' accounts of the minimal emphasis that senior faculty and the overall institution placed on students' holistic well-being in comparison to their academic success. These differences often compelled GTAs to adjust their own instruction to create what they considered

to be more beneficial learning conditions. GTAs did not, however, have the authority to make such changes in all aspects of their teaching practice, particularly in terms of grading and academic requirements. As Wenger (2014a) suggests, these generational encounters led to "an interlocking of identities" (p. 136) in that GTAs grew more aware of 1) areas of alignment and misalignment between their own and faculty members' pedagogical beliefs and values, and 2) their abilities to inform the continuity and discontinuity of teaching practices based on the agency that they held in their instructional roles.

Modulation of Identification. I return here to Wenger's (2014a, 2014b) and Wenger-Trayner and Wenger-Trayner's (2015) conception of the modulation of identification to deepen my explanation of how the agency that GTAs exercised in response to what they learned about teaching informed their own instructional practices and identities. For Wenger, the modulation of identification "involves a constant interplay between practices and identities" (2014b p. 187) where identity

> is both collective and individual. It is shaped both inside-out and outside-in. Identification is both something we are actively engaged in negotiating and something others do to us. Sometimes the result is an experience of participation; sometimes of non-participation. Both types of experience shape our identities. We are constituted by what we are as well as by what we are not. (p. 186)

The modulation of identity is thus "an aspect of power" in that it determines whether a regime of competence is "effective or irrelevant as a source of accountability" (Wenger, 2014b, p. 189). From Wenger's perspective, individuals exercise agency through the meaning they make of and the extent to which they identify with the regimes of competence and paradigmatic identities that they encounter as they learn about social practices.

In this study, GTAs exercised agency when choosing whether or not to identify with various regimes of competence in their practice communities. For example, study participants who identified with the pedagogical knowledge, practices, and beliefs that they encountered when teaching in their academic disciplines worked to organize themselves in accord with these disciplinary regimes of competence. Participants exercised further agency when deciding to mirror the paradigmatic identities reflected by other instructors in their practice communities. For example, a number of GTAs emulated instructional approaches of faculty and fellow GTAs whose teaching styles aligned with their emerging visions of how they wanted to teach and be perceived as teachers. As part of this process, GTAs gauged their own instructional approaches, qualifications, and values against those of other instructors, which shaped their sense of their current and aspirational selves as teachers, that is, who they were and wanted to become as university instructors.

Other times, GTAs acted with agency by rejecting particular regimes of competence and paradigmatic identities. Wenger (2014a) alludes to such agency when stating, "Of course, new trajectories do not necessarily align themselves with paradigmatic ones. Newcomers must find their own unique identities (p. 135). One path that led GTAs to "find their own identities" as teachers consisted of clarifying the learning objectives and conditions they wanted to advance and create, respectively, in their instructional work. This progressive self-understanding informed what participants prioritized in their instruction, how they approached their interactions with students, and why they advocated on students' behalf. Some GTAs, as an example, placed additional emphasis on the social justice implications of the subject matter based on their beliefs that these issues were under-addressed in course materials. Participants also adjusted course policies and requirements to create what they perceived to be more equitable, inclusive, and

supportive learning conditions. In doing so, these GTAs acted with agency as they intentionally constructed their own instructional practices and identities and worked to change existing teaching practices to better align with their pedagogical values and aims.

Wenger (2014) advised that a person may identify with and opt to be accountable to some communities within a landscape of practice over others. Likewise, GTAs exercised agency when deciding whether to identify with specific teaching communities in the broader landscape of university instruction. Several participants, for instance, concluded that they were better suited to teach at a teaching-focused than a research-intensive university. Another GTA felt strongly about teaching in a different academic discipline. Through this process of identification, each of these GTAs exercised agency when choosing the extent to which they would be accountable to different practice communities.

Complicating Wenger's (2014a, 2014b) concept of modulation by overlaying a sociopolitical lens underscored power structures in study participants' practice communities. This extended framing also raised questions about the ways that social and racialized discourses implicated GTAs' identification with and the meaning they ascribed to their work as university instructors. As previously discussed, one way that study participants learned about teaching and themselves as teachers was through the meaning that they made as they participated in and reflected on their teaching practice. In addition to functioning as a learning process, this meaning-making intertwined with the identities that GTAs held as whole beings.

Applying a sociopolitical lens to the study data centered power in my analysis. Doing so enabled a deeper and more focused examination of *why* specific social identities became salient in GTAs' teaching by considering *how* these identities were invoked in response to social and racialized discourses that participants encountered as instructors. This investigation yielded a

clearer picture of the association among social discourses transmitted to participants' practice communities, their social identities, and the agency that they exercised in their instruction.

Several examples illustrate this linkage. For instance, GTAs who took action to create more equitable, inclusive, and supportive learning conditions frequently attributed their associated motivations and efforts to barriers that they personally experienced as members of marginalized student groups. In contrast, GTAs who held privileged identities were often less inclined to exercise agency when faced with issues around educational equity and inclusion. As another example, participants who identified as White, a man, and/or heteronormative were typically more reluctant to speak to matters of race, oppression, and bias in their instruction out of concern that they would do so in an uninformed or offensive way. The GTAs also indicated that this apprehension stemmed in part from their beliefs that they were (or were perceived as) less knowledgeable about these topics in light of holding privileged identities. Relatedly, several GTAs concluded that *because* they were men, there was only "so much they could do" to help women feel more comfortable in the classroom. Such occurrences suggest that, at times, the agency that GTAs did or did not exercise as teachers was partially motivated by the meaning that they made as they reflected on instructional experiences in which their identities were implicated by gendered and racialized discourses.

Implications of Agency on Identity Construction. Participants *constructed* their teaching practices and teacher identities in tandem, much like participants *learned* in tandem about teaching and themselves as teachers. A sociopolitical examination of the study data further demonstrated that the process by which the GTAs in this study formed their own teaching practices and identities as teachers rested upon the agency that they a) exercised autonomously

through the process of identification, and b) were afforded based on inevitable power dynamics in their practice communities. I explain this dynamic in greater detail below.

As study participants taught, they developed a clearer sense of the extent to which they identified with and wanted to be accountable to communal teaching practices and identities. Some GTAs experienced high levels of identification with the regimes of competence and paradigmatic identities in their practice communities. These participants were compelled to hold themselves accountable to these practices and identities, which reinforced their identities as teachers in these spaces. In other cases, GTAs did *not* identify with various regimes of competence and paradigmatic identities in their practice communities but approached their teaching in ways that enacted pedagogical beliefs, approaches, and values with which they *did* identify. Through doing so, this latter group of GTAs also exercised agency in ways that reaffirmed their emerging conceptions of themselves as teachers by rejecting practices that did not comport with these images and adopting those that did. Correspondingly, instructional experiences that circumscribed participants' teacher identity construction impeded GTAs' abilities to integrate their visions of themselves as teachers into their own instructional practices and actively become the teachers they aspired to be. Such experiences often entailed participants navigating power structures that prohibited their perceived and actual capabilities to organize their teaching practice in accord with their pedagogical skills, values, and goals.

The agency that GTAs exercised based on the complementarity they experienced through this process of identification shaped their evolving practices and identities as teachers. It appears that instructional experiences that contributed to GTAs' teacher identity construction were those in which participants exercised agency to organize their teaching practices in ways that aligned with their authentic visions of who they understood themselves to be as teachers. The more

complementarity GTAs experienced between their teaching practices and aspirational identities, the more likely they were to construct teacher identities. In contrast, it seems that GTAs who experienced little synergy between their own instructional practices and identities struggled to see themselves (i.e., construct identities) as teachers. These findings recall Wenger's (2014b) assertion that the modulation of identification is a form of agency and that the three modes of identification have the greatest influence on a person's level of identification with a community of practice when combined.

Summary

Interpreting the study data from a sociopolitical perspective yielded a more comprehensive assessment of the role that power relations at multiple levels played in 1) what study participants learned about teaching through their participation in this practice, and 2) the agency that they did or did not exercise in response to this learning/participation. This analysis further clarified how intersections among these various contextual levels enacted power dynamics and social discourses within GTAs' practice communities that subsequently mediated their teaching-related learning, agency, practices, and identities. This sociopolitical lens promoted a more complex understanding of how processes described in the situative learning literature, notably the modulation of identification, unfolded in these GTAs' instructional experiences and affected their agency and identity construction as teachers.

Incorporating sociopolitical learning theory into my analysis revealed that participants' instructional agency and authority were co-constitutive in that GTAs' sense of agency was dependent upon their sense of authority and vice versa. This framing further illuminated that study participants' perceptions of their instructional agency and authority were closely tied to the ways that power dynamics and social discourses within their practice communities evoked their

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social identities. Participants' decisions to act with agency to align themselves with or resist instructional practices and identities gave shape to their resultant pedagogical knowledge, beliefs, behaviors (i.e., teaching practices) and conceptions of and aspirations for themselves as teachers (i.e., teacher identity).

Conclusion

As explicated throughout this chapter, situative learning theory conceptualizes identity as an element of social practice in that refining one's identity represents becoming a member of a particular community of practice. As McKinney de Royston and Nasir (2017) explain, incorporating sociopolitical perspectives sheds light on how power dynamics inform the intertwining of academic, social, and professional roles and identities with personal learning and development. They further reference Holland, Lachicotte, Skinner, and Cain's (1998) assertion that identity construction occurs through the agency that individuals enact in this process, as well as how social others act upon them, based on their position within various communities: "Through these acts of positioning, only certain cultural and identity trajectories may be offered and taken up" (McKinney de Royston & Nasir, 2017, p. 269). As such, a key contribution of sociopolitical theory to understanding the "situatedness" of GTAs' learning and identities as teachers is the way that it "makes visible that seemingly local, idiosyncratic micro-interactions between individuals or specific contexts are, in fact, moment-by-moment reflections of larger social discourses or dynamics of power" (McKinney de Royston & Nasir, 2017, p. 262).

Through my analysis of the study data, I arrived at a much deeper and more nuanced understanding of the mechanism by which study participants learned about teaching and became teachers through their experiences as first-time university instructors. I incorporate what I learned about each component of this process into a new conceptual framework, "Teacher

Practice and Identity Construction through the GTA Experience." I describe this new conceptual

framework in detail in the final chapter.

Chapter 8: Study Contributions and Propositions for Future Research

Study Overview

This exploratory study took an emic approach to understanding graduate teaching assistants' (GTAs) learning and identity construction as first-time university instructors. The study sample consisted of nine doctoral students teaching in the social sciences at a research university. I chose to study GTAs without prior teaching experience because I wanted to understand how doctoral students new to the practice of university instruction learned about and began to see themselves in relation to this work.

One overarching research question guided this study: *What do GTAs learn about the work of postsecondary instruction through their instructional experiences in the course that they are currently teaching?* The following sub-questions focused attention on the key dimensions of this overarching question:

(1) What instructional experiences shape GTAs' teaching practices and in what ways?

(2) What instructional experiences shape GTAs' teacher identities and in what ways?

(3) What influence, if any, does social identity have on what GTAs learn about postsecondary instruction through their instructional experiences?

(4) What influence, if any, do GTAs' experiences as students have on what they learn about postsecondary instruction through their instructional experiences?

Working within a social constructivist perspective, I sought to understand a) what participants learned about teaching and themselves as teachers as they served as an instructor of an undergraduate discussion section, and b) how these insights implicated their own instructional

practice and their identities as teachers. I also inquired about the salience of participants' social

identities and student experiences in this learning. To arrive at this understanding, I conducted an

in-depth qualitative analysis of participants' instructional experiences through semi-structured

interviews, audio journals, a social-identity-in-teaching matrix, and classroom observations. I

collected data during and immediately after the participants were teaching their first

undergraduate course at the University.

To frame my analysis of the study data, I drew upon sociocultural and sociopolitical

perspectives of learning. These frameworks allowed me to closely attend to how the contexts in

which participants were teaching, as well as social discourses and power dynamics embedded

within those contexts, shaped GTAs' learning, practices, and identities as teachers. My analysis

demonstrated that participants' learning about teaching practice largely pertained to their

teaching environments and preparations; student learning, engagement, and conduct; and

evaluation and assessment. Participants' insights about themselves as teachers primarily

concerned their instructional style, qualifications, and authority; their attraction toward the

practice of university instruction; and their aspirations as instructors.

Study participants' social identities and student experiences informed how they perceived

themselves and approached their work as university instructors. GTAs' social identities were

invoked in relation to each element of their teacher identity. GTAs' educational experiences were

also salient in many of these elements of their teacher identities, as well as their insights on the

benefits and drawbacks of teaching in different types of postsecondary institutions and their

students' academic characteristics (e.g., approaches to learning, achievements orientations, sense

of entitlement). Accordingly, GTAs' social identities and student experience were often salient at

the same time in their teaching

New Conceptual Model

My analysis of the study data led me to a deep and nuanced understanding of the process by which study participants learned about teaching and themselves as teachers in their first teaching experience as GTAs. I portray how I now understand the key components of and mechanisms underpinning this process in the model "Teacher Practice and Identity Construction through the GTA Experience" in Figure 8.1. This model brings together my findings and insights from the theories that guided my analysis and ultimately leads to a set of propositions for future research. I describe each component of the model in detail in the paragraphs that follow.

Figure 8.1.

Teacher Practice and Identity Construction Through the GTA Experience
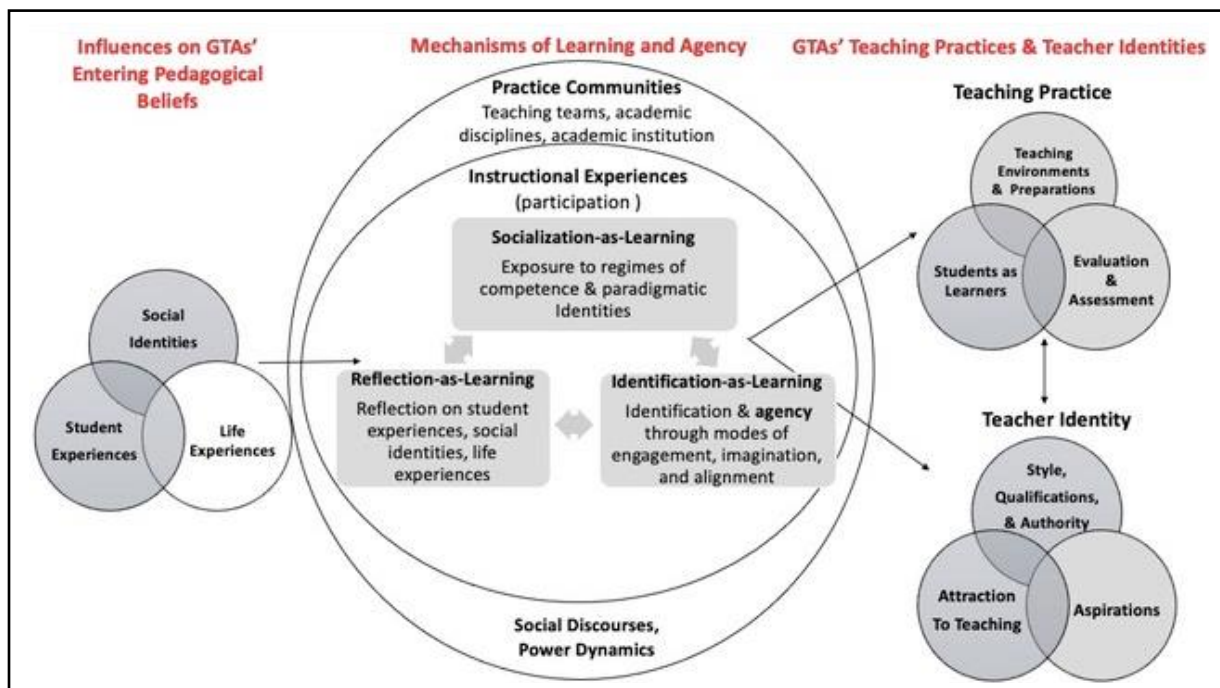
Influences on GTAs' Entering Pedagogical Beliefs

The first component of the revised conceptual framework depicts the sources of GTAs'
beliefs about teaching and themselves as teachers at the onset of their first term as GTA.
Specifically, study participants shared that their existing pedagogical beliefs were based upon
their experiences as students (e.g., taking courses, participating in co-curricular activities,
seeking out academic and emotional support), social identities (e.g., race/ethnicity, gender,
sexual orientation, nationality), and broader life experiences (e.g., professional work, familial
relationships, volunteer engagements). The model also reflects the assumption that these
influences on GTAs' entering beliefs as teachers continue to implicate their learning and agency
in their instructional experiences.

The elements of the model reflect my assessment of the weight of the evidence that I
collected. For this reason, the "life experience" elements that is part of "Influences on GTAs'
Entering Pedagogical Beliefs" is unshaded. In my analysis, these experiences did not emerge as a
major trend in the data and were not a central focus of my dissertation. Yet study participants
made enough references to various life experiences that triggered their learning as teachers that I
believe it important to acknowledge such experiences in my findings. Later in this chapter, I put
forth recommendations to examine the ways that GTAs' life experiences might implicate their
learning, practices, and identities as teachers in future studies when outlining directions for
future research.

Mechanisms of Learning and Agency

The next major component of the new conceptual framework is derived from my findings
about what and how GTAs learned about teaching practice and teacher identity through their
instructional experiences. Specifically, the model suggests that as GTAs teach, they learn about

the work of university instruction and themselves in relation to this work. This learning informs the agency that GTAs subsequently exercise when deciding whether to organize themselves in accord with various instructional practices and identities.

My analysis indicated that three distinct, yet mutually influential, learning processes may function as the mechanisms that lead to this learning and agency. This underscores the importance of attending to each of these processes when striving to promote GTAs' learning and sense of agency as instructors. The three learning processes include: 1) socialization-as-learning (i.e., GTAs learning about teaching practice, including regimes of competence and paradigmatic identities in their practice communities), 2) reflection-as-learning (i.e., GTAs learning through reflection on instructional experiences that resonate with or hold some meaning to them as teachers), and 3) identification-as-learning (i.e., GTAs learning about the extent to which they identify as a teacher in general and in relation to their practice communities). The model further posits that the three learning processes happen within the context of GTAs' instructional experiences, which are located within their particular practice communities.

Socialization-as-Learning. As indicated in the sub-component called "Socialization-as-Learning," GTAs were exposed to pedagogical histories, values, and norms as they participated in/learned about the teaching practices of their academic disciplines and institution. This learning and socialization acquainted GTAs with regimes of competence and paradigmatic identity trajectories that communicated what it meant to be a teacher in their practice communities. The regimes of competence represent GTAs' interpretations of what they "need to know and understand to conduct routine work, solve challenges, continue to grow, and act as recognized members of that particular practice" (Wenger, 2014b, p. 180). Paradigmatic identity trajectories "embody the history of the community through the very participation and identities of

practitioners" (Wenger, 2014a, p. 135) and, successively, communicate the "types" of trajectories available to teachers in specific practice communities. The model further assumes that GTAs' interpretations of these identity trajectories shape their evolving visions of who they do and do not aspire to become as postsecondary instructors.

Reflection-as-Learning. As suggested in the model, the sub-component called "Reflection-As-Learning" depicts the process in which GTAs reflect upon and make meaning of their instructional experiences. The model also suggests that GTAs' social identities, student experience, and, at times, broader life experiences are often salient in this reflection and meaning-making. Consequently, these factors seem to shape how GTAs interpret their instructional experiences and themselves as teachers in relation to such experiences.

The study data further indicate that the process of reflection played a critical role in GTAs' learning as instructors. I designed my study in a way that built reflection into the entire data collection process through the use of reflective journals, timely and in-depth interviews, and reminders to GTAs to contemplate specific elements of their teaching practice (e.g., student evaluations) in preparation for upcoming interviews. This design continually prompted participants to reflect on their teaching experiences, and this reflection appears to be a key mechanism that promoted GTAs learning about teaching and about themselves as teachers. Indeed, participants shared in interviews that they frequently reflected on our conversations and their audio journals between interviews and with fellow GTAs. Several participants further indicated that they applied some of the insights that they arrived at through their engagement in the reflective exercises of this study in their classroom instruction. Consequently, in some ways, the study became an intervention; GTAs participation promoted their learning through reflection.

Identification-as-Learning. In the conceptual model, the identification-as-learning component reflects Wenger's (2014b) and Wenger-Trayner and Wenger-Trayner's (2015) modes of identification (i.e., engagement, imagination, and alignment). The model is grounded upon the assumption that the level of complementarity that GTAs experience among these modes of identification and the regimes of competence and paradigmatic identities in their practice communities informs the extent to which GTAs begin to see themselves as teachers in general and within their respective teaching environments. Instructional experiences that lead to high levels of complementarity seemingly facilitate GTAs' teacher identity instruction, whereas those that result in low levels of complementarity appear to restrict the construction of their identities as teachers. This identification process apparently occurs at multiple levels of scale in that GTAs identify with some practice communities (e.g., I see myself as a teacher in my academic discipline) more so than others (e.g., I do not foresee myself becoming a teacher at a research university.)

The study findings that ground this model further suggest that the interdependent relationship between learning about teaching practice and learning about teacher identity may begin in the mode of engagement, or when GTAs choose whether or not to *engage* with regimes of competence in their practice communities. This decision-making seems to spur GTAs' reflection on and whether or not they begin to *imagine* themselves as future teachers in relation to paradigmatic identities that they recognize in their teaching practice. The images that GTAs do or do not construe in this process of imagination thus appear to inform their decisions whether or not to *align* their own teaching with these communal practices and identities.

As depicted in the model, the three modes of identification also seem to function as the mechanisms that cause GTAs to exercise agency in response to what they learn about teaching

and themselves as teachers. Specifically, the model implies that GTAs act with agency when choosing whether or not to *engage* in, *imagine* themselves in relation to, and *align* themselves in accord with the regimes of competence and paradigmatic identities within their practice communities. As Wenger (2014b) explains, the modulation of identification is both a social and individual process that is "shaped both inside-out and outside-in" (p. 186) and "something we are actively engaged in negotiating and something others do to us" (p. 186). In the case of study participants, the modulation of identity was a means by which GTAs exercised agency based on the extent to which they aspired to be accountable to instructional practices and identities represented by other teachers in the practice communities in which they were teaching.

The model further suggests that intersections between GTAs' social identities and power dynamics within their practice communities mediate what GTAs learn about teaching and themselves as teachers. These insights subsequently inform the degree to which GTAs identify with and exercise agency in their roles as university instructors. In this way, GTAs' identification with and willingness to adopt or reject certain regimes of competence and paradigmatic identities is also seemingly "shaped both inside-out and outside-in" (Wenger, 2014b, p. 186). Illustrating this point, social discourses that participants encountered in their practice communities shaped their beliefs regarding "who" was granted legitimacy as an instructor based on the social groups to which they belonged. Moreover, participants' perceptions of whether certain identities functioned as sources of power or powerlessness were based in part on their evolving understandings of what it meant to a be a member of various social groups in the specific institutional and departmental contexts in which they were teaching.

The model consequently proposes one way that GTAs' social identities shape their learning, practices, and identities as teachers. Specifically, GTAs' perceptions of social and

racialized discourses in their practice communities invoked GTAs' social identities and influenced their reflections on their instructional experiences, and thus, what they are learning about their teaching and themselves as teachers. Such learning informs GTAs' emerging identities and sense of agency as newcomers to the practice of university instruction. The agency that GTAs exercise in response to such learning and identification ultimately shapes their instructional practices and identities, as portrayed in the last component of the model.

GTAs' Teaching Practices and Teacher Identities

The third and final component of the revised framework conveys the assumption that GTAs' decisions whether or not to align themselves with communal teaching practices and identities inform how their own instructional practices and identities change over time. In this study, GTAs constructed teacher identities and accepted or rejected particular teaching practices based on their read of the paradigmatic identities and regimes of competence in their practice communities. Evolutions in GTAs' instructional practices and identities occurred in tandem, in that shifts to their personal teaching practices appeared to influence the (re)construction of their teacher identities and vice versa. My findings further align with scholars' assertions of an interdependent relationship that occurs between practice and identity as individuals participate in a specific practice (e.g., Handley et al, 2007; Lampert, 2010; Sachs, 2005). This relationship is shown via the bi-directional arrow between "Teaching Practice" and "Teacher Identity" in the final segment of the model.

The model depicts specific dimensions of GTAs' teaching practices and teacher identities, which directly reflect the study findings outlined in Tables 5.1 and 6.1. The concept "Teaching Practice" represents GTAs' pedagogical knowledge, beliefs, and behaviors regarding their teaching environments and preparations, students as learners, and evaluation and

assessment. The ancillary concept, "Teacher Identity," encapsulates GTAs' emerging conceptions of themselves as teachers with respect to their instructional qualifications, style, and authority; aspirations as instructors; and attraction to teaching.

Implications for Research

This revised conceptual framework allowed me to convert sample-based themes and patterns into broader propositions about how and what GTAs may learn about teaching and themselves as teachers through their instructional experiences. I describe these propositions in detail below.

Propositions Related to GTAs' Process of Identification-As-Learning

The second component of the new conceptual model, "Mechanisms for Learning and Agency," conceptualizes three learning processes that appear to function as the mechanism that underpins GTAs' learning as teachers. One of these processes, identification-as-learning, inspired a set of propositions for future research. The first set of propositions related to GTAs' identification-as-learning focuses on GTAs' identification with the regimes of competence and paradigmatic identities in their current practice communities. The second proposition pertains to GTAs' identification with regimes of competence and paradigmatic identities in adjacent practice communities.

Proposition 1

> *Proposition 1a: GTAs who experience high levels of identification with the regimes of competence in their practice communities are more likely to construct identities as teachers in those practice communities than GTAs who experience low levels of identification with these instructional practices.*

Proposition 1b: GTAs who experience high levels of identification with the paradigmatic identities in their practice communities are more likely to construct identities as teachers in those practice communities than GTAs who experience low levels of identification with these instructional identities.

The process by which study participants did or did not identify with the regimes of competence — or what they needed to know, believe, and do to become effective instructors in their practice communities — implicated the construction of their teaching practices and teacher identities. Participants' identification with paradigmatic identities, or lived examples of the identities available to teachers in their practice communities, shaped their emergent instructional practices and identities as well. In my analysis, I was unable to disentangle participants' perceptions of these regimes of competence and paradigmatic identities. While it is plausible that one of these constructs is more or less influential on GTAs' instructional learning, practices, and/or identities than the other, it is also possible that they always work in tandem.

Future research on this topic might uncover important differences whether and to what extent GTAs' perceptions of regimes of competence and paradigmatic identities are associated with evolutions to their personal instructional practices and identities. For example, to what degree are GTAs' insights about regimes of competence influential on their teaching practices (e.g., classroom instruction, grading)? Are these insights on what competence looks like in their practice community more or less influential than what GTAs learn about paradigmatic identities? Conversely, does exposure to paradigmatic identities have a greater effect on aspects of GTAs' teacher identities (e.g., my current and aspirational instructional skills and style) than what they learn about regimes of competence?

In accord with a situative perspective of learning (see Wenger, 2014b; Wenger-Trayner & Wenger-Trayner, 2015), study participants identified and dis-identified with regimes of competence and paradigmatic identities through the modes of engagement, imagination, and alignment. However, the extent to which each mode is present in GTAs' identification with communal teaching practices and identities remains unknown. For example, are the modes of engagement and alignment more associated with how GTAs identify with regimes of competence and, in turn, influential on their personal teaching practices than the mode of imagination? Alternatively, does the mode of imagination have a greater impact on GTAs' identification with paradigmatic identities and how they begin to see themselves as teachers than the modes of engagement and alignment?

The relationship between the modes of identification and GTAs' identity construction recall Burt's (2020) case study of a second year doctoral student's evolving desires to pursue a faculty career. As the doctoral student participated in activities associated with his research team (e.g. conducting research, interacting with team members), he created a "faculty protype" (p. 821) based on his observations of the professor who led the team. In addition to his conception of faculty roles and norms, this protype shaped the student's emerging vision of his future self as a professor and his interest in this work. In this way, *engaging* in research activities informed the extent to which the student began to *imagine* himself in relation to and aspire to *align* himself with the paradigmatic "faculty" identity that he recognized in his practice community. Burt's study offered an analysis of how a broader conception of a "faculty prototype" created a possible self for a graduate student engaged on a research team. My study revealed that GTAs similarly construed images of themselves in relation to paradigmatic identities, but hones in on a single dimension of the faculty role to consider how doctoral students might construct teacher identities

through their graduate teaching experiences. Further research can help clarify how these modes work together and/or in isolation in GTAs' emerging and evolving understandings of themselves as teachers.

As noted in my description of the new conceptual model, participants referenced various life experiences that became salient in their teaching. More focused research is needed to investigate the implications of such experiences on GTAs' identification with the regimes of competence and paradigmatic identities in their practice communities. For example, how might GTAs' experiences teaching or advising students in a different type of postsecondary institution or a department with a more teaching-focused culture inform the alignment of their own beliefs around optimal student outcomes and learning environments with those of their current practice communities?

Studies of graduate student and faculty instruction indicate that prior teaching experience is a prominent factor of influence on instructors' self-efficacy, learning, and behaviors as teachers (Connolly et al., 2016; Hora, 2014; Oleson & Hora, 2014). However, each participant in this study had less than one year teaching experience. Additional research is needed to understand how the process of identification might unfold over time and in similar and/or different ways for GTAs with varying levels of instructional experience, particularly across different types of academic settings. For example, for a GTA who has previously identified as a secondary English teacher, forming a teacher identity as a university instructor may entail modifying this existing teacher identity to align with the expectations of the university context (a process that would be unfamiliar to GTAs lacking such experience).

On a related note, how might GTAs' extracurricular involvements (such as participating in theatrical productions or taking an active role in community organizing) shape their

confidence regarding and approaches to various aspects of their teaching practice (such as delivering a class lecture or promoting student participation)? Similarly, in what ways might defining life experiences (e.g., immigrating to a new country, witnessing political warfare, experiencing overt discrimination) implicate GTAs' pedagogical beliefs, aims, and concerns?

Proposition 2

> *Through the mode of imagination, GTAs recognize and identify or dis-identify with differences across adjacent practice communities (e.g., departmental, disciplinary, institutional communities).*

In the prior proposition, I discussed GTAs' identification with the regimes of competence and paradigmatic identities within the practice communities in which they are currently teaching. This proposition focuses on GTAs' identification with adjacent practice communities. I conceptualize adjacent practice communities as instructional communities embedded within the broader landscape of university instruction and beyond GTAs' existing teaching practice, such as other academic disciplines and postsecondary institutions.

This proposition is grounded in the situative learning literature, as well as the findings from this study. Specifically, situative learning scholars conceptualize "identity as multi-scale" (p. 185) in that a person may resonate with some levels of an instructional practice more than others. The GTAs in this study also identified (and dis-identified) with practice communities at various levels of scale. Some participants, for instance, perceived themselves as teachers in their academic disciplines but not as future faculty in a research university setting.

My analysis further suggests that the process of identifying with adjacent practice communities (like envisioning oneself working at a teaching-focused university when teaching at a research university) occurs primarily through the mode of imagination. Specifically, it seems

that GTAs started to recognize differences between their current and adjacent practice communities as they construed images of themselves teaching in these spaces. GTAs' interpretations of such differences appeared to inform the extent to which they identified with specific practice communities. Illustrating this point, a handful of GTAs indicated at the end of the term that they anticipated pursuing academic careers at a teaching versus a research university. A key element of this decision-making process was recognizing differences between these practice communities — an awareness that stemmed primarily from these GTAs' prior experiences as students at more teaching-centric undergraduate institutions, not their current instructional experiences as postsecondary teachers. Thus, these GTAs were largely *imagining* what it might be like to teach in other academic environments rather than *engaging* or *aligning* themselves with the instructional practices of those communities.

Further studies are needed to clarify how the modes of identification work together, and vice versa how these modes work in isolation, to better understand how GTAs construct teacher identities across the boundaries of multiple practice communities. One component of this research should examine ways to operationalize and distinguish different "types" of teacher identities and the three modes of identification in empirical studies. As an example, what constitutes a "strong" versus "weak" teacher identity? Additionally, what are the indicators of engaging in an instructional practice versus aligning oneself with that practice? Future research might also determine whether the process of imagining oneself in a relation to a paradigmatic identity is the same as or different than aligning oneself with such an identity. For instance, does the process of alignment typically take place through external behaviors, whereas imagination occurs though internal reflection?

Scholars might also conduct a more focused evaluation of how GTAs' identification with different practice communities implicates their own teaching practices. For example, do GTAs who anticipate pursuing careers at teaching-focused, as opposed to research-intensive, universities prioritize their teaching and research responsibilities in different ways? How might GTAs' academic role prioritization shape their teacher and scholarly identities over time?

Propositions Related to GTAs' Instructional Agency

My conceptualization of the process by which GTAs form and exercise instructional agency inspired another set of propositions. The first pair of propositions in this section, Propositions 3a and 3b, focus on the relationships among GTAs' instructional authority and agency, power dynamics in GTAs' practice communities, and GTAs' social identities and student experiences. The second set of propositions, Propositions 4a and 4b, focus on how GTAs' level of identification with regimes of competence and paradigmatic identities implicates their instructional agency. Proposition 5, the final proposition, pertains to how the agency that GTAs exercise as teachers shapes their instructional practices and identities.

Proposition 3

> *Proposition 3a: GTAs' sense of their own instructional authority informs their perceptions of their instructional agency and vice versa.*
>
> *Proposition 3b: The intersections of GTAs' social identities and power dynamics in their practice communities influence their emerging sense of instructional authority and agency.*

Another contribution of this study is its demonstration of the interaction of power and agency in GTAs' learning, agency, and identity construction as teachers. As previously explained, a sociopolitical perspective acknowledges that identity construction rests upon "the

kind of identities to which one has access and performs — by virtue of their access to certain kinds of cultural practices (via race, social class, institutional affiliations, and so on) and their positioning within these practices" (McKinney de Royston, 2013, p. 270). This interaction also demonstrates Wenger-Trayner and Wenger-Trayner (2015)'s assertion that a person's positioning within institutional hierarchies determines their authority to dictate what is recognized as competence and which practices are adopted in their communities.

Study participants had limited instructional authority over many areas of their teaching practice, particularly those pertaining to academic requirements and grading. Participants' status as graduate students, as opposed to faculty members, and the authority that their instructors of record and academic departments did or did not grant them as teachers had a substantial influence on GTAs' actual and perceived instructional agency. Power structures in participants' practice communities, often in the form of institutional hierarchies, seemed to mediate their sense of instructional agency and authority.

Future research is needed to evaluate how power dynamics across instructional contexts might implicate GTAs' learning, agency, and identity construction. For example, how might the experience of teaching at an institution where graduate students are instructors of record incite GTAs to act with agency in different ways than the participants in this study? What implications might such behaviors have on GTAs' evolving conceptions of themselves as teachers? A related line of questioning pertains to how the power GTAs hold at different career stages (e.g., as a new GTA versus team lead) might inform their decisions to adopt or reject regimes of competence and paradigmatic identities in their practice communities.

Sociopolitical learning theory emphasizes the ways that social and racialized discourses are enacted across multiple contextual levels to mediate individual learning and development

(McKinney de Royston & Nasir, 2017; Nasir, Scott, Trujillo, & Hernández, 2016). Applying a sociopolitical lens to my data revealed that a central component of participants' learning through their instructional experiences was their interpretation of intersections between their own social identities and the contexts in which they were teaching. These intersections consequently informed participants' perceptions of the ways that power structures and social discourses constrained or facilitated their instructional agency and authority, particularly as a result of their own and others' social identities. In this way, GTAs' sense of agency closely intertwined with their instructional authority and social identities.

Further studies are needed to understand these intersections across distinct instructional contexts. Specifically, are GTAs' social identities implicated in different ways in their teaching based on the power dynamics and social discourses that they encounter in their practice communities? For example, a common sentiment among study participants who identified as a woman and/or person of color was that holding a marginalized gender or racial identity undermined their instructional competence, particularly in the eyes of colleagues who were White and/or men. Would these GTAs arrive at similar beliefs about the association between who is granted legitimacy as an instructor and the social groups to which a person belongs if working on a teaching team comprised primarily of people of color or women, respectively?

Another indicator of power dynamics and racialization in educational environments is the extent to which different social and cultural groups are recognized and prioritized in academic activities and practices (McKinney de Royston & Nasir, 2017). Issues of power and racialization were evident in participants' perceptions of the ways that course curriculum, academic policies, and institutional resources privileged certain social and cultural groups. For example, a number of GTAs believed that some faculty and course materials addressed issues of race and oppression

in a cursory and/or uninformed manner. Some participants further felt that academic resources made available through the broader university were created with White students from upper-income families in mind and that resources for minoritized students were ignored or undervalued.

Study participants held a relatively diverse set of racial, ethnic, and gender identities. There is still much to explore about how power dynamics and social discourses manifest in and implicate GTAs' instructional learning, practices, and identities across instructional contexts. For example, how might institutional missions at Hispanic-Serving Institutions (HSIs) or Historically Black Colleges and Universities (HBCUs) lead GTAs to different conclusions about the influence of power and racialized discourses on predominant pedagogical aims and values in those institutions than the participants in this study, who were teaching in a Predominately White Institution (PWI)?[26] Relatedly, does the experience of teaching different student populations (e.g., in terms of socioeconomic status, race/ethnicity, or age) potentially implicate GTAs' instructional insights, practices, and identities in ways other than those reported in this study?

Future research can even extend these findings through an in-depth investigation of the influence of racialized discourses and power on GTAs' learning and identity construction as teachers. As an example, scholars might examine the instructional experiences of GTAs who hold the same racial identity and teach in academic spaces where they might encounter dynamics

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[26] The term Predominately White Institution (PWI) refers to an institution of higher education in which 75% or more of study enrollment is White (National Center for Education Statistics, 2021). Historically Black Colleges and Universities (HBCUs) are defined as "any historically black college or university that was established prior to 1964, whose principal mission was, and is, the education of black Americans, and that is accredited by a nationally recognized accrediting agency or association determined by the Secretary [of Education] to be a reliable authority as to the quality of training offered or is, according to such an agency or association, making reasonable progress toward accreditation" (U.S. Department of Education, 2021a). A Hispanic-Serving Institution (HSI) is defined as an institution of higher education that "is an eligible institution" and "has an enrollment of undergraduate full-time equivalent students that is at least 25 percent Hispanic students at the end of the award year immediately preceding the date of application" (U.S. Department of Education, 2021b).

of power and racialization in markedly different ways (e.g., a PWI, a HBCU, a HSI). These researchers could draw upon sociopolitical learning theory to craft interview questions explicitly intended to elicit GTAs' interpretations of how, if at all, intersections between race, power, and their social identities mediated their teaching-related learning, agency, practices, and identities. Researchers could also design survey questions through a sociopolitical lens to elicit these perceptions from larger samples of GTAs across different types of postsecondary institutions.

A related question pertains to how GTAs' social identities might inform their sensitivity towards and willingness to confront challenges faced by disparate student populations. For example, the study data indicated that participants were especially attuned to and often took action to address difficulties facing students who held the same marginalized identities as they held. Additional research is needed to understand how GTAs' social identities might shape their commitments towards serving students with various social identities and how those choices might shape GTAs' understandings of their own teaching practices and identities in relation to their practice communities.

Proposition 4

> *Proposition 4a: GTAs' assessments of the extent to which they identify with particular regimes of competence in their practice communities influence their sense of instructional agency.*
>
> *Proposition 4b: GTAs' assessments of the extent to which they identify with particular paradigmatic identities in their practice communities influence their sense of instructional agency.*

Study participants appeared to learn about regimes of competence and paradigmatic identities in tandem. However, it can be helpful to consider how these constructs independently

relate to GTAs' identification and agency as instructors when putting forth propositions for further research. I outline several directions to clarify these relationships below.

Participants' insights about regimes of competence and paradigmatic identities seemed to inform the extent to which they began to see themselves as teachers in general and, more specifically, within their respective practice communities. My analysis further suggests that the three modes of identification (i.e., engagement, imagination, and alignment) operated as the mechanism that caused participants to exercise agency to adopt or reject various communal teaching practices and identities. This finding supports Wenger's (2014b) contention that individuals exercise agency as they modulate their identities and choose whether or not to identify with and hold themselves accountable to the regimes of competence and paradigmatic identities in their communities of practice.

The study findings align with the tenets of situative learning theory, which stipulate that learning cannot be divorced from the context in which it occurs (e.g., Lave & Wenger, 1991; Sawyer & Greeno, 2009; Wenger, 1998). Indeed, GTAs' learning as teachers was inextricably connected to where they were teaching. As such, a prominent direction for future research is investigating whether the theoretical relationships identified in this study hold in different disciplinary and institutional settings. Reinforcing this point, earlier studies on graduate student instruction report that GTAs' perceptions of the extent to which teaching is valued as an academic activity vary by academic discipline and institutional context (e.g., Connolly, Savoy, Lee, & Hill, 2016; Kajfez, 2013; Seymour, 2005). Yet it is unclear how GTAs' exposure to different regimes of competence and paradigmatic identities across teaching environments might yield such differences. Thus, an important direction for future research is to confirm whether the relationship I observed between GTAs' identification and agency holds across disciplinary,

departmental, and institutional contexts and to learn more about various ways that these spaces might convey specific pedagogical values, norms, behaviors, and the like.

For example, well-resourced research universities may have more pedagogical resources for their instructors than smaller teaching-focused institutions. However, it is well-documented that faculty employed by research universities tend to be socialized to prioritize research over teaching (e.g., Bowen & McPherson, 2016; Moore & Ward, 2010; van Lankveld, Schoonenboom, Volman, Croiset, & Beishuizen, 2017). How might institutional messaging around "the value of teaching" at a research university inform GTAs' perceptions of the identity trajectories available to them and, subsequently, provoke GTAs to think about their instructional work and identities in potentially different ways than if exposed to such messages at a teaching-focused university? Relatedly, Connolly et al.'s (2016) research uncovered differences in GTAs' perceptions of faculty views on the importance of teacher training programs by academic field. Future studies should investigate how variations in regimes of competence across academic disciplines might differentially inform GTAs' beliefs about the extent to which they need to dedicate time to their teaching practice (e.g., through teacher trainings, course preparations) to be perceived as competent and effective teachers in their respective academic communities. Additionally, how might the process by which GTAs learn and make decisions about whether to pursue paradigmatic teacher identities also differ by academic field, such as in the humanities versus the hard sciences?

Proposition 5

GTAs' learning through instructional experiences influences the agency that they exercise as they construct their own practices and identities as teachers.

The agency that study participants exercised based on what they learned about teaching

and themselves as teachers shaped their resultant instructional practices and identities. It is unclear, however, whether the nature of the agency that participants exercised implicated their identity construction in different ways. For example, participants tended to willingly mirror paradigmatic teacher identities that aligned with their aspirational visions as instructors. In contrast, paradigmatic identities that did not resonate with participants often spurred their thinking about alternative teacher identities and where they could express such identities. It is possible that this process of actively challenging existing and exploring alternative instructional identities reinforced these latter GTAs' authentic sense of self as a teacher, particularly if this process led them to align their instructional practices and identities in a very intentional way.

Earlier studies paint GTAs' experiences balancing multiple academic roles (i.e., as researchers, students, and instructors) as an ongoing source of conflict and frustration in their work as postsecondary instructors (e.g., Muzaka, 2004; Park & Ramos, 2002), which was a common sentiment among the GTAs in this study. However, participants also acknowledged a host of benefits associated with working in various academic capacities, including their abilities to relate to their students as fellow students and to learn more about their academic discipline and scholarly interests through their teaching. These latter outcomes support Winstone and Moore's (2017) supposition that occupying multiple academic roles can afford GTAs unique opportunities to shift between and capitalize on these various identities in different contexts.

A ripe area for research is clarifying how and when navigating multiple academic roles might facilitate or inhibit GTAs' learning, agency, and identity construction as teachers. For example, do GTAs find that certain conditions or experiences create synergies across their academic roles that promote their learning about and interests in the practice of university instruction? Relatedly, how might "what" GTAs learn as a student and researcher influence their

instructional practices, agency, and identities? Do GTAs' decisions to prioritize certain academic roles implicate how they approach and see themselves in relation to their teaching? Relatedly, how might linkages between GTAs' research interests and the subject matter they are teaching shape how they feel towards their instructional work?

Longitudinal studies of GTA teaching practice and identity construction are also needed, as this study focused on the first teaching experience, and GTAs in some fields may be required to teach for multiple semesters. My review of the relevant literatures also established that individuals continually reconstruct teacher identities (e.g., Beijaard et al., 2004; Beauchamp & Thomas, 2009; Rodgers & Scott, 2008). Accordingly, developing a more comprehensive understanding of how and why GTAs' teacher identities evolve in certain ways necessitates examining their learning and identity construction as teachers over a longer duration of time. For example, does GTAs' identification as teachers deepen or lessen with time? If so, what causes such changes (e.g., learning about different paradigmatic identities, teaching different subject matter, gaining additional experience and instructional authority)?

As previously stated, the long-term implications of GTAs' identity construction on their teaching futures and effectiveness remain unclear. For instance, what associations, if any, exist among the extent to which GTAs identify as teachers and whether they become university instructors and in what capacity (e.g., clinical, tenure-track) and their teaching context (e.g., discipline, type of institution)? Likewise, in what ways might GTAs' level of identification as a teacher influence their commitment to improving their teaching practice?

Another important direction for future research is investigating the possible linkage between teacher identity construction and GTAs' sense of their efficacy as instructors and, potentially, their effectiveness in the classroom. Illustrating this point, the six participants who

demonstrated the greatest enthusiasm towards their current and future work as university instructors at the end of the semester also had higher levels of confidence with respect to their instructional qualifications, knowledge, and style than at the start of the term. These heightened levels of teacher efficacy were far less apparent among the three participants who expressed more indifference towards their work as teachers and who struggled to identify with this role.

How might assessing GTAs' identity construction through the lens of modes of identification (Wenger, 2014b; Wenger-Trayner & Wenger-Trayner, 2015) shed further light on a possible relationship between one's sense of self and one's efficacy as a teacher? For instance, do GTAs who experience high levels of complementarity among engagement, imagination, and alignment feel more efficacious? Do they teach in ways that better promote student learning? Do their teaching practices differ from those of GTAs who experience lower levels of complementarity among these modes? Are certain modes of identification (e.g., imagination versus engagement) differently associated with teaching efficacy or instructional effectiveness? Importantly, while establishing any relationship between teacher identity construction and teacher effectiveness is desirable, it necessitates an understanding of students' experiences of instruction — an outcome not addressed in this study. Furthermore, as evidenced by the learning experiences of the GTAs in this study, learning for both GTAs and their students is a complex process; identifying clear associations between how instructors perceive themselves and specific teaching practices is an ongoing research challenge.

Participants' student experiences and social identities shaped the meaning they made of their instructional experiences, which subsequently affected how they saw themselves in relation to this work. Accordingly, researchers should also examine how GTAs' experiences as students, social identities, and life experiences remain more or less salient in their teaching over time. For

example, how might changes in GTAs' age, student- and socioeconomic statuses, or their institutional positioning influence their sensitivity towards and willingness to exercise agency to address challenges facing their students?

Study Contributions

The goal of this study was to contribute theoretically and empirically to our understanding of GTAs' learning and identity construction. I designed the study with these aims in mind, and the findings from this research extend our existing knowledge of how learning through the first GTA experience can shape GTAs' insights, behaviors, beliefs, and conceptions of themselves as teachers. In addition to yielding important theoretical and empirical insights about such learning, this study offers implications for GTAs' professional development.

Theoretical Contributions

The primary contribution of this study is a more complex theoretical understanding of how and why the process of teaching affects what doctoral students learn about the practice of university instruction and who they choose to become (or not to become) as postsecondary instructors. My revised conceptual model also offers a detailed visual of the processes that appeared to contribute to study participants' learning about teaching practice and themselves as teachers, as well as the observed implications of this learning on their own instructional practices and identities. In the sections that follow, I discuss how my findings align with and build upon the extant literature on graduate student instruction.

The Relationship Between Teaching Practice and Teacher Identity. The few studies that examine the relationship between teaching practice and teacher identity among GTAs report that the act of "practicing" one's teaching seems to affect teacher identity (e.g., Barr & Wright,

2018; Gallagher, 2016; Gormally, 2016; Zehnder, 2016). The findings from this study were consistent with this research; as participants learned about teaching practice, they gained insights about themselves as teachers. However, my review of the existing literature on graduate student instruction indicated that we know very little about why, how, and when various elements of and experiences associated with GTAs' teaching practices inform their teacher identities. For this reason, my study departed from the aforementioned research that documented shifts in GTAs' teaching practices and identities to examine *how* and *why* these shifts may have occurred.

Through my research, I arrived at a deeper understanding of both how GTAs' teacher identities were shaped by what they learned about teaching and why some GTAs were more inclined to construct teacher identities than others. Applying a situative perspective of learning to the study data allowed me to unravel and form a clearer picture of participants' learning processes. Specifically, I identified three learning processes (i.e., identification-as-learning, socialization-as-learning, and reflection-as-learning) that catalyzed the interdependent relationship between GTAs' learning about teaching and themselves as teachers. I was then able to distill how "what" participants learned about teaching through each learning process contributed to their emerging conceptions of themselves as teachers and vice versa. In other words, specifying the potential mechanism that underpinned GTAs' teaching-related learning enabled a more precise understanding of how specific components of GTAs' teaching practice (i.e., pedagogical beliefs, knowledge, and behaviors) and teacher identities (i.e., emerging sense of who I am and aspire to be as a teacher) came together theoretically through their instructional experiences.

Agency, Power, and Social Identity in the GTA Experience. My research also extends our understanding of the role of agency in GTAs' learning and identity construction as teachers.

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As previously established, scholars conceptualize teacher identity as agentic in the sense that teachers act with agency as they engage in professional practice, make sense of their instructional roles, and take action to achieve their purposes in teaching (Beauchamp & Thomas, 2009; Beijaard, Meijer, & Verloop, 2004; Rodgers & Scott, 2008). Higher education scholars similarly assert that doctoral students and faculty members exercise agency in the formation of their scholarly identities (e.g., Baker & Lattuca, 2010; Neumann, 2009). Pifer and Baker (2016), for instance, identify doctoral students' abilities to act with agency and "be drivers of their own success, particularly in the face of challenges" (p. 24) as a critical component of their success across all stages of doctoral study.

My assessment of the literature indicated that we know very little about how "what" GTAs learn as they participate in teaching practice compelled them to exercise agency in certain ways as teachers. Framing my analysis from a situative perspective allowed me to extend our knowledge of this relationship by demonstrating that the insights that GTAs gained about the regimes of competence and paradigmatic identities in their practice communities consequently informed the agency that they exercised in their teaching. Conducting a situative analysis of the study data also uncovered the mechanism (i.e., the modes of engagement, imagination, and alignment) that appears to promote GTAs' agency when deciding whether to organize themselves in accord with pedagogical values, norms, and customs in their practice communities.

The literature on graduate student and faculty instruction further suggests that GTAs' social identities might inform how they experience their work and exercise agency as university instructors (e.g., Chesler & Young, 2007; Connolly et al., 2016; Munene, 2014; Turner, Gonzalez, & Wood, 2008). One way that my research adds to our understanding of these relationships is by identifying how and when participants' social identities became salient in

their teaching and appeared to implicate their instructional agency, practices, and identities. Foregrounding social identity in my analysis helped me discern why GTAs may have found some instructional experiences more poignant than others, as well as why they may have responded in certain ways to such experiences, based on the identities that they held at that time. Interpreting GTAs' instructional experiences through a sociopolitical lens shed further light on important intersections between dynamics of power in GTAs' practice communities, GTAs' social identities, and GTAs' sense of instructional agency and authority. Consequently, such findings suggest that neglecting to consider how issues of power mediate GTAs' agency and identity construction inhibits researchers' abilities to fully grasp the "situatedness" of GTAs' learning as teachers.

Empirical and Methodological Contributions

Few empirical studies have engaged GTAs in conversations and reflection designed to elucidate how their interpretations of specific instructional experiences might implicate their learning about teaching and associated practices and identities. My assessment of the literature further demonstrated that we knew very little about how GTAs' social identities and prior educational experiences might shape such learning. Further scholarship, if applied to the GTA experience, suggests that the narratives and stories that GTAs construct about their instructional experiences can offer valuable insights on what and how they learn as teachers. In their review of the literature on teacher development in K-12 settings, Beauchamp and Thomas (2009) reported that "considerable importance is placed on the understanding that stories are a way to express identity" (p. 181), which can reveal teachers' evolving understanding of their professional identities within specific contexts (like academic disciplines). Beijaard, Meijer, & Verloop (2004) similarly found that studies that emphasized contextual influences on K-12 teacher

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identity formation tended to highlight the association between teachers' identity formation, context, and narrative: "teachers' stories constitute their 'core' identity, but, at the same time . . . these stories are socially formed and informed" (p. 123).

The steps that I took to provide GTAs ongoing opportunities to reflect on their learning as teachers were critical to understanding how this learning occurred. Specifically, the methods I used to foster participants' contemplation on their instructional experiences may be particularly useful for eliciting reflection from GTAs on how their participation in various elements of their teaching practice shaped their thinking about their current and future selves as teachers. For example, in preparation for the second and third interviews, participants completed audio journal exercises that encouraged them to contemplate their learning about teaching and themselves as teachers. I also reminded GTAs to review their student evaluations in the week leading up to the third interview so that they were ready to share any new insights about their teaching based on student feedback. In addition to promoting such reflection between interviews, I scaffolded participants' reflection during the interviews. I guided GTAs through general and then customized inquiry grounded in their own unique instructional experiences shared in their audio journals and previous interviews. Moreover, I drew upon my observations of participants' classroom instruction to create individualized interview questions. I also crafted thoughtful interview prompts and allocated 90 minutes for each interview, which provided ample time to elicit timely and illustrative stories from study participants about their instructional experiences.

The intentionality and consistency with which I engaged participants in dedicated reflection throughout this research substantially enriched the findings. Participants' narratives provided rich evidence of the kinds of learning they experienced through their teaching, as well as how this learning influenced their meaning-making about teaching and themselves as teachers.

These stories further demonstrated that the meaning that participants assigned to their instructional experiences often informed how they approached and saw themselves in relation to their instructional work. Thus, a significant contribution of this study is extending our existing knowledge of GTA learning as they participate in and reflect on their teaching practices, as well as the ways that this learning-as-reflection might shape their identity trajectories as teachers.

Finally, this study offers researchers ideas about data collection methods that (to my knowledge) have not been used in studies on graduate student instruction. One method is the use of audio journals to collect timely and detailed narratives to help surface what GTAs learn through their instructional experiences in a less intrusive manner than traditional interviews. A second method is administering a social-identity-in-teaching instrument to help focus discussions on the potential influence of GTAs' personal identities on their learning as teachers.

Implications for Practice

This study offers several practical suggestions to improve doctoral students' professional development, learning, and overall experiences as graduate student instructors. A number of GTAs reported that they learned the most about teaching through "practice," thus echoing situative learning theorists' assertation that individuals learn through participation in practice (e.g., Lave & Wenger, 1991; Wenger, 1998). These outcomes are also consistent with Connolly et al.'s (2016) finding that GTAs reported learning the most about teaching through teaching assistantships that provided ample opportunities to "practice" their instructional skills. In accord with these findings, teacher training programs might better prepare doctoral students for their instructional responsibilities by providing hands-on opportunities for these students to apply what they learn through such programming. Applied activities might include delivering a class

lesson, grading a sample assignment, and practicing new tactics to use in one's classroom instruction.

Each GTA indicated that they learned a substantial amount about teaching and themselves as teachers through conversations with instructional colleagues and reflective exercises as study participants. In line with this finding, academic departments could create instructional "practice communities" in which GTAs mentor and support one another. These practice communities might offer GTA-led mini-tutorials that address GTAs' core responsibilities (e.g., creating a lesson plan, implementing a classroom activity, and providing feedback on a course assignment) and reoccurring concerns (e.g., navigating student conflict, dedicating sufficient time to course preparations).

To foster such learning on their teaching teams, faculty could assign GTAs reflective work as a portion of their instructional responsibilities. GTAs could then share insights, questions, and concerns prompted by such contemplation in team meetings. A strand of this work might encourage GTAs to identify connections between their teaching and personal scholarship, which several participants indicated contributed to their identity construction as teachers and overall scholars. This recommendation also aligns with other scholars' recommendations to structure GTAs' training and assistantships in ways that enhance their abilities to capitalize on synergies across their academic roles and cultivate more integrated research-teacher identities (Barr & Wright, 2018; Beisiegel & Simmt, 2012; Gormally, 2016). In accord with these findings, teaching preparation programs would also do well to dedicate ample time for reflective work and exercises in pedagogy courses and workshops.

Many participants expressed frustration with a lack of instructional guidance and authority in their roles as GTA. One concern voiced by every study participant pertained to the

intense pressures of balancing multiple academic and life roles when serving as GTA. Academic departments and teaching centers might bring such concerns to faculty attention, as well as help GTAs identify strategies to manage their time and academic roles. Relatedly, instructors of record should help GTAs effectively structure their instructional responsibilities by outlining clear roles and expectations of all team members. Faculty could also meet with GTAs individually to identify areas of their teaching practice that GTAs want to develop over the term, as well as opportunities to take further responsibility during a course. Pifer and Baker (2016) outline a number of suggestions that doctoral students can take to exercise additional agency in their doctoral studies, including establishing and holding oneself accountable to specific goals, obtaining clarity about academic roles and obligations, and taking initiative to seek necessary guidance and assistance. GTAs could exercise agency in similar ways in their roles as university instructors as well.

Conclusion

For the past fifteen years, I have worked as an instructor, researcher, and/or administrator in research universities. I also pursued my undergraduate, master's, and doctoral degrees at three different Research-1 institutions. As such, the teaching and learning that takes places in research universities is personally familiar and holds a special place in my heart. Yet, my experience is not unique. In 2019 alone, research universities educated over 1.3 million undergraduates, or 12% of the U.S. undergraduate population (Association of American Universities [AAUP], 2021). The AAUP further indicates that these universities also award nearly 42% of the nation's research doctoral degrees. Thus, in addition to educating a substantial portion of our country's forthcoming graduates, research universities provide the training ground for future faculty.

The delivery of undergraduate instruction at research universities is highly dependent on graduate students (Reeves et al., 2016; Young & Bippus, 2008). Yet critics have long maintained that higher education institutions have not intentionally prepared GTAs for their teaching responsibilities (Jackson, 2020; Robinson, 2017; Schussler, Read, Marbach-Ad, Miller, & Ferzli, 2015), and few doctoral degree holders feel their graduate studies sufficiently prepared them to teach (Beld & Delmont, 2016; Patel, 2017; Stupinsky, Pekrun, & Lichtenfeld, 2016). To make matters worse, researchers have given little attention to the role of graduate student instructors in academe (Barr & Wright, 2018; Gormally, 2016). Although we have witnessed a growing number of evaluations of GTA teaching preparation programs in recent years (e.g., Connolly et al., 2016; Reeves et al., 2018; Zehnder, 2016), this research does little to clarify how GTAs learn to do the actual work of teaching or about themselves as teachers.

In light of their critical roles as educators, both as doctoral students and prospective faculty, our limited knowledge of the GTA experience and its effects on what doctoral students learn about teaching is rather incomprehensible. Through this research, I have demonstrated that learning the practice of postsecondary instruction is a complex phenomenon influenced by numerous factors. My study makes visible the many ways that GTAs' instructional contexts, social identities, and academic experiences shape what they believe, how they approach, and who they perceive themselves to be as teachers. Future research is sorely needed to expand our understanding of how doctoral students learn to teach, as well how their conceptions of who they are teachers and whole individuals implicates their instructional approaches and, ultimately, student learning.

Appendices

Appendix A: Social-Identity-In-Teaching Matrix

In preparation for our first interview, I'd like to learn more about how you think about yourself as a person might inform your learning about teaching and yourself as a teacher. To do so, I ask that you take 10-15 minutes to complete the matrix below. Any information you share on this form is confidential. I will not use it to identify you personally in reports on the study but rather to understand more fully the experiences and reflections you choose to share as a participant.

Researcher Positionality

The positionality I bring with me to my research shapes every aspect of this study, including my research questions, methods, and design, as well as how I interact with you and interpret your responses as a study participant. My identities and background as a native English-speaking, heterosexual, White woman also influence how I have experienced my work as a graduate student instructor. I recognize that your experiences in this role, as well as the meanings you ascribe to them, will likely differ from mine in important ways. In turn, I will continually reflect upon, identify, and challenge preexisting assumptions that accompany me to this research and affect me as a researcher, our conversations and relationship, and my perceptions of your teaching experiences. It is through such reflexivity that I will arrive at the most authentic understanding of how the identities you hold might shape your teaching-related learning and, in turn, practices and identities as a postsecondary instructor.

Instructions

The matrix below outlines 11 social identities in the first column. In order to complete this matrix, please:
1. Place an **"X"** in the cells in the second column next to the identities you feel best answer the prompt across the top row.
2. Jot down several keywords or phrases in the third column that **represent a time when this identity was particularly salient in how you experienced your classroom instruction this term.**

	Which identities are most salient to you in your classroom teaching experiences as a GTA this term?	Related Keywords/Phrases
Ethnicity		
Religious or spiritual identity		
Race		
Gender		
Age		
Sexual Orientation		
Physical, Emotional, Developmental (Dis)Ability		
Political Partisanship		
Socio-Economic Status		
First Language, National Origin		
Unmentioned identity(ies)		

Note: Table is based on "Social Identity Wheel" exercise used by the University of Michigan's Program on Intergroup Relations and Spectrum Center (University of Michigan, n.d.).
https://sites.lsa.umich.edu/inclusive-teaching/social-identity-wheel/

Appendix B: Recruitment Announcement

Subject Heading: Invitation to participate in a study on your teaching ($200 compensation)

Dear [Participant]:

When registering for this Fall's graduate teaching assistant training, you indicated interest in receiving further information about an opportunity to participate in a study on graduate student instruction.

Thank you for your interest. I am conducting this study of graduate student instruction for my dissertation research. The study is designed to examine how graduate teaching assistants' teaching experiences shape their learning about teaching and their identities as teachers. *I will not be evaluating your teaching; instead, my aim is to understand what you are experiencing in your instructional role and what you are learning from that experience.*

Participation entails completing two interviews and three reflective exercises in the Fall 2019 semester, as well as a third (and final) interview in January 2020. Interviews will be 60-90 minutes in length and take place in person. Each reflective exercise has an estimated completion time of 15 minutes. I will also observe two sessions of your classroom instruction for the course you are teaching this Fall, inquire about your reactions to your final course evaluations, and collect a copy of your course syllabus at the onset of the semester.

Each participant will receive **$200** in recognition of their time and efforts ($100 in November 2019; $100 in January 2020). It is my hope that you find our conversations and your reflections useful in your learning about teaching and yourself as a teacher as well. Eligible study participants must have: 1) doctoral student or candidate standing, 2) be the instructor of record or lead a discussion or lab section for a Fall 2019 course at the University, 3) and plan to pursue, or at least be open to, a career that entails teaching in postsecondary settings.

Opportunities for participation are limited. If you are interested in participating, please email me at [insert researcher's email address] by **Thursday, August 29.** Please **complete and return the attached Intake Form** when you email me to express your interest in participating in this study. If selected to participate, I will contact you with further information about the study by early September.

Thank you,

Jandi L. Kelly
PhD Candidate and Research Assistant

Appendix C: Intake Form

Please complete and attach this form in your email response to me at [insert researcher's email address] by **Thursday, August 29,** to be considered as a study participant.

1. Name: _____

2. What is your academic discipline and name of your academic program? _____
   _____

3. What year are you in your program? _____

4. List any degrees you earned before your enrollment at the University, as well as the universities that awarded these degrees (e.g., BS in Engineering, Purdue University). _____
   _____

5. What is your position title for the course you will be teaching in the Fall 2019 semester (e.g., graduate student instructor, instructor of record, discussion lead)? _____

6. Tell me the following about this course:
   - Course name and number: _____
   - Expected number of enrolled students: _____
   - Format (e.g., lecture, discussion section, lecture & discussion section): _____
   - Meeting days and times of the section <u>you</u> will instruct: _____
   - Number of course credits _____
   - Title(s) and number of course instructors (including yourself): <u>(e.g., 1 instructor of record and 3 GTAs)</u>

7. Insert an "X" on the line(s) next to item(s) that represent your responsibilities in this role.
   - delivering a weekly lecture _____
   - leading a discussion section _____
   - leading a lab section _____
   - co-facilitating weekly seminar discussions _____
   - preparing instructional materials _____
   - holding office hours _____
   - grading _____
   - other (please specify) _____

8. Please answer the following questions about your instructional responsibilities this Fall.
   - Did you choose to serve as a GTA in the Fall 2019 semester? Yes _____ No _____

- If given the choice, would you work in a different capacity (e.g., as a research assistant, GTA for different course)? Yes _____ No ___
    o If yes, what would that position be and why? _____

- On a scale from 1-5 (1 being "very little," 5 being "very much"), to what extent do you want:
    o to teach during your doctoral studies at [the University]? <u>(insert number here)</u> _____
    ___
    o teaching to be a component of your professional work after you graduate from [the University]? <u>(insert number here)</u> _____

9. Do you have prior teaching or instructional experience?   Yes ___   No ____
    - If "yes," please share the following:
        o Grade level(s)   (e.g., K-12, college undergraduates)   _____
        o Total year(s) of teaching experience   _____
        o Where you taught (i.e., city, state; another country)   _____
    - Subject(s)   _____
    - Position type(s) (e.g., secondary school teacher, teaching assistant for college level course) _____
    - Other (please specify)_____

I would like to include students with diverse sociodemographic backgrounds in this study. Please tell me a little about your personal background below by inserting an "X" on the line next to the item that represents your answer to each question.

10. With which gender do you identify?
    o Woman   _____
    o Man   _____
    o Non-binary/third gender   _____
    o Transgender   _____
    o Prefer not to disclose   _____

11. How do you identify racially and/or ethnically? [place an "X" next to as many as apply]
    o American Indian or Alaska Native   _____
    o Asian   _____
    o Black or African American   _____
    o Hispanic or Latinx   _____
    o International (specify country of origin)   _____
    o Native Hawaiian or Other Pacific Islander   _____
    o White   _____
    o Not listed (please specify):   _____

Appendix D: Consent Form

You are invited to participate in a research study about graduate student instruction. As a graduate student at the University, your perspective is very valuable to this topic. Findings from this research may assist in understanding how colleges and universities can better support graduate student instructors' teaching-related learning.

Your participation in this study does not involve any physical or emotional risk to you beyond that of sharing your personal opinions and perspectives. There may no direct benefits from your participation in this research. Participation in this study will involve no cost to you. If you agree to be part of the research study, you will be asked to:

- participate in three, 60-90 minute interviews
- complete three reflective exercises, including two audio journals and one social identity matrix (estimated completion time of 15 minutes each)
- provide me a copy of your course syllabus
- permit me to observe two sessions of your classroom instruction
- discuss your reactions to your final course evaluations with me

You will receive your $200 incentive in installments. Participants who complete two interviews, three reflective exercises, and allow me to observe their teaching twice during the fall semester 2019 will receive $100 in November 2019. Those who complete the final interview in January 2020 will receive the final installment of $100 in winter term 2020. Your participation in this research study is completely voluntary. You may choose to terminate your participation at any time. Terminating your participation will not result in any penalty to you or rights to which you are entitled.

Data from this study may be shared in administrative reports and oral presentations, as well as at academic conferences and in publication. Your name will not be used in any materials or presentations that may result from the project. I will protect the confidentiality of your research records by storing study data in a password-protected account. Only the research team will have access to the study records. If you have questions about this research study, please contact me at [insert email] and Dr. Lisa Lattuca at [insert research supervisor's email].

If you wish to participate, please sign and return this document to me via email or in-person at your first interview. Print a copy of this page for your records.

I agree to participate in each of the bulleted research activities above as a participant in this study.

_____   _____
Name   Date

Do you agree for each interview to be recorded?   Yes____   No____

Sincerely,
Jandi Kelly, Lead Researcher

Appendix E: Interview One Protocol

Thank you for taking the time to talk with me today. In this first interview, I'm interested in learning about your experiences teaching thus far this semester, as well as your responses to the social identity matrix you completed in preparation for today's conversation. I'd like to start by getting to know one another a little better.

As I shared earlier, I'm a doctoral student studying higher education. I've also experienced my share of highs and lows as a graduate teaching assistant! My intention in this study is not to "evaluate" you as a teacher. Rather, I'm interested in how you are *learning through* your work as a GTA this semester. I would like to hear about moments or experiences, particularly in your classroom instruction, that stand out to you. These can relate to what you are learning about teaching and student learning — and about yourself as a teacher. There are no right or wrong answers to the questions I will ask you; I really want to know more about how *you* are thinking about *your experiences* as a GTA over the Fall term.

Do you have any questions about these points? Let's proceed by learning a little more about you.

General Background
1. I'd like to start with some general background information. You are a (e.g., 1st year PhD student in political science) and teaching (e.g., Political Science101) this Fall. How are things going so far?
    *   Would you say teaching is what you expected? In what ways?
2. When you think about your work as a GTA this term, what would you say is important to you as a teacher? Relatedly, what are some thing you hope to accomplish through your teaching?
3. Can you think of any ways that your experiences as a student have shaped how you are approaching your teaching this Fall? What about how you think about teaching?

Teaching Observation
4. Would you say the session I observed was a pretty typical class? Does anything come to mind that was noteworthy or stood out to you in anyway? *If they say no, ask why.*
5. What do you think was successful about this class? Is there anything you might do differently if given the chance to teach this class again?
    *   How did you come to this realization? What were the indicators?
My Observations (if applicable)
6. Something that I observed was _____. Can you walk me through what you were thinking when this happened?
    *   Why do you think you reacted/approached the situation in the way you did? Did you have a specific goal or intention in mind? How do you think your approach went?
7. Would you say you gained any new insights about teaching or yourself as a teacher through this experience?

Additional Learning

8. Thinking about past classes you've taught so far, are there any additional moments or experiences that stand out? Tell me about those.
9. Based on these first class sessions, how do you think you are doing?
10. How do you think students would describe you as a teacher? Why do you think this might be the case? Is that what you intend?

Social Identities

Prior to this interview, you completed some questions about your social identities. I would like to take some time to talk through your responses. On your matrix, you indicated that the following social identities are the most salient to you in your teaching this semester: **[insert social identities].**

11. Let's start with **[insert identity].** Has this identity influenced your work as a GTA so far this semester?
    - If yes: Can you tell me about a time when this identity was particularly salient to you in the classroom?
    - I see that you noted (insert key words) from matrix. Can you walk me through this experience? Why is it important to you?
    - How, if at all, has this experience influenced your thinking about teaching? *[If they can't answer after 10 seconds, don't probe with others].* What about yourself as a teacher?

Wrap Up

12. We have discussed several experiences that have stood out to you as GTA thus far this term. As we begin to wrap up, can you think of any additional moments that caused you think further about teaching for some reason? What about yourself as a teacher?
    - If YES: What would you say it was about this particular experience that made it notable?

Appendix F: Interview Two Protocol

Thanks again for inviting me to observe your class earlier this week. I really appreciated the opportunity to visit again. In this second interview, I would like to talk about your audio journal and any additional insights you have had about teaching or yourself as a teacher this semester. Do you have any questions before we begin?

Teaching Practice and Identity

1. Let's start by talking through the reflections you shared in your audio journal. You mentioned [high level summary of learning shared in audio journal]. Have you thought any more about this experience and what you may have learned from it? Have you done anything as a result of this experience?
   - For example, changed your teaching approach in anyway? Used a certain tactic more frequently?
2. When you think about your teaching thus far this term, what seems to be working well in your instruction? How can you tell? Can you provide an example of this strategy or tactic?
   - For example, what seems to work well to facilitate student learning? What observed leads this belief? What is your sense of how students are doing learning the course material? Are there any changes to the course or your instruction that would better promote student learning? What do you attribute this belief to?
3. What are the primary challenges currently facing in instruction?
   - Can you tell me time this was apparent to you? What make of this? Something you mentioned in last discussion…..Any additional insights on this dynamic (e.g., students' reticence to engage at times)?
4. Can you think of anything new you have tried since the last time we met that you haven't already mentioned? Any additional insights on what works well or doesn't work well in teaching this class? What was the inspiration for that? How did it go?
5. Do you think that how you are thinking about teaching or yourself as a teacher has changed in any way? When you think about your personal teaching practice, what would you say are your strengths? Areas to development
   - How do you come to this realization?
   - Can you provide one or two examples of these attributes in your instruction?

Revisiting Earlier Insights on Teaching

6. In our last conversation, you mentioned several things that were particularly effective in your classroom instruction. These included (X). Would you say this is still the case?
   - Have you had any additional insights as to why these are effective?
   - Have you come across any additional tactics or strategies that have worked particularly well in your teaching?
7. In contrast, you also expressed that some areas you would like to change/address in your discussion were X. Would you say this is still the case?

- Have you had any new insights about these areas of your teaching practice/classroom instruction/student learning?
- Have you taken any steps to address these concerns? Any tactics you are considering for the future?
  - o If yes: How did that strategy work out?
  - o If no: What challenges did you face in addressing this issue?
- Would you say experiencing these challenges in your classroom instruction have afforded any new insights about teaching? What about yourself as a teacher?

Teaching Observation
My Observations (if applicable)
8. Did anything noteworthy take place or anything stand out to you about this class session?
   1. What went well? Anything you would do differently if given the opportunity to teach that the class again?
   2. How did you come to this realization? What were the indicators?
9. Something that I observed was _____. Can you tell me more about how you think this exercise went/walk me through what you were thinking when this happened?
   - Did you have a specific goal or intention in mind? How do you think your approach went?
   - Why do you think you reacted/approached the situation in the way you did?
   - Would you say you gained any new insights about teaching or yourself as a teacher through this experience?

Social Identity
I would also like to revisit our previous conversation regarding how you perceived various social identities in relation to your work as a GTA. Earlier this term, you indicated that [insert social identities] were important to the meaning you ascribed to your teaching experiences in some way.
10. Have you had any additional insights on how these social identities have informed your instructional experiences in any way?
    - Does a more recent experience come to mind when this identity was particularly salient to you in the classroom?
    - What did you do when that happened? Would you do that again/handle same way?

11. Have other social identities become more salient or apparent to you through your teaching since we've last talked?
    - When think about the teaching experiences you mentioned related to the various identities that you hold, can you think of any ways that these experiences have influenced your thinking about teaching? Yourself as a teacher?

Wrap Up
12. Can you identity 1-2 takeaways that you now know about teaching that you were not aware of at the start of the term? Yourself as teacher?
    - Would you say your teaching experience is unfolding as anticipated? Why or why not?
    - Has how you think about teaching changed in any way? How you think about yourself as teacher?

13. As we wrap up for today, I'd like to revisit some of the goals and values you identified as important to you in your teaching. Specifically, when I asked ""Come January, if you were to look back at this term, what would have happened in your teaching that you would have felt particularly good about?", you said X. Are these still the most important things to you in your teaching? Is there anything you would like to add?

    • At this point in the semester, how would you say you are doing in relation to these goals?

Appendix G: Interview Three Protocol

In our final interview, I would like to get a sense of how you are thinking about your overall teaching experience as a GTA this past Fall. More specifically, I'd like to talk about what you might have learned about teaching and yourself as a teacher through your classroom instruction. Do you have any questions before we begin?

Teaching Practice

Now that you've had some space from the class and time to process your experiences, I'd like to start by giving you a minute or two to silently reflect on your overall teaching experience as a GTA this past Fall. You may close your eyes if you wish.

1. I'd now like to revisit the questions I asked you in the audio journal. At this point in time, what would you say are the main things you have learned about teaching? What are the primary instructional experiences that led to these insights?

Audio Journal Two

2. In your second journal, you mentioned several things you learned about teaching this Fall. *Insert probes here based on audio journal responses. Sample probes:*
   - Student engagement: You noted that student engagement was an ongoing area of concern for you throughout the term. What would you say you have learned about *classroom participation?*
     - What tactics or strategies did you use that promoted student engagement? What did not work? Is there anything new you would like to try in future teaching appointments?
     - Have your experiences trying to promote classroom participated shaped your conceptions of yourself as a teacher in any ways? How so?
   - Instructional preparations: Looking back, how prepared would you say that *you* were for your instructional role?
     - What elements of your instructional preparations were most effective?
     - Based on your experiences this past term, what could the *University or* your department do to better prepare GTAs for their instructional responsibilities? What experiences led you to make these recommendations?
3. Have your beliefs about teaching or how you approach your work as a GTA changed in any notable ways over the course of the semester?
   - If so, what changed? What influenced that change? For example, you shared in your audio journal that…
   - If not, why do you think that is the case?

Student Evaluations

4. Did you have a chance to review your evaluations? In general, what were your reactions to students' feedback? What stood out to you? Do you feel that you learned anything from you evaluations?

- For example, did you learn anything about instructional practices you used throughout the term? What about any insights about yourself as an instructor, such as unrealized strengths or areas you need to grow more?
- Do you plan to do anything different in your teaching as a result of these evaluations?
5. Would you say that any specific social identities that you hold were implicated or reflected in the comments or evaluations? How so?
   - For example, when you were reading or think about students' feedback, were any of your social identities particularly salient? What do you make of this?

Role of GTAs' Social Identities and Student Experiences

I'd now like to revisit some the connections you mentioned between your takeaways from your teaching experiences this term and your social identities. You indicated the following social identities that you hold were most salient in what you've learned about teaching [insert relevant social identities].

6. At this point in time, would you still say that these social identities (that you personally hold) were the most salient to you in your instructional experiences? How so?
   - Can you summarize at a high level how they shaped your experiences as a GTA?
   - Would you say that you learned about teaching or yourself as a teacher as a result of holding this SIs?
7. Can you think of any ways that the experiences you have had as a result of holding these social identities might inform how you approach your teaching this term?
   - For example, is there anything you plan to do differently or want to be sure to address in your instruction as a result of your [insert salient] IDs?

Future Teaching Assignment/Aspirational Teacher Identity

8. I'd like to learn more about how you are feeling about teaching moving forward. You indicated in your journal that you will be teaching [insert course] in the Winter term. How are you feeling about your teaching assignment at this time?
   - What could make this teaching experience a particularly fulfilling experience for you? What would you like to avoid?
   - Is there anything else you would like to do differently or try, if you were to teach again? Why or why not? Can you think of a particular moment or experience in the classroom that made this apparent to you?

Teacher Identity

9. I'd like to get a sense of how you are thinking about yourself as a teacher. When you think about your experiences as a GTA this past Fall, what would you say are the main things that you have learned about yourself as an instructor?
   - At this point in time, how would you describe yourself as a teacher? Does how you just described yourself fully capture who you want to be as a teacher? Why or why not?
10. You also shared in your journal that you've come to understand the following about yourself as a teacher [insert here]. Are those sentiments still resonating with you now that the course is over?
    - Have you thought any more about these insights or experiences? How they inform how you see yourself as a teacher?
    - Is there anything else you'd like to add that you have learned about yourself as a teacher?

11. Do you have any aspirations for yourself as a teacher? Have your experiences in the classroom last semester informed these aspirations?
    - Are there areas of teaching you need or want to learn more about? Why do you feel these aspects of your teaching practice are particularly important for you to develop?

Wrap Up
As we begin to wrap up, I'd like to get your thoughts on a some concluding items.
12. Knowing what you know now, what advice would you give yourself at the start of the term?
13. Before I thank you for your time and participation in my study this term, I'd like to ask if there is anything else that happened in your teaching, or that you are thinking or realizing about teaching that we haven't covered?

Appendix H: Crosswalk Table

This is an "evaluation crosswalk" (O'Sullivan, 1991, p. 43) table of sample interview questions and data sources organized by each research question. This study was guided by one overarching research question: *What do GTAs learn about the work of postsecondary instruction through their instructional experiences in the course that they are currently teaching?"*

Interview 1 Beginning of Term	Interview 2 Middle of Term	Interview 3 End of Term	Audio Journal Middle & End of Term
RQ1: What instructional experiences shape GTAs' teaching practices and in what ways?			
When thinking about the classes you have taught so far, what is a moment or experience that stands out to you? What is it about this particular experience that makes it meaningful or notable to you in some way? For example, something that caused you take pause? You might do differently if given the opportunity? Evoked an emotional response? In thinking about that same experience, did this experience lead to new ideas or understandings about teaching? For example, that an instructional approach was more or less effective than you anticipated? Would you say that today's session was a pretty typical class? Why or why not	When you think about your classroom instruction since we last talked in September, what has happened that has remained with you? What have you found yourself thinking about with regard to your classroom teaching? Is your teaching experience unfolding as you anticipated? Why or why not? • Did anything out of the ordinary happen? How did you handle that? What, if anything, did you learn from it? Did you try anything new since the last time we met? What was the inspiration for that? How did it go?	In general, what were your reactions to your evaluations? What stood out to you? Was anything surprising or unsettling? Why? Do you feel that you learned anything from your evaluations? For example, did you learn anything about instructional practices you used throughout the term? Would you do anything different in your teaching as a result of these evaluations? Broadly speaking, if asked what you learned about *teaching* after this past semester, what would you say?	Tell me about up to two experiences that happened in your classroom over the past few weeks in which you learned something about teaching. For example, what is something you now understand about teaching that you didn't know at the beginning of the semester? Is there something you would do differently in your teaching if given the chance? 1. Please describe the classroom experience that comes to mind in two to three minutes. 2. Please describe what you learned or realized about teaching because of this classroom experience. 3. Now please tell me how/why you think that this classroom experience influenced your teaching practice.

		What was your most meaningful experience or insight? Why? Do you think your approach to teaching or any beliefs you had about teaching changed over the course of the semester? If so, how? Why do you think they changed?	This can include how the experience informed your beliefs about students, learning, or teaching; your knowledge or understanding of teaching or learning; and/or your behaviors associated with your teaching (e.g., how you teach something, how you interact with students, etc.).
RQ2: What instructional experiences shape GTAs' teacher identities and in what ways?			
Did you learn anything about yourself as a teacher from this experience? For example, are you more or less comfortable with certain aspects of teaching? Based on these first class sessions, how do you think your students would describe you as a teacher? Why do you think this might be the case? Is this how you want to be perceived as a teacher? If not, how do you want to be perceived? What characteristics or adjectives come to mind?	If I were to ask you what you now know or understand about yourself as a teacher, as result of your classroom experiences, that you didn't know about the beginning of the term, what would you say? *If you don't feel that you have learned anything about yourself as a teacher, why do you think that might be the case?*	Do you feel that you learned anything about yourself as a teacher [from your evaluations], such as unrealized strengths or areas you need to grow more? *When discussing "big picture" takeaways over the semester:* What would you say that you have learned about *yourself* as a teacher? What helped you learn that? Would you say this is who you *want* to be? Why or why not? How do you see your experiences in the classroom as informing these	*See prompt used in Audio Journal One* Example of additional prompt: In what ways, if at all, did this classroom experience(s) influence how you think about who you are as a teacher and/or who you aspire to be as a teacher.?

		aspirations, if at all?	
RQ3: What influence, if any, does social identity have on what GTAs learn about postsecondary instruction through their instructional experiences?			
When you think about [insert social identity], would you say that this identity has shaped your classroom experiences as a GTA this Fall? If so, in what ways? • Can you think of an example of a time when this social identity informed your teaching or how you experienced your teaching? • Perhaps a way you reacted to a comment in class or the classroom environment your strive to cultivate? How a student responded to you?	You indicated that [insert social identities] were important to the meaning you ascribed to your teaching experiences in some way. Have you had any additional insights on how these social identities have informed your instructional experiences in any way? What have you learned about teaching or yourself as a teacher as result of these experiences? Have other social identities become more salient or apparent to you through your teaching since we've last talked?	I ask the question from interview #2 On social identity again in the third interview	I ask participants about the salience of their social identities and student experiences in the instructional experiences that they share in both audio journals
RQ4: What influence, if any, do GTAs' experiences as students have on what they learn about postsecondary instruction through their instructional experiences?			
Take a moment to think about your experiences as a student, whether in graduate school or earlier in life. Do your experiences as a student influence your approach your teaching this term? Have your prior educational experiences contributed to your knowledge or understanding about teaching? Yourself as	Can you compare your experience as a GTA this fall to your prior teaching experience? How is it similar? How is it different? Did you think about your prior teaching experiences much this term? When? In what ways? PROBE: Do you feel that your insights about teaching and/or student learning are informed by your former experiences as a student in any way?	Repeat questions from earlier interviews	I ask participants about the salience of their social identities and student experiences in the instructional experiences that they share in both audio journals

a teacher? If so, how? • PROBE: Perhaps how you approach teaching certain subject matter? Tactics you use to create a welcoming learning environment?			

Appendix I: Audio Journal One

In this audio journal exercise, I invite you to reflect upon and share one or two experiences that have occurred in your classroom instruction and contributed to your learning about teaching. If possible, share an experience that **we have not discussed** in an interview and **limit your response to 20 minutes or less.**

Instructions

To complete your audio journal, please read through the following instructions. You may then record your responses to the five "Guiding Questions" at the bottom of this exercise.
1. Make yourself comfortable in a space free from distractions and background noise, which will compromise the quality of the recording.
2. Test the voice recording function on your phone or computer so you can record your responses to the Guiding Questions (below).
3. Read through the Guiding Questions before responding. Jot down a few notes about one or two things that happened in your classroom instruction that you want to describe and reflect on in your audio journal. We will discuss your reflection in your upcoming interview.
4. After responding to all of the Guiding Questions, **please upload a copy of your recording to your private Dropbox folder for this study by [date]**. Like the other materials you have uploaded to this folder, only you and I will have access to your recording.

Guiding Questions

You have now been teaching for roughly (x) weeks this term. Tell me about an experience (or two) that happened **in the contexts of the classroom in which you teach** and what you learned about teaching and/or yourself as a teacher from the experience. For example, you might describe an experience that caused you question how you approached your classroom instruction, a new insight about what "good teaching" looks like or yourself as a teacher, or a challenge or question you are wrestling with in your personal instruction. To share more than one classroom experience, repeat these steps after describing the first experience.

1. After stating your name and the date, please describe (in 2-3 minutes) the specific classroom experience.

2. Please share what you learned or realized about teaching as a result of this classroom experience. For example, is there something you would do differently if given the chance? Conversely, did you find an instructional tactic you plan to use again in the future? Why so?

3. Can you think of any ways that this classroom experience has influenced how you think about who you are or aspire to be as a teacher? What is important to you as an instructor? Your personal strengths or areas for growth as a teacher? An unexpected insight about how you feel about teaching? Please share your thoughts.

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4. Now take a moment to review the alpha-ordered, social identity categories below. Do you see any associations between this experience and the social identities that you hold? If so, how? Would you say that how you experience these social identities in this experience has raised anything questions for you about teaching? Prompted you to think about university instruction or yourself as a teacher differently in any way?

Age	Physical, Emotional, Developmental (Dis)Ability
Disciplinary Identity (e.g., political scientist, historian)	Political Partisanship (e.g., liberal, conservative, moderate)
First Generation Student	Race/Ethnicity
First Language	Religious/Spiritual Identity
Gender	Sexual Orientation
Geographic origins (e.g., regional, national)	Socio-Economic Status
Graduate Student (i.e., not faculty)	Unmentioned Social Identity(ies)

5. In closing, are there any personal experiences you have had, as a student or otherwise, that would help me better understand *why* the classroom experience you reflected on stands out to you? Why you interpreted it in a certain way, or took a particular lesson from the experience?

Appendix J: Audio Journal Two

In this second audio journal, I invite you to reflect on any "big picture" takeaways you've had about teaching this past term. I first ask you to describe what you've learned about **teaching in general,** followed by what you've learned about **yourself as teacher**. Please limit your response to this journal to **less than 30 minutes.**

Instructions

Please read through the following instructions. You may then record your responses to the "Guiding Questions" below.

1. Make yourself comfortable in a space free from distractions or background noise. Test the voice recording function on your phone or computer so you can record your responses.
2. For several moments, silently reflect on your GTA experiences this semester. What went well in your teaching? Could have gone better? Did anything take you by surprise? What was your most insightful classroom teaching experience?
3. Read through each of the Guiding Questions. As you do, jot down a few notes in response to each of the six questions. Like the first audio journal, we will discuss your reflections in your upcoming interview.
4. Record your responses to each Guiding Question. Once you have finished responding, please **upload a copy of your recording to your private Dropbox folder by [insert date].** Only you and I will have access to your recording.

Guiding Questions

1. After stating your name and the date, succinctly describe (in under 5 minutes) up to **three things** that you learned about **teaching** through your work as a GTA this term**.** For example, what did you learn about:
   - teaching in your academic discipline? At the University?
   - the effectiveness of instructional approaches or tactics? The accuracy of various pedagogical beliefs?
   - what is expected of you as a GTA and by whom? Sources of support that are available to you as a GTA?
   - working as a member of an instructional team?

2. Now, briefly describe **3-4 instructional experiences** that helped you arrive at these insights.

3. I'd now like you to concisely (in less than 5 minutes) share up to **three things** you learned about **yourself as an instructor** through your experiences as a GTA this term. For example, what did you come to realize about:
   - what is important to you as a teacher? Specific aims or objectives you aspire to achieve in your teaching?

- how prepared you were for your instructional responsibilities? What do you attribute this to?
- your strengths and/or areas for growth as a teacher?
- how you are perceived as a teacher and by whom? How you aspire to be perceived?
- how you feel about teaching? Was teaching what you anticipated? Do you desire to teach in the future?

4. Please provide a brief overview of **3-4 instructional experiences** that facilitated this learning.

5. Now, take a moment to review the alpha-ordered, social identity categories below. Do you see any associations between what you learned about teaching or yourself as a teacher and **the social identities that you hold?** If so, how?

Age	Physical, Emotional, Developmental (Dis)Ability
Disciplinary Identity (e.g., political scientist, historian)	Political Partisanship (e.g., liberal, conservative, moderate)
First Generation Student	Race/Ethnicity
First Language	Religious/Spiritual Identity
Gender	Sexual Orientation
Geographic origins (e.g., regional, national)	Socio-Economic Status
Graduate Student (i.e., not faculty)	Unmentioned Social Identity(ies)

6. Are there any personal experiences you have had, as a student or otherwise, that would help me better understand *why* these instructional experiences resulted in what you have learned about teaching or yourself as a teacher?

7. As you conclude, please indicate 1) if you will be teaching in the Winter 2020 term, and, 2) if so, whether you know what class you will be teaching and the name of the class.

Appendix K: Classroom Observation Guide

Name

Course of observation

Date

Intervals of Classroom Instruction

Notes

Layout

Students (number in attendance, demographics)

Overall impressions GTA's demeanor & comfort in classroom (body lang., interaction style)

General teaching approach (structure of class, resources used)

"Quality" of teaching (facilitation, directions, interactions)

Student response/level of engagement

Notable interactions/happenings to follow up on & why

Summary
I think X - and here's why….. (bulleted list)……

Appendix L: Codebook

The codebook below consists of three classifications of codes: 1) categories, 2) codes, and 3) sub-codes. The codebook comprises three categories listed in **bold** font: "**Factors of Influence, Teacher Identity, and What was Learned About Teaching**." The codes for each category are listed in *Italics*, and the sub-codes are indented directly under their overarching code. To illustrate this hierarchy, the first category is "**Factors of Influence**." This category consists of the codes "*Background, Environmental Factors, Student Experiences, GTA Social Identity, and Students Social Identity*." The sub-codes for the code "*Background*" include "Extracurricular Involvements, Personal Relationships, and Work Experiences." This pattern was used throughout the codebook.

Name	Description	Files	References
FACTORS OF INFLUENCE			
BACKGROUND	GTAs' personal and professional experiences, personality traits, and interpersonal relationships	7	15
Extracurricular Involvements	GTAs' extracurricular involvements	4	6
Personal Relationships	GTAs' personal relationships	5	5
Work Experiences	GTAs' professional experiences	5	7
ENVIRONMENTAL FACTORS	Environmental factors	0	0
Authority Figures	Authority figures: Individuals GTAs perceive as having instructional authority or expertise (faculty advisors, consultants)	5	5
Macro Environment	Macro: The broader environment (e.g., social, political)	4	4
Peer	Fellow GTAs	7	13
STUDENT EXPERIENCES	Ways that GTAs' experiences as students, both current and previous, inform their teaching practices and/or identities	16	60
GTA SOCIAL IDENTITY	GTAs' social identities that were evoked in response to an instructional experience	19	166
Age	The effect of time on a person and/or perceptions of that person	11	16
Disability	Any disability held by a GTA (e.g., physical, emotional, developmental)	9	12

Name	Description	Files	References
Discipline	Disciplinary identity	12	20
Gender	Gender: Effects of being a male, female, non-binary	14	24
Geographic	Geographic origins (e.g., regional, national)	3	9
GTA Status	Graduate student status, particularly as first time graduate student instructor (rather than faculty member/instructor of record)	8	10
Language	First language	3	5
Political Partisanship	Social affiliation or identification with a political party and its associated groups and values	4	5
Race/ethnicity	Racial or ethnic identity	10	24
Rank	Order of salience of social identities	6	7
Religion	Religious or spiritual identity	1	1
Socioeconomic	GTAs' current and/or historical SES, as well as potential status as a first generation college student	9	15
Sexuality	Sexual orientation	5	5
STUDENT SOCIAL IDENTITY	Social identities of the students in GTAs' classrooms (e.g., demographics, majors)	2	2
Major	Students' academic majors	2	2
Student Disability	Any disability held by a student (e.g., physical, emotional, developmental)	3	4
Student Gender	Students' genders	5	10
Student Language	Students' first language and/or national origin	3	5
Student Race/Ethnicity	Students' race & ethnicity	8	14
Student Socioeconomic	Students' socioeconomic status	7	9
TEACHER IDENTITY	Teacher identity: GTAs emerging sense of themselves as instructors		
AFFINITY FOR TEACHING	GTAs' affinities toward teaching	8	10
TEACHING CAREER	How GTAs are thinking about their future work as university instructors; the extent to which they aspire for teaching to be a component of their professional work	3	5
TEACHER EFFICACY	GTAs' sense of confidence and/or comfort in their work as instructors, including any notable shifts in such confidence/comfort	9	21

Name	Description	Files	References
INSTRUCTIONAL STYLE	Instructional styles: tendencies, behaviors, preferences, etc.	11	48
Advocate	advocate for one's student and their learning experiences	6	8
Approachable	Valuing being viewed by students as approachable	6	6
Collaborative	A preference for taking a collaborative or communal approach to learning and teaching	4	6
Credible	Being viewed as knowledgeable and/or a credible sources of information	9	21
Engaging	Being an engaging instructor	7	8
Professional	Being viewed as professional and respectful as an instructor	1	1
WHAT WAS LEARNED ABOUT TEACHING	What GTAs learn about teaching		
CHARACTERISTICS TEACHING PRACTICE	Elements, attributes, characteristics of GTAs' teaching practice	0	0
Clarity	The clarity or transparency of various aspects of one's teaching practice (e.g., purpose of assignment/exercises, transparency of exam and assignment instructions and questions)	7	12
DEI	Areas of GTAs' teaching practice related to issues/topics/concerns of diversity, equity, and inclusion	11	54
CONTENT	CONTENT: The course subject matter of the classes GTA are teaching	13	45
Course Goals	Broader course goals and objectives	3	4
Feelings Content	GTAs' feelings toward course content	4	5
FEEDBACK	Feedback: the act of collecting feedback and/or engaging in efforts to assess the effectiveness of the course and or one's teaching	8	27
TEACHING GOALS	What GTAs aspire to achieve in their teaching	0	0
Acclimate	Helping students successfully acclimate to navigate campus life; support students' success and comfort on campus/as college students	4	6
Deeper	Students' developing a deeper understanding about and/or interest in the course content	12	22

Name	Description	Files	References
Pro-D	GTAs' goals related to their development as instructors	4	4
Student Success	To help students succeed in the course, whether in the form of adequately preparing them for exams, helping them achieve their personal goals for the course, etc.	5	9
Well-being	Student well-being (e.g., mental, physical, social, fiscal)	3	5
GRADING	The grading process and the work, policies, tools, approaches, associated with it	9	21
Assessment	Assessing student learning (vs. grading performance); GTAs' understandings' of extent to which students' are learning course material/understand course content	4	5
Grievance	Grade grievances - students' concerns or objections related to the grades they receive; "hot moments", disagreements, altercations related to students' grades	5	6
GTA EXPERIENCE	Affordances, downsides, or general nature of structure of the general GTA experience/role	1	1
Agency	GTAs' experiences, efforts, and/or barriers exercising (or encountering barriers to exercising) agency in their instructional roles	8	23
GTA ROLE	GTAs' instructional responsibilities and workload; expectations of GTAs in instructional role	5	10
Instructor of Record	The instructor of record for the course the GTA teaches	10	20
Teaching-Research Synergy	Teaching-research connection: Synergies between GTAs' work as instructors and research	3	3
Teaching-Student Synergy	Synergies between GTAs' work as instructors and as doctoral students	5	6
Teaching Team	Working on an instructional team	3	9
GTA-STUDENT RELATIONSHIP	Relationships among GTAs and their students	0	0
Classroom Management	Classroom management: GTAs' instructional experiences related to student conduct, maintaining authority, etc. (what they learn about classroom management, maintaining authority, setting expectations, including the	15	25

Name	Description	Files	References
	importance of these aspects of their teaching practice to them)		
Rapport	Rapport: GTAs' efforts to build relationships with and among their students, including boundary setting; nature of students' reactions to GTAs (e.g. as indicated by laughter, amicability, willingness to approach, etc).	12	29
INSTRUCTION	Instruction: The classroom teaching activities by which learning may be achieved	3	6
(Re)structuring	Intentional decisions GTAs make with respect to the how they structure or restructure their classroom instruction (how they spend time, nature of pedagogical activities and approaches) based on what they've learned through their teaching experiences as a GTA thus far term	9	23
Classroom Climate	The instructional environment the GTA strives to cultivate	9	32
Context	Contextual factors that shape teaching & learning experience (time of class, class space)	8	14
Concepts	The concepts GTAs emphasize in their instruction, including instructional tactics used to teach specific concepts, ideas, or materials (e.g., scaffolding, prioritizing concepts, use of learning goals/objectives in one's instruction)	9	26
Discussion	The facilitation of classroom discussions and conversations	10	19
Group	Group work in the classroom	11	19
Opinion	Sharing one's personal views and beliefs with students	2	3
Course Preparations	Preparations for one's classroom instruction (e.g., lesson planning, learning content, rehearsing slides, creating handouts)	11	19
Tool	Tools used to facilitate classroom instruction (e.g., slides, materials, handouts, white/chalkboard, etc)	8	17
LEARNING & ENGAGEMENT	Student learning & engagement	0	0
Indicator of Engagement	Using indicators of student engagement to assess the effectiveness of a pedagogical	8	15

Name	Description	Files	References
	decision, activity, move, approach, etc.		
Level of Engagement	Student engagement, participation, energy levels; interest in material	8	15
Student Learning	Efforts to assess and/or indications of the extent to which students are grasping course content (e.g., quality, accuracy, nature of responses in or outside of class; abilities to critical engage with, and/or make connections across course concepts)	3	4
Indicator of Learning	Using indicators of student learning to assess the effectiveness of a pedagogical decision, activity, move, approach, etc.	6	8
Learning & Performances	student learning as indicated by their performance on a course assignment or exam	8	15
Learning Style	Students' learning styles and preferences	4	9
Learning vs. Engagement	Times when GTAs distinguish between student engagement/participation and student learning	1	1
LEARNING & TEACHING ENVIRONMENT	The broader learning and teaching environments in which GTA teach	4	8
Assumptions	Assumptions, stereotypes of student learners (academic and personal)	3	8
Teaching Preparations	Teaching preparation resources available to GTAs; GTAs' experiences with and efforts to obtain resources to support them in their roles as university instructors (e.g. programming, mentorship, information/advice)	7	18
Undergraduate Culture	The broader undergraduate experience or culture (e.g., student norms and behaviors; academic expectations of students)	5	9
Value of Teaching	The value placed on teaching as an academic activity by GTAs' academic institutions, disciplines, and/or departments	5	5

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