

CONCEPT DEVELOPMENT THROUGH PRACTICE:
PRESERVICE TEACHERS LEARNING TO TEACH WRITING

By

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Dissertation

Submitted to the Faculty of the
Graduate School of Vanderbilt University
in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

in

Learning, Teaching, and Diversity

August, 2015

Nashville, Tennessee

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To my advisor, Lani Horn, for thoughtful feedback, high expectations, and well-timed words of encouragement, and to Ian, my unflinching fan. This is not just for you. It is because of your support.

ACKNOWLEDGEMENTS

I would like to thank, first and foremost, Dr. Lani Horn, for teaching me the endless of fascination of trying to understand how teachers learn by watching them talk, for tirelessly and patiently reading draft upon draft of writing research, and for openly and honestly modeling what it means to be a mom in the academy.

I could not have done this research without Dr. Melanie Hundley, who introduced me to the world of Katie Wood Ray, video analyses of Shakespeare, and an unmatched passion for the literacy of the young. Thank you, Melanie, for generously and open-mindedly opening your classroom to me, allowing me not only to see behind the curtain of writing methods courses, but also to drag preservice teachers across campus to do some very organized pretending.

Thank you to Dr. Kevin Leander, who sees the world much differently than I do, but listens carefully and allows me to grow as he listens. Since you were my first English methods professor, I still hear your voice in my head as I teach others.

Thank you also to Dr. Sandra Solomon, for the willingness to bring your knowledge of writing instruction to bear on a different field.

I also want to thank my colleagues and peers, who have supported me through as many brainstorming sessions as venting sessions. In particular, thanks to Liz Self, who was with me in an AERA hotel room, concocting this monster project.

Thank you to Ian, Mom, Dad, KJ, and Chelsie for knowing I could do it. So far, Mom wins the prize for reading drafts of this most deeply: She made it to the word, “pedago-gical,” at which point she sighed and wondered why things have to be so complicated all the time. You’ll notice that “pedagogical” makes an early appearance. And she’s winning, guys. (Love you, Mom).

And finally, thank you to Maren for writing your dissertation with me. I can't wait to read about "Ian and Sawyer and dogs and eyes." Sawyer, thank you for sleeping and smiling. Maren and Sawyer, may you love to learn. May you have faith. The rest will follow.

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CHAPTER I

INTRODUCTION

Teaching writing in intellectually rigorous and equitable ways requires an understanding of writing as an open-ended, exploratory process of problem solving and communication (Smagorinsky & Whiting, 1995; Hillocks, 2008). It also requires teachers to be responsive to students' partial and changing understandings, flexibly supporting them as they develop their use of writing strategies and concepts, as well as grammar and mechanics (Kennedy, 1998). Approaches to instruction like this, which rely upon teachers' intellectual and relational agility in the face of specific situations, have been called *ambitious*. Process approaches to writing instruction, which are currently the "primary paradigm" for understanding writing instruction can be ambitious (Pritchard & Honeycutt, 2006), yet process writing instruction is not inherently ambitious—these approaches depend upon teachers' development of professional judgment to reach that potential.

In order to support preservice teachers' development of professional judgment, researchers in teacher education hope that practice-based approaches, such as the use of pedagogies of investigation and enactment, can prepare teachers for the "constant, in-the-moment decision-making that the profession requires" (McDonald, Kazemi & Kavanaugh, 2013, p. 378). Yet there are also fears that such approaches will support teachers as expert technicians, not ambitious instructors (Kennedy, 1987; Zeichner, 2012). I hope to inform this debate by interpreting the difference between teacher-technicians and ambitious instructors as a question of teachers' concept development. I assume that ambitious practitioners of writing instruction have

developed robust concepts that can support their flexible, equitable, and intellectually rigorous use of teaching practices associated with process writing instruction. The following three papers describe attempts to design for and then better understand teachers' concept development about ambitious writing instruction.

In Chapter II, I lay out design conjectures for supporting preservice teachers' development of concepts about ambitious instruction (Sandoval, 2004). Based on a synthesis of sociocultural theories of concept development, research on high quality writing instruction, and research on practice-based approaches to teacher education, I suggest three design conjectures for methods courses seeking to support preservice teachers' development as ambitious writing instructors. Preservice teachers should participate in a community of writers; participate in pedagogies of investigation and enactment designed around a core teaching practice, *making student thinking visible*; and participate in investigations and enactments of instructional activities suggested by the literature on how teachers learn to teach writing. These include collaborative assessments of student work and simulations of writing conferences.

Chapter III investigates the first iteration of a design study using these conjectures; it seeks to understand the conceptual resources preservice teachers developed as they participated in these pedagogies of investigation and enactment, as well as how these resources mobilized preservice teachers for future work (Horn & Kane, 2015). Preservice teachers collaboratively assessed an individual students' writing, as well as a set of student writing. They also participated in a simulated writing conference, in which they interacted with an actor trained to portray a struggling student writer. Simulations are a new pedagogy in teacher education, borrowed from medical education (Dotger, 2015; Self, 2015). All of these enactments were designed around the suggested ambitious teaching practice, *making student thinking visible*. I

found that collaborative assessments of student work supported preservice teachers in developing concepts about writing as a discipline, but simulations of writing conferences supported them in interpreting interactional work with students, which is important to professional judgment.

In Chapter IV, I followed preservice teachers into their student teaching placements, analyzing how their concepts about *making student thinking visible* were developed as they taught writing with actual students. I found that preservice teachers developed concepts about a core teaching practice, *making student thinking visible*, in combination with other ideas about writing instruction that arose in the contexts in which preservice teachers taught writing. I interpret this to mean that teaching concepts develop ecologically—in relation to one another, to the cultural and historical discourses and practices that characterize particular contexts for teaching, and—most importantly—to students.

All of these papers address a lacuna in the literature, because in my review of recent research, I did not find other investigations of how practice-based approaches to teacher education support concept development about ambitious practice. These analyses contribute to research on how teachers learn to teach writing, to research on concept development in teaching, and to broader conversations about the potential and limits of practice-based approaches to teacher education. Over the last century, research programs that emphasize practice have often narrowly defined teaching and supported teachers in becoming technicians. It is hoped that current instantiations of practice-based teacher education will be different (Zeichner, 2012). Yet teaching ambitiously is intellectually and relationally complex, and the institutional structures of schooling rarely support teachers in teaching writing ambitiously (Hillocks, 2002). As practice-based approaches to teacher education begin to take hold—again—we need to buttress them with

a stronger understanding of how they contribute to preservice teachers' development of concepts about intellectually rigorous, equitable forms of writing instruction.

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CHAPTER II

DESIGN CONJECTURES FOR NOVICES' CONCEPT DEVELOPMENT ABOUT AMBITIOUS WRITING INSTRUCTION

Introduction

How do novice teachers develop understandings about intellectually rigorous and equitable writing instruction? This question must garner more attention from educational research, because students continue to struggle with writing performance, both on standardized writing assessments and once they enter the working world (National Assessment Governing Board, 2011; National Commission on Writing, 2003; 2004; 2005). In addition, the Common Core State Standards require more and more intellectually rigorous writing; and digital composition skills are becoming ever more necessary, both in daily life and in the workplace (Calkins, Ehrenworth, and Lehman, 2012; National Writing Project & DeVoss, Eidman-Aadal & Hick, 2010; Porter, McMaken, Hwang, and Yang, 2011). However, writing instruction is often relegated to a few short assignments, lectures on format, and decontextualized grammar instruction (Applebee & Langer, 2011; Smagorinsky, 2010; Kiuahara et al., 2009). Nor should we be surprised: A majority of secondary teachers (71%) report little to no preparation for the teaching of writing (Kiuahara, Graham & Hawken, 2009). This climate of increased demands and scant preparation presses the question of how preservice writing teachers might be supported to develop intellectually rigorous and equitable writing instruction.

I interpret this question as one about teachers' learning, so I draw upon sociocultural theories of learning, with particular attention to ideas about concept development. I synthesize

this work with precepts on practice-based approaches to teacher education, as well as a review of the literature on how preservice and in-service teachers learn to teach writing. Building off of this, I make design conjectures for how writing instruction methods courses might be structured to support preservice teachers' (PT) concept development about intellectually rigorous and equitable writing instruction, which is often referred to as *ambitious instruction* (Lampert & Graziani, 2009).

Design conjectures are conjectures about “how theoretical propositions might be reified within designed environments to support learning” (Sandoval, 2004, p. 215). Thus, design conjectures are based on extant literature on learning in specific domains and are offered at a level of specificity that allows them to be empirically refined or rejected. The body of work available on how teachers learn to teach writing is small and interest in practice-based approaches to teacher education are only recently experiencing a resurgence, so these conjectures are necessarily provisional.

Nonetheless, they lay a foundation on which the field might build a stronger understanding of teachers' concept development about writing instruction. I report on the first cycle of a design study using these conjectures elsewhere (Kane, 2015b; 2015c). In order to contextualize these conjectures, I provide a brief overview of recent work in teacher education, drawing connections between this work and possibilities for concept development, before describing my design conjectures for supporting ambitious approaches to writing instruction in methods courses.

Practice-based Teacher Education: Improving upon the Past

Many teacher education researchers are converging on the idea of placing teaching practices at the center of efforts to support PTs to teach in ways that are intellectually rigorous and equitable.

Some have highlighted *pedagogies of investigation and enactment* (Grossman & McDonald, 2008; McDonald, Kazemi & Kavanagh, 2013) as an important means of placing practice at the center of PTs' development. In such a framework, PTs are introduced to a teaching practice, have access to a number of models of that practice, and then decompose and analyze the practice (Grossman, Compton, Igra, Ronfeldt, Shahan et al., 2009). PTs then have opportunities to enact the practice, in an environment of reduced complexity, after which they analyze and investigate their own work and that of their peers.

This pedagogical cycle has a number of advantages. It decomposes teaching practice into component parts, rendering them more manageable to see, analyze, and interpret. By providing representations of particular teaching practices, pedagogies of investigation can extend teachers' "horizons of observation" (Hutchins, 1993), or what is available for teachers to see, since teachers rarely have access to the practice of others (Little, 1990; Lortie, 1975). The cycle also allows teachers to investigate and analyze teaching practices alongside more expert others, and it provides opportunities for enactment in settings of varying complexity (Grossman et al., 2009; Grossman & McDonald, 2008). Because of these many advantages, researchers in teacher education are now investigating how they might use practice-based approaches in a number of content areas (TeachingWorks, 2015; McDonald, Kazemi & Kavanaugh, 2013).

Problematizing the Past: Previous Practice-based Approaches in Teacher Education

Yet placing teaching practice at the center of teacher development programs is not new. Understandings and misunderstandings about *practice* have been prevalent in a number of historical attempts to support teachers' development. In both the Commonwealth Teacher Training study of the 1920s and the process-product research of the 1960s and 1970s, teachers' work was conceptualized as a set of practices, activities, or tasks that could be adumbrated by researchers and

inculcated in teachers (Cochran-Smith & Fries, 2008; Zeichner, 2012). Such approaches have been critiqued for creating long and unwieldy lists of teacher tasks or practices, leading to the criticism that past instantiations of practice-based teacher research amounted to an “orgy of tabulation” (Saylor, 1976, as qtd. in Zeichner, 2012).

Less quotably, but just as frustratingly, these programs of research often neglected to investigate teachers’ thinking about when, how, and why they might deploy particular tasks/activities/practices—and in what combination. Therefore, these tabulations of practices implicitly (and sometimes explicitly) presented teaching tidbits as decontextualized and universally useful. Although decontextualized, formalized knowledge has long been valorized as more scientific and transferable than its situated counterpart (Lave, 1996), decontextualizing teaching practice can have two related, undesirable effects: It may aid teachers’ development of technical skills, and it may sublimate the professional judgment they will need in order to equitably support students in U.S. schools, who hail from a variety of cultural and educational backgrounds (Kennedy, 1987; Zeichner, 2012; Dutro & Cartun, 2014). As Zeichner (2012) notes, historical efforts to establish practice-based approaches to teacher education have been “plagued by a narrow technical focus ignoring the need to ground teachers’ technical competence in an understanding of the historical, cultural, political, economic, and social contexts in which their work is embedded” (p. 380).

Despite these oft-repeated drawbacks, approaches to teacher education that seek to systematically decompose teaching into a number of decontextualized practices, and then teach teachers to use them, are still with us today. One current version might be found in Doug Lemov’s recent bestseller, *Teach Like a Champion*, which suggests the use of practices like “wait time” or “no opt out,” based upon observations of teachers with high value-added scores. Like its predecessors,

Lemov's work fails to take into account teachers' thinking about how and when particular practices—which he calls “techniques”—might be used, and to what educational effect.

The Core Practice Consortium's Renewed Efforts

Yet current instantiations of practice-based teacher education can be differentiated from approaches like Lemov's or the process-product research program (Lampert et al., 2013; McDonald, Kazemi & Kavanaugh, 2013; Windschitl, Thompson & Braaten, 2011). These present day programs of research, many of which claim membership in the Core Practices Consortium, delineate a tighter, more usable list of teaching practices (TeachingWorks, 2015). They also acknowledge the importance of context in teaching (Lampert et al., 2013).

More usable lists of teaching practices. For instance, researchers associated with TeachingWorks, housed at the University of Michigan, have collated a list of nineteen “high leverage” teaching practices, which are “actions or tasks central to teaching” across grade levels, content areas, and contexts (2014, n. p.). Even Zeichner (2012), who has raised concerns about practice-based approaches to teacher education developing technicians instead of professionals, notes that:

The current wave of reform in American teacher education to focus on high-leverage teaching practices [...] involves a grain size that is more usable by new teachers and their teacher educators than either the lists of hundreds of competencies or general standards [that characterized past attempts]. The idea of creating a common core of these teaching practices [...] is potentially a good development (p. 378).

Thus, work is being done to tighten the list of teaching practices with which both novices and teacher educators must become conversant.

Attending to context in teaching practices. Current instantiations of practice-based teacher education are also taking steps to ensure that teaching practices are not seen as decontextualized teaching tidbits. Instead, Lampert and her colleagues at three different colleges of education (2013) posit that teaching practices exist within the context of instructional activities. Instructional activities function as “containers,” which envelop teaching practices, content knowledge, and principles. Indeed, far from ignoring teachers’ rationales for their use of particular practices in particular situations, Lampert and her colleagues emphasize that teachers use practices, content knowledge, and teaching principles “*in relation to one another*, not in isolation. Furthermore, they must be used *in relationships among teacher, students, and the content to be learned*” (2013, p. 228, emphasis in original). Thus, instructional activities provide a context in which and with which teachers use principles and content knowledge to make decisions about their practice.

Critiques of Current Practice-based Approaches: Professional Judgment?

Yet critiques of these current instantiations remain, particularly from those concerned with educational equity. Using the dual perspectives of critical and affect theories, Dutro and Cartun (2014) have argued that Lampert and her colleagues’ container metaphor has other, less desirable entailments. Specifically, seeing specific teaching practices as “core” to teaching implicitly highlights a dangerous binary between what is central to teaching and what is not. Their analysis of PTs’ learning within the core practices paradigm questions whether a discrete set of core practices and principles can adequately divide teachers’ work in this way, particularly in light of the joys, tragedies, and richness of individual students’—and teachers’—lives.

Teachers need professional judgment that will enable them to make decisions about their practice not only in terms of content knowledge and teaching principles, but also with deep understanding of students’ affective lives. As Ladson-Billings (2006) has pointed out, culturally

relevant pedagogies depend not on deploying a list of specific practices, but on teachers' decision-making in light of how they think about social contexts, students, curricula, and instruction. From a similar social justice standpoint, Zeicher (2012) worries about how practice-based preparation paradigms stand to support teachers' development of professional judgment.

Yet, members of the Core Practice Consortium explicitly see professional judgment as a pedagogical goal:

By highlighting specific, routine aspects of teaching that demand the exercise of professional judgment and the creation of meaningful intellectual and social community for teachers, teacher educators, and students, core practices may offer teacher educators powerful tools for preparing teachers for the constant, in-the-moment decision-making that the profession requires (McDonald, Kazemi & Kavanaugh, 2013, p. 378).

Thus, current instantiations of practice-based teacher education are attempting to create more usable lists of "high-leverage" teaching practices, to attend to the importance of context in teaching, and to support teachers' development of professional judgment. By setting out this tightened list of practices, as well as proffering cycles of *pedagogies of investigation* and *enactment* as important tools for teacher education, this body of research moves the field forward, providing broad guideposts for the design of courses in teacher education. Yet many questions remain about how PTs' development of professional judgment might best be supported, particularly for novice writing teachers.

Practice-based Teacher Education: Where We Are, Where We Need to Go.

I interpret the problem of supporting PTs' professional judgment as a problem of concept development, which is an as-yet-untapped vein of research in this area. History suggests the need for researchers and teacher educators to attend not only to teachers' tasks, techniques, or actions—as

practice is sometimes conceptualized—but also to teachers’ thinking about their practice, how particular teaching contexts influence teaching practice, and, as Dutro and Cartun (2014) suggest, even critical analyses of what constitutes the “core” of practice and what constitutes the context. In short, we need to pay careful attention to how teachers learn within a practice-based teacher education paradigm. To support teachers’ professional judgment, the field needs to understand more about how PTs’ concepts about intellectually rigorous and equitable instruction develop. These considerations are particularly important in light of the deeply situated nature of teaching, and the culturally rich and diverse student body whose learning opportunities teachers, teacher educators, and educational researchers hope to support.

Concept Development: How Does It Work?

How, then, do concepts develop? Concepts develop within particular figured worlds. Figured worlds are:

socially and culturally constructed realm of interpretation in which particular characters and actors are recognized, significance is assigned to certain acts, and particular outcomes are valued over others. (Holland, Lachicotte, Skinner & Cain, 1998, p. 52)

Thus, figured worlds are “as if” worlds, in which actors participate as if some cultural and historical discourses and practices were more beneficial, logical, or useful than others. Given that the cultural and historical discourses and practices of figured worlds are value-laden, individuals are socially positioned with respect to those discourses and practices within figured worlds. These cultural and historical discourses and practices and the social positionings they entail, then, are influential to individuals’ identities and their practices (Holland et al., 1998). In other words, figured worlds influence learning, because—according to sociocultural theories—learning is a change in identity and practice (Lave & Wenger, 1991).

Since figured worlds influence learning, they also influence concept development. Thus, concept development happens in relationship to the cultural and historical discourses and practices that characterize figured worlds. Vygotsky (1986) posited that concepts are built through an interplay between scientific concepts and spontaneous concepts. Scientific concepts¹ are generalizable abstractions, taught in formal settings such as classrooms. Spontaneous concepts are concepts that humans spontaneously create based upon their activity-in-the-world—that is, practice, according to traditional understandings of the theory-practice dichotomy. However, from Vygotsky’s viewpoint, in order to create robust concepts people must synthesize scientific and spontaneous concepts. This synthesis is continually refined through further activity-in-the-world (Vygotsky, 1986; Smagorinsky, Cook & Johnson, 2003).

It is worth pausing here to differentiate this understanding of concept development from one that is more widely pervasive in Western society: the theory-practice dichotomy. Traditionally, decontextualized, abstracted, formalized knowledge—or theory—has been seen as more intellectually rigorous than its opposite, practice (Lave, 1996; Lampert, 2010). Theory has been valued because it is decontextualized and therefore seen as universal. This quality, it has been posited, allows theory to be applied across contexts, thus making theoretical, scientific knowledge more transferable and generalizable than its practical counterpart. Thus, it has been implied that, in order to learn, people should apply theory to practice, or activity-in-the-world.

However, this is not the framework for concept development that Vygotsky proposes. Instead, he understands traditional dichotomies between theory and practice as untenable: Abstracted, generalized concepts cannot be understood or refined apart from practice, or activity-in-

¹ Some argue that a better translation for *scientific concept* would be *academic concept* (Smagorinsky, Cook & Johnson, 2003). Regardless of the translation one takes up, the important distinguishing factor is that *scientific/academic concepts* are generalizable across situations, while *spontaneous concepts* are ways of framing particularities.

the-world. Concepts develop through synthesis and negotiation between the formal and the informal, the decontextualized and the local, the general and the specific. Thus, practice—far from being an underling waiting for meaning to be attached to it from above—is the substrate through and with which concepts must develop. Without practice, theory is meaningless and vice versa. As Smagorinsky, Cook, and Johnson (2003) put it, practice is the “worldly experience through which a concept derives its grounding, coherence, and meaning” (p. 1408). Thus, traditional dichotomies between theory and practice are uprooted. Concept development involves an interplay between the formalized and general, the local and the specific.

With this understanding of concept development in mind, I propose conjectures for the design of methods courses intended to support PTs’ concept development about intellectually rigorous and equitable writing instruction. These conjectures are based on a careful review of the literature on how preservice and in-service teachers learn to teach writing, current work on (and critiques of) practice-based approaches to teacher education, and sociocultural theories of learning, which highlight that concepts develop through an interplay between activity-in-the-world and abstract generalizations about that activity. In the following sections, I present three key design conjectures—intended for use in conjunction with one another. Because of the limited research basis for these conjectures, they are necessarily provisional, but they offer the field a starting place from which more powerful approaches to writing teacher education might be built. Before explaining the design conjectures in depth, I briefly outline what constitutes intellectually rigorous and equitable, also called *ambitious*, writing instruction, as this is not taken-for-granted in research on writing instruction.

Understanding Intellectually Rigorous and Equitable Writing Instruction

Defining high quality writing instruction has been a source of debate among researchers and

practitioners, largely because the nature of writing itself has been historically debated. Kennedy (1998) offers a nice heuristic for understanding tensions embedded within ideas about strong writing instruction. She divides stances on writing instruction into three categories, *prescriptive*, *conceptual*, and *strategic and purposeful*. The *prescriptive* model is concerned with teaching conventions of mechanics and language usage. According to the *conceptual* model, writing instruction should focus on concepts, such as paragraph, genre, and chronology. For those who understand writing as *strategic and purposeful*, students should be able to use the process of writing—that is, the way their ideas are generated and transformed into text—to refine and clarify their thinking. Since *prescriptive* and *strategic* approaches have been particularly influential in the history of writing instruction, the following provides more in-depth information about both.

Prescriptive Approaches to Writing Instruction: Concerns with Correctness

Prescriptive approaches to writing instruction dominated U. S. classrooms through the nineteenth century and into the 1960s, largely due to the ancient Greek idea of a muse, whose whims were said to govern text generation. This idea survives today, even among those who hope to teach writing (Norman and Spencer, 2005). Thus, writing instruction was considered to be effective when it focused on what it was possible to learn: namely, the conventions of punctuation, grammar, and language usage (Kennedy, 1998). This *prescriptive* stance on writing is still influential in terms of how teachers actually teach writing, since decontextualized grammar instruction and instruction in reproducing specific formats, like the five-paragraph essay, is still prevalent and even encouraged by pressures from state and district testing (Baildon & Damico, 2008; Berlin, 1982; Hillocks, 2002; 2008; McCarthy and Sun, 2011; McQuitty, 2012; Pella, 2011 Smagorinsky, 2010; Whitney, Blau, Bright, Cabe, Dewar et al., 2008).

Strategic Approaches to Writing Instruction: Writing as a Process

Writing instruction reformers seek to change this, however, defining writing, “not as a set of prescriptions to follow but as a strategy for organizing one’s thoughts and communicating those thoughts to others” (Kennedy, 1998, p. 8). For many, Kennedy’s *strategic and purposeful* category calls up the idea of process writing instruction, which has become the “primary paradigm” in writing instruction since the 1980s (Pritchard and Honeycutt, 2006). Generally speaking, process approaches to writing instruction highlight the need for writers to have extended opportunities to write for authentic purposes and audiences.

Disagreements about process writing instruction. Yet practitioners and researchers are inconsistent in their definitions of process writing instruction (Pritchard and Honeycutt, 2006). While it is now generally agreed that the *writing process* is recursive and individual, rather than linear and prescriptive (see, e.g., Hayes & Flower, 1980), disagreement exists about writing process *instruction*, particularly around the teacher’s role. Early conceptualizations of writing process instruction advocated what Smagorinsky and Whiting (1995) have called a theory of “natural development” (e.g., Elbow, 1998; Graves, 1981; Calkins, 1981; 1983; Atwell, 1998). This theory expects teachers to avoid “detailed instruction in specific aspects of writing,” in favor of encouraging teachers to create environments, such as the Writers Workshop, in which students can write (Smagorinsky and Whiting, 1995, p. 61).

However, critics have noted that this approach is inadequate. In addition to methodological concerns about its research base (Hillocks, 1986; Smagorinsky, 1987; Pritchard and Honeycutt, 2006, p. 281), some argue that students from non-dominant cultures, students whose first language is not English, and students with disabilities may—for different reasons—not have access to implicit linguistic and literary forms which the culture of power values (Ball, 2006; Delpit, 1995; De La Paz & Graham, 2002). These students will need more access to more explicit strategy instruction *in the*

context of meaningful opportunities to write extended pieces (Ball, 2006). Critics of “natural development” approaches cite a need for scaffolding in writing instruction, which might include “strategy instruction, attention to genre, and consideration of the role of social context in classrooms” (McCarthy and Sun, 2011, p. 275). Such an approach requires the teacher to don a more “assertive role in pointing student learning in a particular direction” (Smagorinsky and Whiting, 1995, p. 73) than the facilitator for which Atwell (1998) and others called.

Thus, in their review of research on writing process instruction, Pritchard and Honeycutt (2006) note that process writing instruction is imperfectly understood and subject to constant redefinition. They arrive at the same conclusion about the writing process approach as did Cramer (2001), who noted that process writing instruction is: “not a panacea. But it is a better candidate for improving writing performance than the traditional approach [of prescriptive lectures]” (Cramer, 2001, p. 39).

Growing Consensus about Quality Writing Instruction

Despite disagreements about the teachers’ role in process writing instruction, some consensus is forming. Smagorinsky and Whiting (1995) suggest that seemingly disparate theories of writing instruction share a rejection of lecture-based teaching, see writing as a process, and advocate empowering, meaningful learning that happens in a constructivist, student-centered classroom. Similarly, Pritchard and Honeycutt (2006) note that the process approach to writing instruction is evolving *toward* the inclusion of more explicit strategy instruction. Anderson (2005) has referred to this as the “craft” movement in writing instruction, which encourages students to analyze the “craft”—or strategies—which mentor writers have used in order to build their own treasure chest of craft techniques (see also, Noden, 2011; Ray, 1999; Lane, 1993). These “craft techniques” often place writing *prescriptions* in the context of meaningful writing, as Ball’s (2006) review of writing

instruction research in culturally diverse classrooms suggests. Indeed, while process writing instruction is generally associated with *strategies and purposes*, and more traditional instruction is associated with *prescriptions*, Kennedy cautions that an overreliance on any one aspect of writing “can do a disservice to children and can devolve easily into no instruction at all” (p. 13).

Defining High Quality Writing Instruction as Ambitious

High quality writing instructors, then, remain true to an ideal that defines writing as an open-ended, exploratory process of problem solving and communication. They also teach in ways that are responsive to students’ developing understandings, flexibly supporting students to build strategic, conceptual, and prescriptive approaches to composition while they gain access to linguistic and literary forms implicit in the culture of power. In other words, high quality writing instruction is guided by particular epistemics about writing, and it is also situated in and responsive to particular classrooms with particular students.

This is the essence of ambitious instructional approaches. As Cohen (2011) points out, those who teach ambitiously hold particular epistemics about knowledge. Such teachers do not see knowledge as inert or finished, but understand that “to know is to be a competent inquirer, to frame problems fruitfully, to make disciplined arguments, and to interpret material and defend results convincingly” (Cohen, 2011, p. 35). High quality writing instruction, then, is ambitious in that it values critical thinking and problem solving. Ambitious instruction is also always responsive to students’ needs, since it defines teaching as “work with students that is intellectually demanding, attentive to students’ work, [and] conducted in thoughtful conversation” (Cohen, 2011, p. 47). Given the complex terrain in which high quality, ambitious writing instruction sits, then, what do novice writing teachers need to understand in order to become ambitious writing instructors?

Supporting Writing Teachers’ Development: Laying the Groundwork

To teach ambitiously, novice writing instructors need access to a number of instructional repertoires and concepts from which to build a responsive writing instruction program that consistently frames students as builders of knowledge, offers students extended and meaningful opportunities to write, guides them to see and purposefully take up a number of craft techniques, and balances writing *prescriptions*, *concepts*, and *strategies* (Kennedy, 1998). Ideally, ambitious writing instructors would not only understand these three aspects of writing, and the theoretical histories that gave rise to them, but they would also have a vision of what instruction that seeks to balance these theories and aspects of writing looks like in light of students' own personal and cultural histories. They would be able to decide when to implement, adapt, or avoid various instructional strategies based upon an analysis of students' development as writers. In short, ambitious instructors of writing need professional judgment. This means they need ample opportunity to develop robust concepts around how people learn to write, what the nature of writing is, and how their own instructional work might support students to become writers who inquire into and frame problems.

As Cohen notes, such instruction typically requires considerable training. Research specific to writing instruction bears this out: Process approaches to writing instruction show a greater influence on students' writing performance when they are paired with strong professional development (Ball, 2006; Graham and Perrin, 2007; Pritchard and Honeycutt, 2006; Whitney et al., 2008). In the following sections, then, I use research on how teachers learn to teach writing to lay out design conjectures for how teacher educators might support writing teachers' professional judgment in teacher education courses, paying particular attention to how teacher educators can design for robust concept development.

Design Conjectures for Writing Teacher Education Methods Courses

Based upon a synthesis of the literature on how teachers learn to teach writing, recent work

on practice-based teacher education, and sociocultural theories of concept development, I propose three design conjectures for writing teacher education. To support PTs' concept development about writing instruction, and thus their professional judgment, writing methods courses should provide opportunities for PTs to:

1. participate in a community of writers;
2. participate in cycles of pedagogies of investigation and enactment that move toward ever more authentic approximations of a single teaching practice.
 - a. In writing instruction, *making student thinking visible* is promising as a focal practice.
3. investigate and enact this practice within the context of different instructional activities.

Useful instructional activities for writing teachers might include:

- a. the collaborative assessment of student work
- b. work that happens in the interactional space of the classroom, such as writing conferences.

Design Conjecture 1: Preservice teachers should participate in a community of writers.

Perhaps the loudest advocate for writing teachers' participation in a community of writers is the National Writing Project (NWP), which makes this claim for teachers of digital and non-digital writing alike: "writers are the best teachers of writers simply because they are involved in the practice of writing" (Lieberman and Mace, 2009; Lieberman and Wood, 2003; NWP and DeVoss, Eidman-Aidahl, and Hicks, 2010; NWP and Nagin, 2006). Lieberman and Wood's (2003) two-year case study of two NWP sites concluded that asking teachers of writers to write, to give feedback to peers, and to receive feedback themselves was a defining characteristic of the NWP, and one that allowed teachers to see, experience, and reflect upon the writing process: "Actual engagement in writing allows [teachers] to reflect on the *processes* of writing so they

will more deeply understand these processes and be better prepared to teach them” (p. 15, emphasis in original).

Indeed, both personal accounts and more systematic case studies suggest that teachers’ experience in the NWP as writers might be part of what makes the NWP “life-changing” (Davis, 2004; Kaplan, 2008; Whitney, 2008). In her case study, Whitney (2008) noted that teachers who claimed that the NWP was “transformative” accepted the NWP’s invitation to write and to share their work. Those who did not produce their own written work for the summer institute—and therefore participated only facilely in a community of writers—did not find their time in the NWP to be especially meaningful, and their work did not suggest improvements in their understanding of writing instruction.

Despite the hopeful tenor of findings about the need for teachers of writing to write themselves, however, it should be noted that much of the support for this idea comes out of the NWP itself (Davis, 2004; Kaplan, 2008; NWP and DeVoss, Eidman-Aadahl, and Hicks, 2010; NWP and Nagin, 2006). Because the NWP is publically invested in the idea that writing teachers should write, we should not necessarily expect a critique of this premise from those quarters. Indeed, Wilson’s (1994) case study suggests that teachers struggle to maintain a commitment to what they learned in NWP summer institutes once they return to their home schools, which may or may not be supportive of the writing instructional practices the NWP advocates.

This finding echoes research coming out of preservice teacher education, which suggests that novices often adopt writing instruction practices that emphasize writing prescriptions, to the exclusion of concepts and strategies, and specific writing formats, like the five-paragraph essay (Grossman, et al., 2000; Johnson, Smagorinsky, Thompson & Frye, 2003; McQuitty, 2012), despite their participation in teacher education programs that eschew such practices.

Unfortunately, very little research has investigated questions about how PTs' participation in communities of writers influences their instruction. Only one study to date has sought to identify links between teachers' participation in a community of writers and their students' achievement in writing. Whyte and her colleagues (2007) split their 35 participating English Language Arts teachers into four groups, divided by whether teachers had attended one of the NWP's summer institutes and whether or not they themselves had an active writing life. One's writing life was measured based on participation in a writerly culture: how often a teacher reported having attended a poetry reading, or how often a teacher wrote online, for instance. The authors then compared students' pre-and post-scores on a writing assessment, aggregated by teacher.

The findings provide partial support for the idea that writing teachers should write and participate in peer review groups themselves. NWP teachers with active writing lives taught students whose writing scores showed statistically significant improvement. An active writing life alone, however, was not enough to engender stronger writing scores. The scores of students whose teachers had active writing lives, but did not participate in the NWP, did not improve significantly. Interestingly, participation in the NWP, without an active writing life, also did not produce statistically significant improvement in P-12 students' writing scores (Whyte et al., 2007). According to Whyte and her colleagues (2007), then, the interaction effect between participation in the NWP and having an active writing life suggests that "the writing by teachers central to the NWP may combine with the two other core elements of the NWP's programs...(demonstrations of practices for teaching writing and professional reading and study) to improve student achievement in writing" (Whyte et al., 2007).

Relationship to concept development. There is simply not enough research to suggest

unequivocally that writing teachers' participation in a community of writers themselves improves writing instruction. However, findings from other quarters, such as sociocultural theories of learning, as well as work specifically about teachers' learning, suggest that participating in a community of writers may support teachers' improved writing instruction. According to sociocultural theories, learning involves a change in identity: Whitney's (2008) study of transformation in the NWP suggests that only those teachers who participated in the practices of a community of writers (writing and receiving feedback on their writing) experienced shifts in their identities, improving their opportunities for learning about writing and writing instruction (e.g., Lave and Wenger, 1991; Wenger, 1998; Cole, 1996). Research specific to teachers' learning has also found that teachers should be engaged as learners in the areas in which they ask students to learn, but at a level suitable to them (Wilson & Berne, 1999; Desimone, 2009). In other subject areas, researchers argue that experiences which engage teachers as learners, such as solving math problems at the edge of their own understanding and conducting scientific experiments, are particularly effective in helping teachers to incorporate student thinking into their instructional decision-making (Borko, 2004; Cohen, 2011).

Connecting this to my framework for concept development, teachers need activity-in-the-world to ground and make meaning of formalized concepts they might hear about writing and writing instruction. Thus, participating in a community of writers may constitute important activity-in-the-world through which teachers might make sense of writing and writing instruction. Indeed, writing one's self also seems particularly important given the diffidence about writing and the lack of preparation for writing instruction many teachers of both digital and non-digital writing report (Dalton, 2012; Kiuvara et al., 2009; Norman & Spencer, 2005). However, the field has yet to refine this supposition through empirical analysis. Based on the

available evidence, then, I conjecture that participating in a community of writers is beneficial for PTs' concept development about writing instruction, but not sufficient. This design conjecture must be combined with the others presented here to support PTs' learning about intellectually rigorous and equitable writing instruction.

Design Conjecture 2: Preservice teachers should participate in pedagogies of investigation and enactment that move toward ever more authentic approximations of a single teaching practice.

Pedagogies of investigation and *pedagogies of enactment* are a centerpiece of the current instantiation of practice-based teacher education (Core Practices Consortium, 2014; Grossman et al., 2009; Grossman & McDonald, 2008; McDonald, Kazemi & Kavanaugh, 2013). In pedagogies of investigation, PTs are introduced to readings about and representations of teaching practices. With a more expert other, PTs analyze these practices. In pedagogies of enactment, PTs “rehearse and develop discrete components of complex practice” in comparatively low-stakes spaces (Grossman and McDonald, 2008, p. 190). After their enactments within teacher education, PTs enact a core practice with students, and then investigate, analyze, and reflect upon their work again.

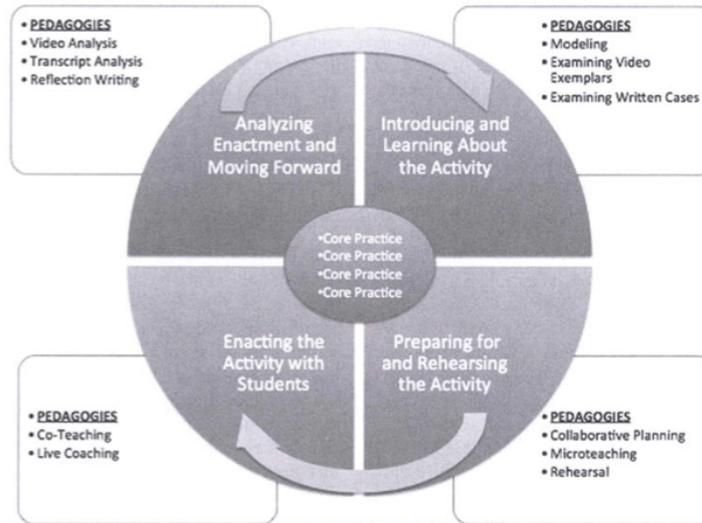


Figure 1. McDonald, Kazemi & Kavanaugh’s (2013) representation of pedagogies of investigation and enactment.

Figure 1, as published in McDonald, Kazemi, and Kavanaugh’s (2013), crystallizes the cyclical nature of pedagogies of investigation and enactment, which may begin in any of the four quadrants shown above, depending on the learning goals of the teacher educator. The pedagogies are intended to guide PTs by “introducing them to the practices as they come to life through meaningful units of instruction, preparing them to actually enact those practices, requiring them to enact those practices with real students in real classrooms, and then returning to their enactment through analysis” (p. 382). In other words, McDonald and her colleagues (2013) suggest that pedagogies of investigation and enactment are iterative opportunities to participate in ever more authentic approximations of a single core teaching practice, punctuated by opportunities to analyze and refine PTs’ work with the support of a more expert other.

Relationship to concept development. These opportunities for PTs to analyze and refine their work can lay the groundwork for supporting PTs’ concept development about particular teaching practices. With the support of a more expert other, pedagogies of investigation and

enactment can provide opportunities for PTs to participate in constant synthesis, negotiation, and refinement of concepts related to their practice. Through pedagogies of investigation, PTs can use observations and representations of core practices to analyze and specify abstract principles, thereby developing concepts. Through pedagogies of enactment, PTs can bring those abstract principles and newly developed concepts into contact with their own activity-in-the-world. Thus, with the support of a more expert other, pedagogies of investigation and enactment can support PTs' concept development, or their continual synthesis, negotiation, and refinement of abstract notions about a single core practice in light of iterative opportunities for activity-in-the-world.

Design Conjecture 3 offers more specific conjectures about how these pedagogies might be designed for concept development. For now, I want to highlight that pedagogies of investigation and enactment, designed around a given core teaching practice, lend themselves well to supporting PTs' development of concepts about that practice. With this in mind, we can focus on which core teaching practice might best facilitate novice teachers' development as ambitious writing instructors.

Design conjecture 2a: Selecting a core teaching practice, making student thinking visible

The question for writing teacher educators, then, is: What focal teaching practices might merit prolonged attention in a teacher education course? According to Grossman, Hammerness and McDonald (2009), a preliminary list of characteristics for core practices stipulates that practices must:

- Occur with high frequency in teaching
- Be able to be enacted by novices across curricula or instructional approaches
- Be approachable for novices
- Allow novices to learn more about students and teaching

- Preserve the integrity and complexity of teaching
- Be research-based and capable of supporting students' learning

In light of principles like these, researchers at the University of Michigan's TeachingWorks (2015) have been developing a set of "high-leverage" teaching practices that cross disciplines and could form the backbone of teacher education program's seeking to support novices' ambitious instruction (TeachingWorks, 2015; Zeichner, 2012). Their list includes practices such as eliciting student thinking, running a class discussion, assessing student work, and communicating with parents. In order to support PTs' concept development about ambitious writing instruction, then, writing teacher educators need to select a teaching practice that is likely to carry with it a number of principles associated with intellectually rigorous and equitable instruction. As Lampert and her colleagues (2013) have pointed out, these principles include "treating students as sense-makers" and "attending to students as individuals and learners." From the content-neutral list provided by TeachingWorks, "eliciting student thinking" emerges as a front-runner, since it implicitly frames students as sense-makers with individual and nuanced learning trajectories.

Yet we need not rely on these content-neutral justifications alone. Although research on effective writing instruction infrequently frames teachers' work in terms of particular teaching practices—or things that people "habitually and consistently" do (McDonald, Kazemi & Kavanaugh, 2013), this research nonetheless buoys *making student thinking visible* as a practice central to ambitious writing instruction. In high quality writing classrooms, students need to develop their own strategies and processes for writing in the context of writing communities (Gallagher, 2011; Graham & Perin, 2007; Ray, 1999; Hayes & Flower, 1980). This means that students need to have access to writerly strategies and processes. These become available when

thinking about writing strategies, concepts, and prescriptions is made visible—students’ own thinking, the thinking of peer writers, and the thinking of more expert writers. Thus, learning to write involves the ability to analyze one’s thinking and the thinking of others to develop strategies for composition, which can only be done when thinking is made visible.

Making students’ thinking visible is also vital because teachers need to make complex decisions about their own and their students’ roles in writing instruction. Advocates for educational equity often call for greater guidance from writing teachers, arguing that teachers must take on a more actively supportive role for historically underserved student populations and students with disabilities (De La Paz & Graham, 2002; Delpit, 1995), but others fear that overly explicit instruction may rob students of opportunities to become active participants in their own learning (Atwell, 1998; Calkins, 1994). In classrooms, this debate is finally settled by the professional judgment of particular teachers, judgments made in light of teachers’ understandings of what particular students on particular days are thinking, both academically and affectively, about writing prescriptions, concepts, strategies, and purposes.

Thus, making students’ thinking visible is vital to intellectually rigorous and equitable approaches to writing instruction. Access to their own and others’ thinking can help students to understand the strategies and processes they and others use as writers, supporting their ability to refine their writing processes. Making students’ thinking visible is also instructionally valuable for teachers (Borko, 2004). Teachers can use students’ thinking to inform professional judgments they must make about their own role(s) in writing instruction on specific days with specific students.

Choosing *making student thinking visible* as a focal teaching practice, then, is supported by cross-disciplinary work undertaken by members of the Core Practices Consortium (2014), by

work on how writers develop, and by research on high quality writing instruction. To understand how *making student thinking visible* can become the focal point of pedagogies of investigation and enactment, we need to deepen our understanding of the design of pedagogies of investigation and enactment, explaining the relationship between “core” practices and “instructional activities,” and then looking to the literature on writing instruction to understand which instructional activities might support writing teachers’ learning.

Design Conjecture 3: Preservice teachers should investigate and enact core practices within and across different instructional activities that “contain” the same practice.

As we have said, researchers in teacher education have called for pedagogies of investigation and enactment to focus on a core teaching practice. They add that core practices need to be investigated and enacted within the context of an “instructional activity” (Lampert et al., 2013; Lampert & Graziani, 2009; McDonald, Kazemi & Kavanaugh, 2013; TeachingWorks, 2015). Instructional activities are recognizable units of instructional work that envelop or “contain” teaching practices, principles, and content knowledge. They “construct authentic episodes of teaching around core practices” (McDonald, Kazemi & Kavanaugh, 2013, p. 382). Thus, core practices are abstracted from the work of teaching until they are “embedded into an instantiation of teaching-in-action,” such as an instructional activity (McDonald, Kazemi & Kavanaugh, 2013, p. 382). Instructional activities, then, are teacher-educator created “containers,” which bring teaching practices to life and in which novices can rehearse the interactional, relational, and improvisational work of teaching.

Relationship to concept development. The idea that core practices are abstractions until they are embedded within teaching-in-action (McDonald, Kazemi & Kavanaugh, 2013) lends itself nicely to reinterpretation in light of what we know about concept development. From the

perspective of concept development, teaching practices entail a number of generalizable abstractions, which Vygotsky (1986) called scientific concepts. These abstractions are made meaningful as they are negotiated, specified, and refined in light of activity-in-the-world. Instructional activities, then, bound and define the nature of that activity-in-the-world so that abstractions about core teaching practices might be brought into productive contact with that activity. Differentiating instructional activities from the backdrop of other classroom events is important, because real classrooms are often spaces that are too complex for novices to productively frame in terms of new concepts (Grossman et al., 2009; Kennedy, 1987).

Because they differentiate aspects of classroom activity, instructional activities are also valuable for supporting PTs in experiencing a core practice in a variety of settings, which is key to robust concept development. According to Smagorinsky, Cook, and Johnson (2003), “without continual reinforcement over time and settings, a concept does not have an opportunity to develop beyond its rudimentary stages” (p. 1424). Thus, to develop concepts, PTs need opportunities to recontextualize the spontaneous and scientific concepts they have derived from their practice. Instructional activities, as a construct, can support PTs’ recontextualization in two ways: vertically, through increasingly authentic approximations of the core practice in the same instructional activity, and horizontally, through approximations of the core practice across different instructional activities at similar levels of authenticity.

In vertical recontextualization, PTs might enact *making student thinking visible* using class discussions as an instructional activity. They could enact the core practice first in a whole class discussion with their fellow PTs, then in a small group of students, and then in a whole class student discussion (Lampert et al., 2013). However, if the teacher educator’s goal is to support PTs in understanding how making students’ thinking visible might be used to support a

number of instructional goals, one might use horizontal recontextualization. As Ball and Forzani (2009) point out, “teaching involves stable and learnable practices” which exist always in an “endemic tension between flexibility and stability.” Part of understanding and refining what is flexible and what is stable in a particular teaching practice, then, involves opportunities to develop concepts about that practice across a variety of instructional activities.

Thus, instructional activities offer an opportunity for PTs to utilize core teaching practices not only in settings of greater and greater authenticity (vertical recontextualization), but also to enact the same teaching practice across different “curricula or instructional approaches” (horizontal recontextualization) (Grossman, Hammerness & McDonald, 2009). Using instructional activities to design cycles of investigation and enactment for both vertical and horizontal recontextualization could “continually reinforce” PTs’ concepts about core teaching practices (Smagorinsky, Cook & Johnson, 2003). To make use of these insights for novice writing teachers, I ask: What instructional activities does the literature on how teachers learn to teach writing suggest?

Design Conjecture 3a: The collaborative assessment of student work may be an instructional activity used to support preservice teachers’ concept development about making student thinking visible, a focal teaching practice.

The literature on how pre- and in-service teachers learn to teach writing frequently highlights the importance of an instructional activity that takes place asynchronously from student-teacher interaction: collaboratively assessing student work. Research on how teachers learn to teach writing suggests that teachers’ facilitated, collaborative assessment of student work supported teachers in creating shared meanings about writing assessment, which—in turn—led to a host of desirable outcomes: The studies revealed improvements in students’ writing

performance (Ancess, Bartlett & Allen, 2007), improved confidence in teaching writing (Limbrick & Knight, 2005; Reid, 2007), knowledge of what development in writing looks like (Limbrick & Knight, 2005), a new understanding that writing assessment should play a role in designing future writing instruction (Aguirre-Muñoz, Park, Amabisca & Boscardin, 2008; Allen, Ort & Schmidt, 2009; Reid, 2007), and observed changes in target writing instruction practices (Aguirre-Muñoz et al., 2008; Allen, Ort & Schmidt, 2009; Strahan & Hedt, 2009). Although these articles do not set out to analyze how teachers' collaborative assessments of student work contributed to their concept development around writing instruction, they agree that these collaborative discussions helped teacher groups create shared meanings—and perhaps concepts—about policy documents.

Thus, although the collaborative assessment of student work is not an instructional activity that takes place in the context of relational work with students, it is the most consistently studied instructional activity in the literature on how teachers learn to teach writing. Findings about its usefulness are generally positive, although they rarely provide in-depth insight into how teachers learned from their collaborative assessments. Nonetheless, I suggest it as a beginning point for the design of writing courses in teacher education because (1) assessing student work is common instructional work for writing teachers; (2) findings suggest that teachers can learn about writing and writing instruction from it; and (3) it requires teachers to draw out and make sense of students' thinking. Thus, the collaborative assessment of student work is an instructional activity that “contains” the core teaching practice of *making student thinking visible*, which I have already identified as central to supporting PTs' professional judgments about what aspects of writing—prescriptions, concepts, strategies, or purposes—they should highlight and with what level and type of guidance from teachers and peers.

Design Conjecture 3b: PTs need opportunities to participate in instructional activities that represent relational and improvisational work with students, such as a writing conference.

Some may object that, despite the benefits of using the collaborative assessment of student work as an instructional activity, it falls short because it does not represent teaching as interactive work with students. Indeed, cycles of investigation and enactment are intended to allow novices to try out the relational and improvisational work of teaching (McDonald, Kazemi & Kavanaugh, 2013). I agree. Unfortunately, the literature on learning to teach writing does not yet consistently investigate instructional activities that happen in the interactional space of the classroom. Only one study, by Aguirre-Muñoz and colleagues (2008), provided information about interactional practices teachers were asked to learn, as well as how their classroom practice changed, but it detailed a set of practices associated with systematic functional linguistics, which is not widely familiar either to writing instructors or advocates of ambitious instruction. Thus, the small body of work on writing teachers' learning provides little guidance on which instructional activities might support writing teachers' development.

Nonetheless, those familiar with process writing instruction know that practitioner-oriented work on the subject has long touted an instructional activity that “contains” the core practice *making student thinking visible*: The writing conference is a long-standing—but interactionally intimidating—component of Writer’s Workshop (e.g., Anderson, C., 2000; Fletcher & Portalupi, 2001; Wilson, 1994). It is an especially enticing choice since a review of research on teaching writing in diverse classrooms suggests that students from non-dominant backgrounds benefit strongly from instructional activities like the writing conference, which allow students to have maximal interaction with teachers around their written work (Ball, 2006). It may also be useful as a starting point for novice writing teachers, because it asks PTs to make

visible and respond to the thinking of only one student at a time, thus reducing potential complexities of *making student thinking visible*.

Other instructional activities, such as running a mini-lesson using a mentor text (Ray, 1999; Noden, 2011; Anderson, J., 2005), also present opportunities for PTs to make student thinking visible, but they include the added challenge of making several students' thinking visible in one discussion, synthesizing that thinking while managing behavioral and time management concerns, and responding to that thinking in ways that push the collective thinking of a class forward. While such work is central to teaching writing and its value cannot be overstated, it is perhaps one developmental step beyond conducting writing conferences, since novices are likely to have little previous experience eliciting and responding to student thinking at all. Of course, without a more substantial research base from which to draw, this is conjectural. Certainly, we need more empirical work on this front, but it seems that rehearsing a writing conference is a reasonable instructional activity that teacher educators might use to support PTs' concept development about the suggested focal teaching practice, *making student thinking visible*.

Discussion and Conclusions

This paper aims to develop design conjectures about how teacher education might support concept development about ambitious writing instruction. Robust concept development is particularly important, because teachers need a handle on routine practices along with strong professional judgment to teach ambitiously. The equitable dimension of ambitious teaching has been of particular concern in research on writing instruction, since some have argued that theories of "natural development" in writing instruction, which undergirded early research on process writing instruction, are inadequate for meeting the needs of students who do not have

implicit access to cultural, linguistic, and literary practices of writers within the culture of power. Specifically, critics argue that teachers influenced by theories of natural development will not provide enough explicit guidance about the writing process to support novice writers, particularly those who hail from non-dominant backgrounds, those whose first language is not English, or those with disabilities. However, writing instruction can also be overly explicit, emphasizing rules for writing prescriptions outside the context of authentic writing and requiring specific formats for written products, which researchers have seen as intellectually deadening work that does not support students' development as writers or as critical thinkers (e.g., Hillocks, 2002). Thus, teachers must find ways to integrate three aspects of writing instruction — prescriptions, concepts, and strategies and purposes—in light of the needs of their students.

In order to support concept development and professional judgment for intellectually rigorous and equitable writing instruction, then, I have drawn upon sociocultural literature on how concepts develop, as well as research on practice-based approaches to teacher education, how teachers learn to teach writing, and what constitutes high quality writing instruction. Based upon a synthesis of these somewhat disparate research bases, I have offered design conjectures for writing methods courses in teacher education. Specifically, writing methods courses should provide opportunities for PTs to:

1. participate in a community of writers;
2. participate in pedagogies of investigation and enactment that move toward ever more authentic approximations of a single teaching practice.
 - a. In writing instruction, the core practice *making student thinking visible* seems promising.
3. investigate and enact this practice within the context of different instructional

activities. Useful instructional activities for writing teachers might include:

- a. the collaborative assessment of student work
- b. work that happens in the interactional space of the classroom, such as writing conferences.

Of course, these design conjectures for supporting PTs' concept development about ambitious writing instruction are currently just that, conjectures. The research base upon which they are founded, particularly in the area of how teachers learn to teach writing, is still thin, and it is not focused around writing practices that teachers undertake in their classrooms with students. Indeed, as a field, we need more research that sheds light on how PTs learn to enact specific instructional activities associated with ambitious writing instruction, such as conducting writing conferences, modeling writing strategies, conducting writing mini-lessons based on mentor texts, or supporting students to become stronger peer reviewers. In particular, the field needs to understand more about how PTs use ambitious writing practices in the context of these instructional activities, and how they negotiate their use of these practices as PTs move into more and more authentic work with students. Indeed, research on practice-based approaches to writing teacher education is still in its early stages, with only one conference symposium of which I am aware (Schutz, Rainey, Iwashyna, Danielson, Dutro et al., 2014).

Thus, the research on which these conjectures are based is small and still developing. It is for this very reason that the synthesis I provide here, and the conjectures I derived from that synthesis, might serve as a useful springboard from which the field can move forward. In particular, these conjectures might help the field move toward a deeper understanding of how PTs develop concepts within pedagogies of investigation and enactment—which is useful for teacher educators and researchers not only in writing instruction, but also across content areas.

For writing teacher educators, these conjectures provide a foundation for understanding how practice-based approaches to teacher education might fit into the landscape of what the field knows about ambitious writing instruction, and ideas for future research. Indeed, I conducted a design study based on these conjectures. Elsewhere, I report on how PTs developed their concepts about the suggested focal teaching practice, *making student thinking visible*, in a writing methods course (Kane, 2015a) and in their student teaching experiences (Kane, 2015b).

This work will provide a basis from which future research can rethink, reframe, and refine teacher educators' understanding of how the design of activities in methods courses influences PTs' concept development, and—ultimately—the professional judgment they will use to teach writing in intellectually rigorous and equitable ways. Supporting PTs' professional judgment for writing instruction is especially important given students' struggles with writing, the increased rigor of writing that the Common Core State Standards expect, the rise of digital literacies, and increasing pressure to teach writing in ways that align with the expectations of state and district tests. With greater access to opportunities for concept development around central writing instruction practices, perhaps preservice writing teachers will enter their own classrooms armed not only with more confidence, but also with more robust concepts about ambitious instructional repertoires for teaching writing.

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CHAPTER III

CONCEPT DEVELOPMENT, PROFESSIONAL JUDGMENT, AND LEARNING TO TEACH: PRESERVICE WRITING TEACHERS' PARTICIPATION IN PEDAGOGIES OF INVESTIGATION AND ENACTMENT

Introduction

Supporting all students to become critical thinkers and problem-solvers is a valued goal in writing instruction research (Hillocks, 2002; Smagorinsky & Whiting, 1995). Yet if teachers are to teach in ways that are equitable and responsive to students, while encouraging intellectually rigorous critical thinking and problem solving, they will need significant opportunities for professional learning (Ball & Cohen, 1999; Lampert & Graziani, 2009). Such pedagogical work, which has been called *ambitious instruction*, requires substantial professional judgment.

The history of writing instruction in the United States increases teachers' need for professional judgment in order to become ambitious writing instructors. Traditionally, writing instruction has focused on teaching grammar and mechanics in specified formats (Hillocks, 2008). Typical writing instruction continues to be infrequent, outdated, and grounded in theories of writing that highlight the importance of format over critical thinking and problem-solving (Applebee & Langer, 2006; 2011). Thus, teachers do not necessarily encounter ambitious writing instruction when they enter the workforce, so they will need a strong and flexible understanding of ambitious instructional practices if these practices are to become more prevalent.

Ball and Cohen (1999) contended that teachers might best be supported to learn to teach ambitiously by learning “about practice in practice.” This call has resonated with those interested in

teachers' preparation and development, ushering in a turn "once again" to practice-based approaches to teacher education (Forzani, 2013; Zeichner, 2012). A hallmark of current practice-based approaches has been the idea of *pedagogies of investigation and enactment*, which are designed around common teaching practices. *Pedagogies of investigation* provide opportunities for novices to observe and analyze representations of particular teaching practices. In *pedagogies of enactment*, novices have opportunities to approximate—both with fellow novices and with students—those same practices (Core Practices Consortium, 2014; Grossman and McDonald, 2008; McDonald, Kazemi & Kavanaugh, 2013). These pedagogies are intended to be used cyclically.

Advantages of a Practice-based Approach

Proponents of practice-based teacher education outline a number of advantages to this approach. Providing representations of expert practice can extend novices' horizons of observation, or what is available for preservice teachers (PTs) to see (Hutchins, 1993), beyond their own expectations and experiences. This has been identified as a particularly salient problem for teachers, since teachers typically have a thirteen-year "apprenticeship of observation" during their own elementary and secondary careers (Lortie, 1975). This apprenticeship provides a consistent, but occluded, view of the work of teaching. Since ambitious approaches to writing instruction continue to be rare, visions of such practice are infrequently available for PTs to use in their sensemaking about their own future writing instruction.

PTs have also been found to make a "narcissistic error," in which they interpret teaching problems through lenses provided by their own experiences as students (Hargreaves, 1994). Such reliance on one's own experience as a student is problematic, because the teaching force is disproportionately white, monolingual, middle class, and female (Sleeter, 2001). Thus, PTs' own experiences of school may differ dramatically from those of the diverse student body whom U.S.

schools serve. In the context of problems created by the apprenticeship of observation and the narcissistic error, it is hoped that practice-based approaches to teacher education might offer PTs greater access to a wider range of representations of practice, as well as opportunities to investigate and enact what has been represented.

Conceptually, pedagogies of investigation and pedagogies of enactment may also formally offer opportunities for teachers to participate in learning processes found outside of school contexts. Lave and Wenger (1991) described tailors learning to make garments piece by piece, decomposing the practice of garment-making—literally—into more manageable pieces. In teaching, ambitious practice is not split up so materially, so proponents of practice-based approaches to teacher education suggest that cycles of investigation and enactment can support PTs by dividing ambitious *practice* into a number of *practices*. This can reduce complexity and allow time for analysis in light of novices' apprenticeships of observation and the concepts about teaching they are learning in teacher education programs (Core Practices Consortium, 2014). Current instantiations of practice-based teacher education, then, might offer greater access to representations of practice, opportunities to decompose and analyze those practices, and time to practice aspects of ambitious teaching in the vernacular sense of trying it out and doing it again.

Concerns about Practice-based Approaches to Teacher Education

However, critics fear that practice-based teacher education will prepare novices to implement a set of actions, but that these approaches will not support the professional judgment that can enable teachers to perform the relational and intellectual work that is ambitious teaching in action (Horn & Campbell, 2015; Zeichner, 2012). Because teaching and learning are inseparable from issues of identity, culture, and relationship (Cole, 1996; Holland, Lachicotte, Skinner & Cain, 1998), core teaching practices may be very different with particular students in particular geographic regions,

districts, schools, classrooms, days of the week, or times of day. Ladson-Billings (2006) argues that equitable instruction is not about “what to do” (p. 30). Instead, equitable teaching is rooted in how teachers think about social contexts, their students, the curriculum, and instruction. In this vein, Zeichner (2012) worries that teachers will be able to implement a set of teaching strategies, but they will not develop relational skills or broad professional vision, which he defines as “deep knowledge of [teachers’] students and of the cultural contexts in which their work is situated” (p. 379). In short, equitable instruction is about developing professional judgment that will allow teachers’ to contextualize and humanize their instructional activity. Critics fear that practice-based approaches to teacher education will only emphasize activity, to the detriment of social justice.

Indeed, Kennedy (1987) defined past practice-based approaches to teacher education as technical-skills pedagogies that overlooked teachers’ need for professional judgment. According to Kennedy (1987), research programs early in the twentieth century, and again in the 1960s and 70s, assumed that “teaching expertise can be broken down into discrete units; each unit can be defined as an observable behavior; and each unit can be taught to prospective teachers independent of the other units” (Kennedy, 1987, p. 135). This “narrow, instrumental” view of teaching overlooked professionals’ decisions about “*whether* and *when* to employ a particular skill” (p. 135; emphasis in original). The fear was—and is—that a focus on developing technicians who are proficient at the implementation of specific teaching “competencies,” “actions,” “tasks,” or “practices” will not support teachers’ ability to innovate or make professional decisions in complex environments, which are required if teachers are to teach writing ambitiously and equitably.

Practice-based Teacher Education: Where Do We Go from Here?

The question, then, is: Does the current instantiation of practice-based approaches to teacher education share some of the pitfalls of these past attempts? In fairness, leaders of this current

movement seem well aware of both past instantiations and their drawbacks (Forzani, 2013). They are concerned with educational equity, and they hope to support PTs in developing the “in-the-moment decision-making that the profession requires” (McDonald, Kazemi & Kavanaugh, 2013). In their work on supporting PTs to enact “instructional activities,” such as rehearsals of class discussions, Lampert and colleagues (2013) are careful to note that instructional activities envelop not only action—which is a traditional, technician-oriented definition of practice—but also teaching principles and content-area knowledge. Members of the Core Practice Consortium (2014) are similarly careful to eschew a definition of practice as purely action-based: “Practice in complex domains involves the orchestration of understanding, skill, relationship, and identity to accomplish particular activities with others in specific environments” (n.p.).

Even Zeichner (2012) allows that current practice-based approaches to teacher education have attempted to define practices at a grain size that is “more usable by new teachers and their teacher educators than either the lists of hundreds of competencies or general standards” that have characterized previous attempts to create practice-based teacher education programs (Zeichner, 2012). He points explicitly to work now underway at the University of Michigan, which is attempting to cull a tightly defined list of “high leverage” practices that are used frequently and across disciplinary bounds (TeachingWorks, 2015). Thus, it is important to give credit where credit is due.

It is also important to note that, as practice-based approaches to teacher education begin to scale up, we must be careful to attend to the ways that these approaches may be taken up without the nuance its founders intended. TeachingWorks, whose work even critics point to as exemplary, defines “high leverage practices” as an “action or task central to teaching.” A less-nuanced uptake of the current instantiation of work on practice-based teacher education, then, might again emphasize

teachers as technical actors. Thinking about practice in this way, without the nuance that many leaders in the field of teacher education intend, re-opens the door to narrow, technical definitions of teaching that de-professionalize teaching and shortchange teachers' opportunities for professional learning (Cochran-Smith & Lytle, 1999).

Such a narrow understanding of teaching practice is supported by traditional, vernacular definitions of *practice*, which highlight action as the obverse of theory and principle, and the traditionally low-prestige of teaching as a profession, which has too-often defined teachers as practitioners and researchers as theoreticians (Lampert, 2010). Perhaps most distressingly, less nuanced implementations of practice-based approaches to teacher education run the risk of failing to support teachers in their learning to teach well with real students, who hail from diverse racial, socioeconomic, linguistic, and cultural backgrounds, to name only a few. In short, the field needs to better understand how this current instantiation of practice-based approaches to teacher education, which advocates the use of pedagogies of investigation and enactment, might support PTs' learning not as technicians, but as professionals consistently making judgments in the interest of equitable approaches to intellectually rigorous instruction.

To better understand the learning processes that PTs undertook when they participated in cycles of pedagogies of investigation and enactment around a particular teaching practice. I asked:

How do cycles of investigation and enactment support preservice writing teachers' opportunities for professional learning about a core teaching practice?

This analysis comes out of a design study (Sandoval, 2004) in a writing methods course. It contributes an understanding of how current instantiations of practice-based teacher education may support opportunities for professional learning, professional judgment, and concept development in

teaching. Findings have implications for how pedagogies of investigation and enactment may be designed to support PTs in learning about ambitious teaching practice.

Conceptual Framework

I predicate this investigation on sociocultural theories of learning, which define learning as a change in identity and participation in practice within particular contexts (Holland et al., 1998; Lave & Wenger, 1991). Sociocultural theories are useful for this analysis, because their emphasis on context allows an analytic focus on how designed learning environments, such as the cycles of investigation and enactment, contribute to PTs' opportunities to learn. In the sections that follow, I define opportunities to learn before unpacking their relationship to PTs' participation in cycles of investigation and enactment of an ambitious teaching practice, *making student thinking visible*.

Opportunities for Professional Learning

According to sociocultural theories of learning, understanding is always partial, developing in relationship to particular contexts (Lave, 1996). Thus, in this analysis, I investigated not what teachers learned, but what they had opportunities to learn within particular contexts. Greeno and Gresalfi (2008) have defined opportunities to learn as “affordances for changing participation and practice.” Therefore, understanding PTs' development involves “hypotheses about affordances that are available to the learner to participate in particular ways” (p. 172). In their studies of in-service teachers' work, Horn and colleagues (Horn & Kane, 2015; Horn, Kane, and Wilson, 2015; Hall & Horn, 2012) further defined opportunities to learn as (1) the conceptual resources that teachers' conversations support, and (2) how teachers' conversations mobilize them for future work.

Although, as a teacher educator, I hope to support PTs' learning around ambitious practices, PTs' talk can mobilize them to develop conceptual resources that align with traditional or ambitious forms of practice—or any combination thereof, and these are still analytically viewed as OTL.

Opportunities to Learn in Context: Figured Worlds

PTs' opportunities for learning arise in particular contexts, which Holland and her colleagues (1998) have called a *figured world*. A figured world is a:

socially and culturally constructed realm of interpretation in which particular characters and actors are recognized, significance is assigned to certain acts, and particular outcomes are valued over others. (Holland et al., 1998, p. 52)

Figured worlds are “as if” worlds, in which actors participate as if some cultural and historical discourses and practices are more beneficial, logical, or useful than others. In figured worlds of writing instruction, divergent discourses and practices have emerged. For instance, university-based researchers often critique the five-paragraph essay as formulaic, stifling both critical thinking and creativity. However, K-12 teachers often value it as a support for passing high stakes assessments (Hillocks, 2002; Johnson, Smagorinsky, Thompson & Frye, 2003; Nunnally, 1991; Wesley, 2000). These differences position PTs in particular ways within the figured worlds in which they learn to teach. In this analysis, PTs participated in cycles of investigation and enactment in the context of the figured world of their writing methods course. As a figured world, this methods course valued ways of talking about students, teaching, and writing that aligned with many precepts of ambitious instruction, which positioned individual PTs in particular ways and therefore influenced their opportunities to learn—that is, the conceptual resources that PTs developed and their mobilizations for future work.

Cycles of Investigation and Enactment as Activity Structures

Theoretically speaking, each cycle of investigation and enactment was an activity structure within the figured world of the writing methods course (Horn & Kane, 2015; Sandoval, 2004). From the perspective of design research, activity structures are tools that are introduced into the designed

environment which include how an academic task is organized and the roles that PTs are asked to take on within those structures (Sandoval, 2004).

Activity structures are influential to PTs' opportunities to learn, because—like figured worlds—they carry with them particular epistemics (Horn & Kane, 2015). Activity structures communicate an epistemic stance on what there is to know, how to know it, and why it is of value, because participation in different forms of work (activity structures) is only sensible from the viewpoint of particular, valued discourses and practices (Hall & Horn, 2012). If one values writing as the reproduction of a specific format, then asking students to fill out an organizational template becomes a valid activity structure (e.g., Whitney, Blau, Bright, Cabe, Dewar et al., 2008). On the other hand, asking students to draft and revise with a partner would be a valid activity structure only if one sees writing as a collaborative, problem-solving process. As in figured worlds, activity structures position PTs in particular ways with respect to their implied epistemics, which influence the conceptual resources PTs develop and the ways that they are mobilized for future work.

Thus, this analysis seeks to understand how activity structures embedded within an ambitious figured world of writing instruction supported PTs' opportunities to learn about an ambitious instructional practice. These activity structures (cycles of investigation and enactment) are suggested by research on practice-based teacher education, and it is hoped that they will support PTs in developing conceptual resources that mobilize novices' professional judgment. In the following section, I describe how we might understand PTs' development of conceptual resources and mobilizations for future work.

Concept Development within Figured Worlds

Vygotsky (1986) theorized concepts develop through an interplay between the particular, which he called spontaneous concepts, and the general, which he called scientific concepts.

Spontaneous concepts arise from practice. They are “generalizations learned informally through practical activity and everyday social interaction” (Smagorinsky, Cook & Johnson, 2003, p. 1403). As generalizations, spontaneous concepts necessarily frame practice, which foregrounds some aspects of activity-in-the-world while deemphasizing others. Thus, spontaneous concepts are an individual’s framings of practice. Scientific concepts, on the other hand, are sometimes translated as “academic concepts,” because Vygotsky saw them as arising from formal places of learning, such as schools. It may sound odd to refer to a concept in teaching, such as *cooperative groups* or *ambitious instruction*, as “scientific²,” but what is important to highlight here is that scientific concepts are generalizable abstractions used to frame and reframe spontaneous concepts. Thus, spontaneous and scientific concepts work in dialectical relation to one another.

Because of the interdependent relationship between spontaneous and scientific concepts, practice is integral to concept development. Practice is “central to the development of spontaneous concepts and implicated in the development of scientific concepts,” because people create spontaneous concepts by framing activity-in-the-world, and scientific concepts are generalizable abstractions used to reframe spontaneous concepts (Smagorinsky, Cook & Johnson, 2003, p. 1406). For instance, in a comparative case study, Whitney and her colleagues (2008) studied two different teachers’ practice as writing instructors. In Ms. Gonzalez’s classroom, students read one another’s work, searching for mechanical errors. By framing this practice as “peer editing,” Ms. Gonzalez evinced a spontaneous concept in which the goal of peer editing was proofreading. In Ms. Barrera’s comparison classroom, students discussed their writing and engaged with one another’s ideas as authors. Ms. Barrera also framed her practice as “peer editing,” so she manifested a different

² I elected to continue using *scientific* rather than *academic* for clarity, since one of the findings from this analysis centers on *academic* versus *affective* thinking.

spontaneous concept. For her, peer editing was an opportunity to “build an author within [students]” (p. 216).

In order to support teachers’ concept development about peer editing, then, teachers’ spontaneous concepts about peer editing would need to be brought into contact with scientific concepts about not only peer editing, but also about ambitious forms of writing instruction more generally. For instance, to help a teacher move from a spontaneous concept in which peer editing is about “catching” errors, as was the case for Ms. Gonzalez (Whitney et al., 2008), toward a more ambitious understanding of process writing instruction, a scientific concept needs to be brought into dialogue with this spontaneous concept. One might introduce the idea that writers need opportunities to discuss—not just correct—their writing, and these discussions should involve issues related to ideas, organization, and voice in addition to mechanics (Spandel, 2013). Thus, scientific concepts are generalizable abstractions that frame and reframe spontaneous concepts, which arise from practice. To build more robust concepts, scientific and spontaneous concepts are dialectically negotiated.

Yet one might argue that Ms. Barrera, who understood peer editing as an opportunity to “build an author within” students, had more than a spontaneous concept of peer editing. She brought to her work robust concepts about ambitious approaches to process writing instruction, which were informed by a number of scientific concepts. Indeed, this is the essence of Whitney and her colleagues’ (2008) argument.

Such an argument points up two things. The first is that it is analytically difficult to differentiate between scientific and spontaneous concepts, because they are in constant conversation with one another as more robust concepts develop. The important distinguishing factor is that spontaneous concepts arise from practice and are useful for making sense of particular situations, but they will not necessarily be useful across contexts. Scientific concepts, on the other hand, involve

generalizable principles, but they are not meaningful without input provided by spontaneous concepts. As Vygotsky is careful to point out, without practice, scientific concepts like peer editing are nothing but “dead verbalisms.”

The second—and more theoretically important—point is that, as our example of two teachers’ different uses of peer editing suggests, concept development is strongly influenced by how teachers represent practice. Spontaneous concepts are not straightforward renditions of what “actually” happened. Classrooms are intensely complex environments, so there are many ways to depict teaching work. Instead, research on teachers’ learning has found that individuals represent and frame their practice in terms of their epistemic stances (Hall & Horn, 2012; Horn & Kane, 2015; Horn, Kane & Wilson, 2015). For instance, Horn (2007) found that teachers who understood mathematics as the completion of procedural algorithms represented students as “fast” or “slow,” while those with an epistemic stance that defined mathematics as problem-solving described “slow” students as potentially careful, systematic thinkers, which the discipline requires. Thus, spontaneous concepts are framings of practice made in light of one’s epistemic stance—or a stance on what there is to know, how to know it, and why it is of value.

This is particularly important in studies of PTs, since novices have been found to notice different aspects of classroom interaction than more expert teachers (Sherin & van Es, 2009), and epistemic stances differ across teachers at varying levels of accomplishment in ambitious forms of instruction (Horn & Kane, 2015). In Horn and Kane’s (2015) analysis, teachers whose practice better approximated the precepts of ambitious instruction represented their practice in ways that considered relationships between students, teaching, and content ecologically. Less accomplished teachers, however, saw teachers, students, and content as less interrelated.

In short, novices are likely to frame the complexities of classroom practices differently than

do their more accomplished peers. They may not make connections across students, teaching, and writing when they frame spontaneous concepts, which means that they may begin with comparatively impoverished spontaneous concepts to use in dialectic relation to scientific concepts. This means that even when scientific concepts are exquisite encapsulations of ambitious teaching, PTs may not be able to use them to create rich conceptual understandings of ambitious writing instruction, because their spontaneous concepts may not frame teaching practice in terms of the complex interrelations between teaching, students, and writing. Thus, teachers frame and represent instruction in terms of their epistemic stances, which influences the spontaneous concepts they use to make sense of the world.

To bring this argument full circle, I will add that the epistemic stances teachers use to frame spontaneous concepts are themselves influenced by the discourses and practices that characterize particular figured worlds. This means that, for PTs, the figured worlds in which they learn to teach writing influence their concept development, as do the activity structures in which they find themselves. In this analysis, PTs' figured world of writing instruction was a writing methods course intended for secondary English/Language Arts teachers. The activity structures were designed cycles of investigation and enactment, centered around an ambitious teaching practice, *making student thinking visible* (MSTV).

Mobilizing for Future Work

We have discussed concept development in teaching, which is one aspect of what it means to understand PTs' opportunities for professional learning. The second aspect of teachers' opportunities to learn is how teachers are mobilized for future work. To understand this, we will borrow from Kennedy's (1987) review of how preparation programs in other fields—such as medicine, law, business, and architecture—have stood to support professional expertise. Her findings have

implications for whether and how pedagogies of investigation and enactment can mobilize PTs' professional judgment.

Kennedy (1987) distinguished between activity structures in preparation programs that support prescriptive expertise from those that support deliberate action. Prescriptive expertise involves learning and understanding theory and codified principles from a discipline. Deliberate action, on the other hand, may be understood as a close synonym for professional judgment, in which PTs use concepts about ambitious writing instruction interpretively and in response to the particulars of classroom situations. Importantly, both prescriptive expertise and deliberate action involve concept development, and both are necessary for novices across professional fields. It is important to understand the difference, however, so that the field can better how PTs are most frequently mobilized for future work.

Because teachers are more commonly mobilized toward prescriptive expertise, I will begin there. Pedagogies that mobilize professionals toward prescriptive expertise prescribe either a procedure or a paradigm for responding to a situation, based on scientific concepts from the discipline. Novices are taught theory and codified principles from the discipline, and then expected to apply these principles in practice. At their best, prescriptive pedagogies can support training for a broad range of work, since the focus is on general principles (scientific concepts) that may be applicable in a number of situations. Indeed, the depth of theoretical principles that professional disciplines are said to possess has historically been seen as a mark of intellectual prestige. This model is also intended to guide novices in problem solving and making decisions in ambiguous situations (Kennedy, 1987).

However, this goal has proven to be elusive. As we have described in the section on concept development, novices will not necessarily know how to recognize when to apply a given theoretical

principle, since “cases do not present themselves to practitioners as examples of general principles, but instead force practitioners to ferret out the principles from the case” (Kennedy, 1987, p. 142). Also, social situations are not unidimensional, so several principles may apply in a given situation. Novices must learn to select from a number of potentially applicable principles and to use them productively in concert. In the language of concept development, activity-in-the-world must be framed as spontaneous concepts before it can be negotiated with scientific concepts to develop more robust conceptual resources. Pedagogies that support prescriptive expertise present novices with disciplinary problems that have been framed *a priori*. The role of the PT in prescriptive expertise, then, is to solve problems that have already been set.

For teachers, problem solving is necessary, but not sufficient. Novices must also learn to set problems. This is the role of pedagogies that mobilize teachers toward deliberate action: The job of the professional school is to transform students into people capable of deliberation about, and critical examination of, their own actions and the consequences of those actions. This view neither denies the existence of codified general principles, nor denies that such principles contribute to practice. But it assumes their role is interpretive rather than prescriptive (Kennedy, 1987, p. 148). Therefore, prescriptive expertise is about knowing how to recognize aspects of practice to which a given scientific concept might apply. It is a complex matching game, which answers the question, “What is this a case of?” Deliberate action, on the other hand, is about making decisions about how concepts might be used flexibly and in concert to teach writing in intellectually rigorous and equitable ways. As Kennedy (1987) notes, interpretive expertise is about problem *setting* in addition to *problem solving*.

Like prescriptive pedagogies, pedagogies intended to support interpretive expertise have drawbacks. As Kennedy points out, “evidence suggests that, without training, people are not very

careful when inducing principles from experience” (p. 150). This is a particularly sharp double-edged sword in teacher education, because of the dual tendencies toward relying upon one’s apprenticeship of observation and the narcissistic error (Grossman, Smagorinsky & Valencia, 1999; Hargreaves, 1994; Lortie, 1975). Also, because deliberate actors develop goals in response to situations, it is difficult to make distinctions about the most beneficial course(s) of action. Finally—and most pressing for current concerns about practice-based approaches to teacher education—it can be difficult to distinguish deliberate action pedagogies from technical-skills pedagogies.

Nonetheless, as Kennedy (1987) notes, “teacher education has felt the continuing strain of a minority point of view that expertise consists of deliberate action rather than a set of technical skills” (p. 149). She traces explications of deliberate action pedagogies to Dewey (1904/1965), whose laboratory experiences were designed not to encourage “correct” procedure, but rather a thoughtful analysis of professional work. This is the goal toward which both critics and advocates of practice-based teacher education are working (McDonald, Kazemi & Kavanaugh, 2013; Zeichner, 2012).

Summary of Conceptual Framework

By analyzing PTs’ concept development in cycles of investigation and enactment, we can begin to differentiate between opportunities for learning which mobilize PTs toward prescriptive expertise, in which novices solve problems that have already been set, and those that mobilize them toward interpretive expertise, in which PTs must set instructional problems in order to solve them. The sociocultural construct opportunities to learn is useful for this analysis, because it highlights that concepts develop in relation to influential contexts. As contexts, both figured worlds and the activity structures embedded within them are characterized by particular cultural and historical discourses and practices, which influence how PTs are positioned, the scientific concepts available to PTs, and the epistemic stances that help PTs to frame spontaneous concepts about activity-in-the-world. Thus,

figured worlds and activity structures influence PTs' opportunities to learn—the conceptual resources PTs develop and the ways that PTs are mobilized for future work.

Study Design and Methods

In order to better understand my analytic methods, I first provide a brief overview of the study design. Having this information in view will support the reader in understanding the data I collected and how it was analyzed.

Research Context and Participants

This study was conducted in two paired teacher education courses at a university in the mid-southern region of the United States. The focal courses were a writing methods course, intended for those with a major (undergraduates) or specialty (teacher certification masters students) in English Education, and a practicum course. Those seeking licensure were required to take both courses contemporaneously. This analysis focuses on seven PTs seeking licensure and enrolled in both courses. Six of these PTs were undergraduates in their senior year. One was a Masters student, who graduated from a different university the previous year. None had previous teaching experience.

The writing methods course met twice a week for one hour and fifteen minutes. For their practica, PT spent one morning a week in classrooms where, the following semester, they would complete their student teaching appointments. They also met as a class with the methods course instructor once a week for three hours.

Researcher Role

Within this context, I acted as the teaching assistant in the writing methods course and intermittent assistant in the practicum course. I attended every methods course class meeting and selected practicum course meetings, where I led discussions intended to support PTs' understanding of class readings and designed cycles of investigation and enactment around a focal ambitious

teaching practice. I also acted, in the fall, as a liaison between the university and four PTs' practicum and student teaching sites. In the spring, I was the official university mentor for two PTs as they completed their student teaching placements. Thus, I acted as a participant-observer (Spradley, 1980), who built relationships with PTs and had firsthand involvement in and knowledge of the unique social world of PTs' methods course, practicum, and student teaching experiences. The disadvantage—from a research perspective—was that I either directly evaluated PTs' work or was closely aligned with others who did. I managed this tension by giving feedback, but not grades, on PTs' cycles of investigation and enactment.

Design Choices: Selecting a Core Teaching Practice, Making Student Thinking Visible

This analysis focuses on three cycles of investigation and enactment, each of which was designed around the same core practice: *making student thinking visible* (MSTV). This practice was selected because, despite some disagreements within research on accomplished writing instruction, leading theories commonly reject lecture-based approaches to writing instruction, see writing as a process, and share a “commitment to empowering, meaningful learning that happens in a constructivist, student-centered classroom” (Smagorinsky & Whiting, 1995; Kane, 2013a; 2015a). MSTV can reveal—to both students and their teachers—students' developing understandings of composing strategies and processes (Kane, 2015a; 2015c), allowing teachers to “attend to students as individuals and learners” and “treat students as sensemakers,” which are defining characteristics of *ambitious instruction* (Lampert et al., 2013; TeachingWorks, 2015). Thus, MSTV is a central practice for novice teachers learning to become ambitious instructors of writing.

Design Choices: Cycles of Investigation and Enactment

In order to support the development of core practices, Lampert and her colleagues (2013) have suggested embedding a core teaching practice within activity structures they have called

instructional activities, which serve as “containers” for teaching practices, principles, and content knowledge. From a sociocultural perspective, activity structures like *instructional activities* will necessarily influence the construction of teaching practices. Thus, it was my design conjecture that participating in a series of enactments of different instructional activities in which the “same” core practice was embedded would provide PTs with multiple opportunities to frame spontaneous concepts and to ground their scientific concepts and about the core teaching practice across instructional activities. The idea was that repeated cycles of investigating and enacting a practice in different teaching contexts would support teachers as they developed more robust concepts about instructional activities, core practices of ambitious writing instruction, and strategies for recontextualizing scientific concepts associated with core practices (Kane, 2015a).

Thus, each cycle of investigation and enactment consisted of an *instructional activity* in which the focal teaching practice, MSTV, could be embedded. These cycles were selected based on a review of the literature on how teachers learn to teach writing (Kane, 2013; Kane, 2015a). They were designed to progress across a developmental trajectory. In Cycle 1, PTs would make the thinking of an individual student visible by analyzing his work in collaboration with their peers. In Cycle 2, PTs would still be making the thinking of an individual student visible, but they would do so in interaction with an actor portraying a student in a simulated writing conference. Thus, PTs would be required to make student thinking visible based on both the student’s writing and their interaction with a simulated student. In Cycle 3, PTs would collaboratively analyze a set of student work. Here, the interactional demands of the work would be mitigated, but the difficulty level would increase, because PTs would need to make the thinking of several students visible. PTs would need to synthesize across their findings to make decisions about how to organize their writing instruction in the future. Table 1 describes each cycle and its placement within the developmental trajectory. A

table explaining the rationale for major design decisions, such as the genre of student work to be analyzed, is included in Appendix A.

Description of Pedagogies of Investigation and Enactment Cycles			
Cycle	Pre-Investigation(s)	Enactment	Post-Investigation(s)
Cycle 1: Collaborative Assessment of an Individual Student's Writing	<ul style="list-style-type: none"> • Reading: Spandel's <i>6 Traits</i> • Discussion: Defining and clarifying traits with examples • Modeling: (Class+TA) Analyze sample student essay--What does student understand about writing? What does he have yet to understand? 	<ul style="list-style-type: none"> • In small groups, PTs read and assessed a published narrative essay by a middle school student. • PTs collaboratively determined what the student understood about writing and had yet to understand in terms of the 6 Traits. 	<ul style="list-style-type: none"> • Exit Slips: What important insights did your group come to about students, writing, and writing instruction? • Written explanations of what the student understood, what they had yet to understand, and evidence from student work for those claims • Written feedback to the student: What student did well, what student needs to work on.
Cycle 2: Writing Conference with a Simulated Student (SIM)	<ul style="list-style-type: none"> • Reading: Anderson's <i>How's It Going?</i> • Modeling: Nancy Atwell videos of writing conferences • Discussion: What did Atwell do? How does this relate to the main goals of writing conferences, as outlined by Anderson? 	<ul style="list-style-type: none"> • PTs received student essay and description of student prior to the conference. PTs then had 5-7 minutes to confer with an actor portraying a struggling high school writer. Their goal was to support the student's improvement as a writer. • Simulated student was largely unresponsive, did not differentiate between revision and editing, and did not identify with the discipline: "I'm not a writer." 	<ul style="list-style-type: none"> • Raw Debriefs: PTs reflected on how they felt after SIM, what they expected and what was unexpected • Class Debrief: With TA, PTs discussed struggles and successes, viewed excerpts of three classmates' conferences • Written Debriefs: PTs wrote about a moment of struggle in the SIMs, how that struggle was connected to pedagogical theory, and what they planned to do in the future as teachers.

<p style="text-align: center;">Cycle 3: Collaborative Assessment of a Set of Student Work</p>	<p>Same as Cycle 1, plus post-investigations from Cycle 1 and Cycle 2.</p>	<ul style="list-style-type: none"> • PTs received a set of blinded student essays, written by seventh graders for Tennessee's end-of-course test, as well as the test prompt. • PTs were told they would be teaching this group the following year, so they were to analyze what students understood and had yet to understand about writing. • PTs then made decisions about three important foci for their future writing instruction, as well as how they would prioritize these goals. 	<ul style="list-style-type: none"> • Exit Slips: What important insights did your group come to about students, writing, and writing instruction? • Written explanations of what the students understood, what they had yet to understand, and evidence from students' work for those claims • Written explanation of three foci for future writing instruction, and how PTs would prioritize these foci.
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Table 1. A description of the three cycles of investigation and enactment. Preservice teacher is abbreviated PT. TA stands for “teaching assistant,” who is also the author of this paper.

Enactments commonly and uncommonly used in teacher education. It is important to highlight that Cycles 1 and 3, which are both collaborative assessments of student work, are often used in university-based teacher education courses. Collaborative assessments of student work are also frequently suggested in the literature on how teachers learn to teach writing (Aquirre-Muñoz, Park, Amabisca & Boscardin, 2008; Baildon & Damico, 2008; Kane, 2013; Limbrick & Knight, 2005). A simulated writing conference (Cycle 2), however, is a new pedagogy in teacher education. Patterned after a model in medical education, simulations are designed to prepare novices for the challenges of interactional work (Dotger, 2015; Self, 2015). In medicine, for instance, novice doctors simulate a clinical diagnosis in which doctors question simulated patients about their ailments.

Dotger (2013) and his colleagues at Syracuse University are now designing simulations for use in teacher education, and we used two of them in this methods course. Both involved parent-teacher conferences: one was about a student who was not turning in his work and one was about a student who had plagiarized, respectively. These first two simulations are not a focus of the current

analysis (see Self & Kane, 2015), but they are important to mention here because they gave PTs experience with the simulations as an activity in teacher education prior to their participation in the simulated writing conference. I used Dotger's (2013) published simulations, in addition to the class' experience with simulations, to inform my design of the writing conference simulation. For all simulations, I partnered with the Center for Experiential Learning and Assessment (CELA) at Vanderbilt University's Medical University to train actors. Each simulation was recorded by two cameras installed on the ceiling of the simulation rooms at CELA, which PTs could access via a secure online server in order to review and analyze their work in their simulations.

Analytic Methods

Selecting Focal Data

Table 2 outlines the data that I collected for each cycle. Boxes highlighted in gray, with black text, are those that were selected as focal data for this analysis. Boxes in white show secondary data, which was referenced to refine and triangulate my findings.

Data Collection and Analysis Plan			
Cycle	Pre-Investigation(s)	Enactment	Post-Investigation(s)
Cycle 1: Collaborative Assessment of an Individual Student's Writing	<ul style="list-style-type: none"> • Video of relevant class periods • All supporting class materials • Memos written the day of 	<ul style="list-style-type: none"> • Audio and video of small group discussions • Transcripts of audio • Memos written the day of 	<ul style="list-style-type: none"> • Exit Slips: What important insights did your group come to about students, writing, and writing instruction? • Written explanations of what the student understood, what student had yet to understand, and evidence from student work for those claims • Written feedback to the student: What student did well, What student needs to work on.
Cycle 2: Writing conference with a simulated student (SIM)	<ul style="list-style-type: none"> • Video of relevant class periods • All supporting class materials • Memos written the day of 	<ul style="list-style-type: none"> • Video of simulated writing conferences • All supporting class materials • Memos written the day of 	<ul style="list-style-type: none"> • Video of raw debriefs • Video of class debrief • Written debriefs • Memos written the day of
Cycle 3: Collaborative Assessment of a Set of Student Work	<ul style="list-style-type: none"> • Video of relevant class periods • All supporting class materials • Memos written the day of 	<ul style="list-style-type: none"> • Audio and video of small group discussions • Transcripts of audio • Memos written the day of 	<ul style="list-style-type: none"> • Exit Slips: What important insights did your group come to about students, writing, and writing instruction? • Written explanations of what the students understood, what they had yet to understand, and evidence from students' work for those claims • Written explanation of three foci for future writing instruction, and how PTs would organize these foci.

Table 2. Data Collection and Analysis Plan. Gray boxes highlight focal data for this analysis.

Some may be surprised that my analysis plan did not use video of PTs' writing conference simulations as focal data. However, because I was interested in how these cycles of investigation and enactment supported PTs' opportunities to learn, my coding scheme and discourse analysis were principally interested in how PTs developed concepts through their enactments. In all cycles, then, I focused on data that revealed how PTs framed spontaneous and scientific concepts about students' thinking. Thus, though I familiarized myself deeply with these videos, I did not code them.

Coding for Concept Development

Because I am interested in PTs' opportunities for professional learning in particular activity structures, I needed codes for that would help me understand PTs' concept development and mobilizations for future work in light of particular activity structures and figured worlds of writing instruction. Horn and Kane (2015; Horn, Kane & Wilson, 2015) developed a coding scheme for understanding teachers' opportunities for learning in their collaborative conversations. I have adapted that framework to help me understand PTs' concept development and operationalize their scientific and spontaneous concepts. In this model, epistemic stances become manifest through activity structures, problem frames, epistemic claims, and representations of practice. I coded for the final three in this analysis. Activity structures did not need to be coded, since each cycle of investigation and enactment was an activity structure. Definitions, examples, and purposes of all my codes appear at the end of this section in Table 3.

I began by coding for *representations of practice*, which are instances of talk in which PTs describe or narrate classroom events (Horn, 2010; Horn & Kane, 2015). *Representations of practice* reveal spontaneous concepts, because PTs' descriptions and narrations expose implicit frames that PTs used to make sense of students' thinking. I coded *problem frames* for the same reason: *Problem frames* provide a window into PTs' spontaneous concepts, because they reveal which aspects of student thinking PTs viewed as problematic. Finally, I coded for *epistemic claims*, which are bald declarations about students, teaching, or writing (Horn & Kane, 2015). These claims provide insight into concept development, because they reveal generalizations and abstractions that PTs used to make sense of their interactions with a simulated student or with students' work.

As was mentioned in the conceptual framework, it can be difficult to distinguish between statements that index spontaneous concepts and those that reveal scientific concepts, because

spontaneous and scientific concepts exist in dialectical relation to one another, and concepts are—by their very nature—interrelated. If they were not interrelated, they would not be useful (Vygotsky, 1986). Thus, I wrote narrative memos, attending to PTs' use of epistemic claims that referred to particular instances (spontaneous concepts) and those that made claims to universality (scientific concepts).

Even this distinction proved quixotic, however. So, as is common in interpretive research (Strauss & Corbin, 1998), I developed a new code: *reframings*. *Reframings* occurred when participants brought new, refined, or competing *epistemic claims* to bear on the same or similar *representations of practice*. *Reframings* were particularly important to this analysis, because they revealed instances where participants discursively brought new or different concepts into their sensemaking. In short, *reframings* mirror the dialogism inherent to concept development.

Code	Definition	Example	Purpose
Epistemic Claims	<i>Bald assertions about teaching, students, or writing</i>	Like, they're really good analogies. (Maddie, Cycle 1)	To understand the generalizations and abstraction that PTs connected to their practice
Problem Frames	<i>Participants' framings of instructional problems</i>	If they don't want to express their voice, I can't make them. (Donnell, Cycle 2)	To understand how PTs framed spontaneous concepts about their instruction
Representations of Practice	<i>Descriptions of real or imagined classroom activity</i>	What Larry did, was he just created a character... (Robert, Cycle 3)	To understand which aspects of practice PTs used to create spontaneous concepts
Reframings	<i>When participants revised epistemic claims they used to make sense of representations of practice</i>	Maddie: Like, they're good analogies. Celia: Would that be an Idea? (Cycle 1)	To understand PTs' developing use of generalizations and abstractions they employed to make sense of representations of practice

Table 3. Analytic codes, examples, and purposes.

Preservice Teachers' Concept Development across Cycles of Investigation and Enactment

Having identified *reframings* within each cycle, I used grounded theory (Glaser & Strauss, 1967) to categorize the ways that student thinking was framed across cycles. I then drew out representative excerpts of the most typical constructions of student thinking from each cycle. I used the constant comparative method (Miles & Huberman, 1994; Strauss & Corbin, 1998) to compare within and across these representative excerpts to understand the conceptual resources that these framings of student thinking provided. To refine my understanding of how participation in each cycle mobilized PTs for future work, I made comparisons between these representative excerpts from each cycle and Kennedy's (1987) work on prescriptive expertise and deliberate action.

Findings

PTs' framed the core teaching practice, MSTV, differently across cycles of investigation and enactment, and these framings influenced the types of conceptual resources that PTs developed, as well as the ways that PTs were mobilized for future work. In their collaborative assessments of student work, PTs framed student thinking in terms of academic thinking: PTs identified writing tools, writing concepts, and writing strategies that students used. In the simulated writing conference, PTs framed student thinking more affectively, in terms of students' motivations for writing and their perspectives on the world. Thus, PTs had access to different spontaneous concepts across cycles.

Combined with the activity structures, these spontaneous concepts made some scientific concepts about students, teaching, and writing more relevant than others in particular cycles, and thus PTs developed different concepts about writing instruction across the three cycles of investigation and enactment. The collaborative assessments of student work (Cycles 1 and 3) supported PTs in their development of concepts related to Spandel's (2013) "six traits," such as Ideas, Organization, and Voice. The simulated writing conference (Cycle 2), however, supported PTs in developing concepts about how to balance students' affective and academic needs.

As a result of the different conceptual resources they supported, these cycles mobilized PTs for future work in different ways. The collaborative assessments of student work mobilized PTs toward prescriptive expertise, since they asked PTs to solve problems that were already set. PTs had to formulate spontaneous concepts about students' thinking in light of an activity structure and problem frame that pre-defined students' thinking as academic. The simulated writing conference, on the other hand, supported PTs toward deliberate action. PTs needed to make decisions about how to frame their spontaneous concepts in order to select among a number of possible scientific

concepts. Thus, PTs were involved in both problem *solving* and problem *setting*, because they had to define the problem and solve it simultaneously. Hence, cycles of investigation and enactment with a longer history in teacher education, such as the collaborative assessments of student work, mobilized PTs toward the development of prescriptive expertise, whereas the simulation, which is new to the field of teacher education, supported PTs in moving toward deliberate action, which is key to professional judgment.

Cycles 1 and 3: Collaborative Analysis of Student Work

Within the collaborative assessments of student work (Cycles 1 and 3), PTs were asked to analyze student writing to make claims about what students understood about writing and what students had yet to understand about writing, using the “six traits” vocabulary provided by Spandel’s *Creating Writers: 6 Traits, Process, Workshop, and Literature*. The six traits include Ideas, Organization, Voice, Word Choice, Sentence Fluency, and Conventions. Although there were small differences across these two cycles, PTs framed similar spontaneous concepts about student thinking within them, so they developed similar conceptual resources and were mobilized for future work in similar way. Thus, I discuss Cycle 1 and 3 as a set here.

Framing student thinking: Spontaneous concepts about students’ academic thinking. In their collaborative assessments of student work, PTs framed spontaneous concepts about student thinking in terms of writing tools, writing concepts, and writing strategies that students used. Thus, PTs consistently framed students’ thinking as academic. Robert and Celia, both pseudonyms, provide an example of framing students’ thinking in terms of students’ writing strategies. They discussed a letter written by Larry, a pseudonymously named seventh grader. Larry had responded to a prompt for a state writing assessment, which asked students to write to a friend from another place and describe what the student and the friend might do in the student’s hometown. In his response,

Larry imagined a friend from Africa. This friend had never been to a movie theater, but he enjoyed sports and was “very fast.” As PTs read Larry’s letter for the first time, several publically worried that the piece lacked cultural sensitivity. Qiao remarked, “We should do a post-colonial analysis on this!” and Donnell asked, “Do they have cultural sensitivity training for seventh graders? Is that a thing?” Thus, Larry’s letter initially led PTs to frame spontaneous concepts about Larry’s thinking in terms of historical, political, and ethical issues.

However, once Robert and Celia began their analysis of students’ thinking based on four students’ writing, they—like the other PTs—emphasized Larry’s academic thinking over political and ethical concerns. Celia began with an epistemic claim couched in a scientific concept from Spandel’s six traits, Organization: “Larry’s organization was reasonable, despite the evidence being sort of lackluster. Like, “this would be fun for him because” (turn 23). Robert had a different interpretation, which—notably—framed Larry’s thinking in terms of writing strategies³:

24 Robert: What I wrote down for Larry was just that he missed the point, so whereas the point of this assignment was to talk about, “Hey, what’s unique about your hometown.” What LARRY did was he just created a character/

25 Celia: *((laughs))* /It’s true./

26 Robert: /And he/ created a character, that like, the thing is—I’m reading all this stu and it’s like, “Ok, if you just assume all that stuff about a person *((pause))*

27 Celia: Yeah.

³ For the sake of readability, I have limited transcript conventions to those I will interpret. Throughout *((italicized double parentheses))* indicate gesture or nonverbal communication. ALL CAPS indicate emphasis. Interrupted and overlapping speech are indicated by /forward slashes/. Quotation marks signify places where speakers modify their voices, indicating the impersonation of another person or time in their speech. Latching, which happens when there is no pause between speaker 1 and speaker 2, is indicated by=. Unintelligible speech is marked (xx). [Brackets] denote clarifying information or places where names have been replaced to maintain confidentiality.

- 28 Robert: That's not. Very. Nice. That's offensive." /But/
29 Celia: */(laughs)/*
30 Robert: But, he's not talking about a real friend of his, he's just making this person up, so on a certain level, well, whatever, you know=
31 Celia: Yeah=
32 Robert: Like if you're gonna create a character, you could create a character with all these things about him, I would just say, "Hey, don't create *((laughs))* that character."
33 Celia: Yeah.

From Robert's perspective, Larry's writing strategy was to create a character as the subject of his piece. However, Larry's character—in the eyes of both Celia and Robert—was problematic, since it made stereotyped assumptions about people from Africa. Thus, Robert framed Larry's thinking as strategic, even though the strategy in question was flawed.

Before Robert could continue, Celia interrupted in order to remark upon another strategy that Larry had used in his writing:

- 34 Robert: I don't know, so that's=
35 Celia: The thing that Larry does though, is that he kind of considers where the person's coming from, whereas the first two *((looking at papers))*
36 Robert: The other ones [student essays] really only consider what's important about [their hometown]...

According to Celia, Larry had used a common writing strategy, considering his audience, since Larry had thought about "where the person's [Larry's friend] coming from" (turn 35). Thus, Robert and Celia provide an example of PTs' framing spontaneous concepts about student thinking in terms

of writing strategies, even when other historical, political, and ethical frames had been suggested before the official activity structure began.

In addition to framing spontaneous concepts about students' thinking as academically strategic, PTs also framed student thinking in terms of writing concepts and tools students "knew." PTs discussed—and often debated—students' understanding of concepts about writing, which included using details to support a main idea (Peter, Qiao, and Eleana, Cycle 1), organizing one's essay chronologically versus thematically (Celia and Robert, Cycle 3), and "knowing things need to be grouped" (Donnell, Cycle 1).

In the following discussion of a student essay entitled "Thing to Remember," Maddie, Celia, and Elise framed student thinking in terms of writing tools—or craft elements—that students knew (Cycle 1).

- 49 Maddie: I thought that his descriptions here were amazing, /like/
50 Celia: /Yeah/
51 Maddie: "blistering heat" was good, and then like, when—his hyperbole of like, "it was all downhill, even the house," and like, "it could be used as a football field."
52 Celia: Yeah.
53 Maddie: I don't know, you like actually ((*pause*))
54 Celia: It's true, they like=
55 Maddie: =Like, they're really good analogies.

Thus, in this excerpt, Maddie used representations from the student's work, such as "it could be used as a football field," to frame spontaneous concepts about the student's thinking as academic. In this case, Maddie and Celia pointed to writing tools the writer had used, including hyperbole and

analogies. Across their collaborative assessments of student work, then, PTs consistently framed students' thinking as academic. They focused on writing strategies, concepts, and tools that student writers used, even when other political and ethical frames had been suggested immediately prior to the enactment. As the next section reveals, these framing had implications for the concepts that PTs developed during their collaborative assessments of student writing (Cycles 1 and 3).

Supporting conceptual resources about writing traits. Framing students' thinking in terms of writing tools, concepts, and strategies had implications for the concepts that PTs developed around an ambitious teaching practice, *making student thinking visible*. In Maddie, Celia, and Elise's excerpt above, we see PTs drawing out and often quoting particular aspects of the student's work, making connections between these representations of students' thinking and writing tools with which these three English majors were likely familiar, such as analogies and hyperbole. For example, Maddie defined the student's sentence, "it was all downhill, even the house" as hyperbole (turn 51). She then assigned a broader category to her series of examples: The student used "analogies." Thus, Maddie was engaged in forming concepts about student thinking based on the students' work.

Celia continually agreed with Maddie's characterization of the student as using "really good analogies" (turn 55). She often overlapped Maddie's speech with "Yeah," (turn 50, 52) and commented, "It's true," (turn 54). In the following excerpt, Celia showed further alignment by remarking upon another "really good analogy," as they called it, which was funny.

58 Celia: Yeah. And then like, *((laughs))* "play dodge ball with pillows and stuffed animals." That was funny.

59 Maddie: Oh! That is cute. *((sniffs))* Ok.

Thus, Maddie and Celia had pointed out several representations of student thinking that aligned with and reified the scientific concept “good analogy.” Celia then reframed the conversation by including a scientific concept from a course reading on Spandel’s six traits: Ideas.

60 Celia: So like. Would that be an Idea?

61 Elise: What?

62 Celia: “Playing dodge ball with pillows”?

63 Maddie: You know what, let me pull out my chart [of trait definitions].

((Maddie finds her chart.))

64 Maddie: *((reading chart that defined Ideas))* Does it have a main idea? It does.

65 Celia: Yep.

66 Maddie: *((reading chart))* (xx) “chooses is important and interesting details.

Details make a picture in the reader’s mind.” I’d say it does that.

67 Celia: Yeah.

In this conversation, then, Maddie, Celia, and Elise co-constructed a concept about student thinking, framing that thinking as academic. For them, the student understood analogies, a tool for writing. They then drew connections between this concept and another scientific concept from the writing methods course: one of Spandel’s six traits, Ideas. They literally pulled out a sheet on which trait definitions were listed and compared that definition with the specific examples they saw in the student’s work (turn 63-67). Thus, PTs had opportunities to ground scientific concepts represented by the six traits—in this case, *Ideas*—using representations of student thinking and other concepts they had developed based on a framing of student thinking as academic.

Mobilizing for future work: Cycles 1 and 3 and prescriptive expertise. As Kennedy’s framework helps us see, the collaborative assessments of student work mobilized PTs toward

prescriptive expertise, rather than deliberate action, because they were engaged in problem solving based upon a given problem, rather than problem setting. PTs were asked to decide: What does this student understand and have yet to understand about writing, in terms of the six traits? Building spontaneous concepts about students' academic student thinking, then, was logical, because that is what the activity structure prescribed: Think about student thinking in terms of the six traits, which are scientific concepts concerned with an academic understanding of writing. Because I, as the teaching assistant, provided the six traits and earmarked them *a priori* as relevant to this activity structure, PTs' collaborative assessments of student work mobilized them toward prescriptive expertise, in which they could recognize a number of examples of the six traits in middle school writing.

We can see evidence of this mobilization toward prescriptive expertise in the feedback PTs wrote to student writers. This feedback was overwhelmingly about the writing tools, writing concepts, and writing strategies with which students had shown fluency and the ones that could use strengthening, often including references to one of the six traits. For example, Celia wrote the following feedback to the author of "Thing to Remember":

Henri,

Great ideas! When you use vivid descriptions like, "could be used for a football field," it strengthens the writing because these analogies paint a vivid picture for the reader. Well done! One area for you to work on is the organization of your ideas. Pay attention to big ideas and break them up into paragraphs. Then you could expand each paragraph with more of your wonderful descriptions. (Cycle 1)

Here, Celia referenced several concepts she and her peers had discussed, including analogies, Ideas, and Organization. From the perspective of the conceptual resources that this activity structure

supported, it is not surprising that two of these three scientific concepts, Ideas and Organization, came from Spandel's six traits. Thus, in their collaborative assessments of student writing, PTs had opportunities to learn about analyzing students' academic thinking using the new six traits vocabulary. Because I, as the teaching assistant in the methods course, had already outlined the problem, PTs were mobilized toward prescriptive expertise in which they could recognize examples of the six traits. The six traits are academic concepts, and thus it was logical for PTs to frame students' thinking as academic, since this construction of student thinking aided PTs in solving the problem at hand, which had been set for them *a priori*.

Simulating a Writing Conference

By contrast, PTs framed student thinking as affective in the writing conference simulation, mobilizing PTs toward deliberate action rather than prescriptive expertise. Here, PTs defined student thinking not in terms of student's knowledge and understanding of writing, but in terms of students' motivation to write and their perspectives on their own lives. This difference in framing led to differences in the conceptual resources that each cycle of investigation and enactment afforded. In particular, where Cycles 1 and 3 supported concept development around a new vocabulary for the analysis and teaching of writing, Cycle 2 supported PTs in using a number of concepts about students, teaching, and writing in concert, because the instructional problem had not been set for PTs ahead of time.

Framing student thinking as affective. In the simulated writing conference, PTs' predominant framing of student thinking was in terms of the student's affective motivation for writing. PTs often noted that they expected more input from the simulated student, Alex Josephs⁴,

⁴ Because of limitations related to funding, I had to hire one male actor and one female actor to portray Alex Josephs. PTs were aware of this prior to the SIM. Although an analysis of the gendered experiences of the SIMs is outside the scope of this paper, it is worth noting PTs perceived the male "Alex" as relatively more hostile, while the female "Alex" was widely viewed as simply apathetic.

who had written a memoir vignette about the experience of riding a roller coaster. In her raw debrief of the simulation, Maddie mulled over the student's unresponsiveness:

Um...I mean, it unfolded differently than I anticipated just because I thought that he would at least have more to say than just, "I don't know, I don't know." But I mean, I guess that's realistic, it's just not—(*pause*). I don't know. (Raw Debrief)

Donnell expressed a similar frustration:

I think I expect encounters, whether simulated or real, whether with students or random passers-by, to involve a bit of give-and-take. I had no idea how to get that to happen, here. (Written Self-Analysis)

Some characterized students' perceived unresponsiveness as an over-dependence on the teacher.

Eleana felt that this dependence stemmed from a desire to let the teacher do the work:

During the conference (and during watching others' conferences), I noticed Alex seemed really dependent upon the teacher, as if Alex was waiting for the teacher to do the work. (Written Self-Analysis)

Others connected the student's disengagement to non-identity as a writer, which simulated actors were asked to broadcast by saying, "I'm not a writer." Elise took it for granted that students who did not identify as writers would not explain their decision-making as writers:

I thought the simulation went ok. It was pretty much as I expected it to be, other than I thought she would give me a little bit more input on some of her stylistic choices, but I guess that's kind of how a high school student is gonna be when she says she's not a writer. (Raw Debrief)

Donnell was initially confused that the student did not see herself as a writer:

I don't know if this was purely just general apathy or a specific dislike of writing, and I wish I could've gotten into that, but there was this. I don't know what to do with "I'm not

a writer.” I mean ((*pause*)). How do I interact with that? She is. She wrote. To write is to be a writer. She’s not a professional writer, maybe, but neither am I. Neither is anyone. Really, other than, you know, professional writers, so that was kind of weird statement anyway. The point is ((*pause*)) it’s kind of a weird disconnect that I didn’t expect in some ways. ((*pause*)) (Raw Debrief)

Some PTs connected the student’s disengagement not simply to a non-identity as a writer, but to a lack of motivation and the particular genre in question:

Celia: Because a lot of, a lot of students these days just don’t want to do work or think, and they just want the teacher to be like, “This is what you should do,” but, um. The real world is not like that, and—um—especially a memoir—it’s like personal... Memoirs are hard to write, and like. Yeah. I could tell, it’s. It was a tough assignment for her. (Raw Debrief)

Thus, PTs attributed the student’s non-communicativeness to a lack of motivation, an over-dependence upon the teacher, and the student’s professed non-identity as a writer. In the writing conference simulation (Cycle 2), then, PTs framed spontaneous concepts about students’ thinking predominantly as affective.

Supporting interpretive conceptual resources. This did not mean that other ways of constructing student thinking about writing fell away, but rather that thinking-as-affect became more salient for PTs in the context of the simulated writing conference. PTs still referenced constructions of student thinking as academic, such as the writing tools, writing concepts, and writing strategies that students understood, but they felt stymied or unable to access these aspects of student thinking because of other, more pressing spontaneous concepts about student thinking.

Elise described beginning with the intention of familiarizing the student with a common writing strategy—writing a draft and then leaving it alone:

By asking, “how many times did you ‘sit’ with it?” I was trying to find out how many drafts the vignette had gone through, if any. My intention was for my question to help [Alex] realize that writing can always get stronger and that it helps to sit down and look at something over the course of several days or weeks (or months) at different times of day and for different purposes. (Written Self-Analysis)

However, Elise found she needed to reframe the kind of thinking she hoped the student would do, understanding it not in terms of the student’s writing strategies, but in terms of the student’s motivation for writing and her perspective on what she had written. Elise continued:

I could tell by her answer and general disposition, however, that Alex was really just going to tell me what I wanted to hear. So, I went a different route: I asked, “Tell me what *you* like about it [in particular]?” By asking that question, I hoped to get an idea of what particular sentiments she wanted to get across in this piece...I wish I had pushed this part further—is she usually a thrill-seeker? How did she *feel* before she got on it [the rollercoaster]? In what ways did she learn something on this trip to Cedar Point either about herself or about her family? (Elise, Written Self-Analysis; emphasis in original)

In a similar vein, Eleana wondered if she should have taught Alex how to participate in conferences—a goal that pertains to communication skills and affective engagement—or focused on the difference between revision and editing, a concept about the writing process that Alex had yet to understand.

Because the information sheet given to us prior to the Alex Josephs SIM set up the scenario to be at the beginning of the year and because it informed that Alex typically puts minimal

effort into schoolwork, I assumed that the SIM would challenge us to find ways to get Alex to participate in revising. My major question going into the SIM, then, was whether or not it would be more beneficial to try to go through revising Alex's paper (assuming a great amount of resistance from Alex) or to teach Alex about the student's role in a conference. This question was not answered when I left the SIM, and so I wonder about how several potential different responses to Alex's initial "I'm done" could have gone. (Written Self-Analysis)

Here, Eleana recognized two different aspects of the student's thinking that needed support: Academically, the student needed to understand how to revise a paper. Affectively, the student needed to know more about the norms for participation in writing conferences. In her simulation, Eleana chose the former: She attempted to "go through revising Alex's paper," but her written reflection revealed her ambivalence toward this decision. Her question about how to frame the problem, and thus how to proceed in the writing conference, "was not answered when [she] left the SIM, so [she] wonder[ed] about how several potential different responses to Alex's initial 'I'm done' could have gone" (Written Self-Analysis). Thus, Eleana was engaged in problem *setting* as well as problem *solving*.

Qiao also engaged in problem *setting* and problem *solving*. She began to re-evaluate the work she had done not only in the simulated writing conference, but also in her interactions with students in her practicum. In her raw debrief, she noticed a contradiction between how she dealt with student's dependence on the teacher and what the course readings on writing conferences suggested:

((reading from question prompt)) Did encounter unfold as you had expected based on background info? Yes. Um, yeah, that's similar to a lot of the students I encounter in um, my practicum placement right now, where they actually don't want to talk about the writings,

and they want a teacher to tell them exactly what to do, and I take up that role a lot, when I was in practicum. I even like phrase things for them, “Ok. This is how you can phrase this.” And, “What is there to evaluate.” I will tell them what to do. I’m not sure this is right or not. And, apparently, according to the reading, they’re (sic) not right. (Raw Debrief)

Thus, Qiao was initially confused. In her practicum, she had formed a spontaneous concept in which students “don’t want to talk about the writings, and they want a teacher to tell them exactly what to do” (Raw Debrief). As a result, she had told them what to do. However, the reading prior to the writing conference simulation, Carl Anderson’s *How’s It Going?*, had emphasized scientific concepts about the need for students to set the agenda and make writing decisions. During the class debrief on PTs’ simulations, the class viewed a brief excerpt from Qiao’s conference. Maddie initiated the following exchange:

Maddie: I think it [Qiao’s writing conference] was really good. It was like, “I’m not telling you to pick one, or you—I’m saying though, that consistency is a quality of good writing. So you pick one, and you write it that way.”

Britnie: Yes. Love the, "One thing that good writers do," because now we're giving them a principle to work with, but we're still letting them be the writer. They get to make the choices.

Robert: Yeah. Very similar. I like that the student was making this decision. Like, hopefully, this will prime them to want to make more decisions.

After the class debrief, Qiao reframed her work in the writing conference, declaring:

Another theory that guided me through the conference is HPL [*How People Learn*, (Bransford, Brown & Cocking, 2000)] Learning theory’s learner-centered and knowledge-

centered approach. I told students what good writers usually do and let them make the decision themselves. (Written Self-Analysis)

Thus, Qiao had reframed her spontaneous concept about student's thinking. Instead of framing students as people who did not want to talk about writing and were dependent upon the teacher, they had become people who—with guidance—could “make the decision themselves.”

Maddie similarly described a reframing of the student's thinking, which led her to re-set the teaching problem under consideration. She began with a desire to teach academic concepts associated with writing, in this case “how to utilize genre characteristics,” but then recognized the narcissistic error (Hargreaves, 1994) she had made:

While I knew what I wanted to teach, I was thinking about it in terms of how I would best receive instruction. I did not consider my student who was clearly one who was working at a slower pace, was not necessarily grasping the concepts, and was under-enthused about the writing task (Written Self-Analysis).

Based upon their experiences in the simulation, then, PTs shifted their spontaneous concepts about student thinking, an important aspect of the focal teaching practice MSTV, from academic to affective frames. However, PTs' commitment to supporting the students' academic thinking did not disappear; it had to be negotiated with competing spontaneous concepts that framed the student's thinking affectively. Of course, PTs' recognition of a number of spontaneous concepts they could use to make sense of their practice had implications for the conceptual resources they developed.

Mobilizations for future work: Supporting deliberate actors. The simulation required PTs to decide how they might frame students' thinking to reach the goal of supporting students as writers and to develop strategies for dealing with a number of concepts related to students, teaching, and writing at once. Thus, the simulated writing conference required PTs to set instructional problems as

well as solve them. As Eleana pointed out when she wondered whether to focus on the student's writing or on the student's ability and desire to talk about writing, how one frames student thinking has implications for the scientific concepts one uses to make sense of teacher-student interaction, as well as the teaching decisions one ultimately makes. In this case, PTs often reframed the instructional problems by developing spontaneous concepts that understood student thinking not as strictly academic—which would have emphasized writing tools, writing concepts, and writing strategies—but also as affective, which highlighted students as individuals with particular motivations for and perspectives on writing.

As a result, the writing conference simulation mobilized PTs as deliberate actors, who are “capable of deliberation about, and critical examination of, their own actions and the consequences of those actions” (Kennedy, 1987, p. 148). Over the course of their raw debriefs, class debrief, and written self-analyses, PTs devised 35 unique strategies for supporting student engagement during writing conferences, which ranged from giving students verbal encouragement, to deciding whether to mirror a student's body language or to model more engaged body language.

Donnell, for example, initially expressed frustration with the simulated student's low level of engagement, noting, “If they [students] don't want to express their voice, I can't make them. I can try to persuade them, I can try to convince them to give me something resembling of voice, but if there's no point, then there's no point” (Raw Debrief). After describing himself as “off-balance at how magnificently disconnected the student appeared to be” (Written Self-Analysis), he noted that—had he known more about the student affectively, as a person—he could have reframed the student's goal: “to tell a story that is important to the student.”

I think, looking back, that I would have wanted to frame the student's objective differently beforehand. The memoir is a venerable and respected genre of writing, one

which is good at certain things. If I knew more about the student's thinking and perspective on some social issues or something, I might have emphasized its ability to tell a story that is important to the student. (Written Self-Analysis)

Celia also saw the need to understand her students as both affective and academic thinkers in order to do her job well:

Note to self: I really must learn as much as I can about my students, their writing abilities, and their communication skills when preparing for any and all writing conferences! (Written Self-Analysis)

As the examples above clarify, the writing conference simulation mobilized PTs' future work, specifically, to consider students as both affective and academic thinkers. Framing student thinking in this way required PTs to make interpretive choices about their work—that is, PTs were positioned as deliberate actors who had to *set* and *solve* professional problems during the writing conference simulation cycle. The collaborative assessments of student work, however, supported PTs in problem *solving* alone.

Summary

Therefore, the cycles of investigation and enactment in which PTs participated supported different conceptual resources and mobilizations for future work. In the collaborative assessments of student work, I asked PTs to make decisions about what students understood and had yet to understand in terms of the six traits. Thus, it was most reasonable for PTs to frame students predominantly as academic thinkers, which provided PTs with opportunities to deepen their concept of what traits, such as Ideas, Organization, or Voice, meant in the context of middle schools students' work. Since the activity structure provided both a specific problem frame and

scientific concepts (the six traits) through which the problem could be solved, PTs were mobilized toward prescriptive expertise in which they solved a problem as given.

On the other hand, the simulated writing conference supported PTs' development as deliberate actors, since PTs had to make decisions about what kind of problem they were solving. In the simulated writing conference cycle, PTs often framed the students' affective thinking as more salient and pressing than their academic thinking. Thus, PTs had to make decisions about the scientific concepts they might bring to their simulated writing conferences. They could certainly have highlighted one or more of the six traits. They could also have brought a set of scientific concepts we collectively gleaned from our investigation of a writing conference by Nancy Atwell and a book on writing conferences by Carl Anderson, *How's It Going?*. Or they could have framed the problem of running a writing conference using a host of other scientific concepts, in a number of combinations. Thus, the writing conference simulation expected PTs not only to problem *solve*, but also to problem *set*.

Discussion and Implications

It is fair to say that the field hopes practice-based approaches to teacher education may be one means of supporting PTs' development of deliberate actors capable of using ambitious teaching concepts interpretively. Indeed, this analysis suggests that enactments of teaching interactions, such as the one represented by the writing conference simulation, can provide PTs with opportunities to develop interpretive conceptual resources. Yet, this analysis also shows that pedagogies of enactment can mobilize PTs toward the development of prescriptive expertise. Indeed, these cycles of investigation and enactment, which were focused around the "same" core teaching practice, *did not necessarily* support PTs' development of interpretive conceptual

resources. Instead, the collaborative assessments of student work supported PTs' development of prescriptive conceptual resources.

Let us be clear that supporting PTs' understanding of concepts related to writing and writing instruction, such as the six traits, is hardly an unnecessary or quixotic goal. On the contrary, understanding codified knowledge of one's field is imperative to becoming a competent practitioner in any field and to deepening the language and status of that profession (Kennedy, 1987; Lave & Wenger, 1991; McDonald, Kazemi & Kavanaugh, 2013).

However, as current and former critics of practice-based approaches to teacher education have pointed out, prescriptive conceptual resources represent only part of what teachers need (Zeichner, 2012; Kennedy, 1987). Helping teachers' to become deliberate actors is key to their development of professional judgment (Kennedy, 1987). Because actual teaching situations do not present themselves as cases of a particular principle, and because more than one principle is often applicable to a single case, PTs need opportunities to use scientific concepts about teaching interpretively. In university-based teacher education programs, however, PTs rarely have access to pedagogies that allow them to develop interpretive conceptual resources, which require them not only to solve problems, but also to determine what those problems are in the first place.

Critics of teacher education—as well as teachers themselves (Grossman et al., 2000)—have seen PTs as having too much access to prescriptive expertise, which has often been glossed at a coarser grain size as “theory.” As a strategy for rectifying this problem, various attempts to bring more “practice” into beginning teachers' experiences have been made. At the far end of this spectrum, some alternative teacher education programs bypass altogether methods courses and other more traditional teacher education courses in the interest of providing more access to “practice” (Labaree, 2010).

Yet this approach is deeply problematic, and not only because it de-emphasizes the usefulness of pedagogies that support the development of prescriptive conceptual resources (i.e., codified professional knowledge or theory). Implicit in the call for teachers to jump into practice is that doing so will support the development of deliberate action, in which teachers solve and set problems in concert. However, problem *setting* is deeply fraught and often determined by the ways that teachers frame activity-in-the-world (Bannister, 2015; Horn, 2007; Horn & Kane, 2015; Kane, 2015b), which may or may not be productive, particularly with reference to students from non-dominant groups. As Kennedy (1987) points out, “without training, people are not very careful when inducing principles from experience” (Kennedy, 1987, p. 150).

This analysis contributes to a larger conversation about the design of teacher education programs by pointing out that pedagogies of investigation and enactment are not a magic bullet for supporting PTs as deliberate actors. Indeed, if teacher education programs restrict pedagogies of enactment and investigation to instructional activities like collaboratively assessing student work, these pedagogies can simply represent more of the same. We can also imagine scenarios in which cycles of investigation and enactment might support only the re-enactment of a particular algorithm of practice, thus becoming an opportunity not to develop deliberate action or professional judgment, but instead to reproduce technical skills, just as critics of practice-based teacher education fear.

The key to using pedagogies of investigation and enactment to support teachers’ professional judgment, then, lies in their design. Based on this analysis, then, two central design principles for using cycles of investigation and enactment in teacher education reveal themselves:

- 1) The particular instructional activity (i.e., collaborative assessments of student work; writing conference simulations) used in cycles of investigation and enactment influences the character of the focal teaching practice.

In this case, PTs constructed student thinking as predominantly academic or affective, which deeply influenced the ways that they mobilized for future work. Indeed, as originally conceptualized, the different instructional activities were designed around the same core practice in order to support them in recontextualizing this practice across instructional activities and thereby strengthening their conceptual understanding of that teaching practice. Instead, I found that the instructional activities supported PTs in reframing student thinking so substantially that I have very little evidence that they recognized these three cycles as around the “same” practice at all. When the activity structure asked PTs to consider what students had understood and had yet to understand about writing, PTs framed students’ thinking as academic. When no specific problem frame was given, PTs framed students’ thinking as affective, and then questioned this choice in light of their academic goals for the student.

- 2) If a cycle of investigation and enactment is intended to support interpretive conceptual resources, a number of principles related to ambitious teaching must be available, relevant, and rational for interpreting a given enactment.

Relevant principles must *not* be outlined ahead of time, because novices need opportunities to set problems and find solutions themselves. Although the simulation was a very useful pedagogical tool for supporting interpretive concept development in this case, because it carried with it the important advantage of representing a student with a particular motivational and emotional history with the subject of writing, we can imagine simulation designs that may not support interpretive concepts.

For example, had the simulated student been a loquacious and sophisticated speaker about his or her writing strategies, the need to consider students as affective beings with particular

relationships to writing may not have arisen so clearly for so many PTs. The same is true had the writing assignment been a persuasive piece about *Romeo and Juliet*, for instance. In this case, we could imagine PTs framing students not as affective thinkers with particular perspectives on the world, but as readers with particular strengths and weaknesses related to reading comprehension. Thus, if PTs are to be supported in developing interpretive conceptual resources, cycles of investigation and enactment will likely need to present novices with unexpected representations of practice, which—again—do not easily present themselves as an example of a given principle or scientific concept. The evocations of particular subject matter(s) will also need to be taken carefully into account: In the writing conference simulation, PTs were likely more disposed to be concerned with students as affective thinkers, because personal perspectives are very relevant to memoir writing.

A Final Word

The field has called repeatedly for ways to support teachers' development of professional judgment (Dewey, 1904/1965; Kennedy, 1987; Zeichner, 2012). Practice-based approaches to teacher education have been suggested as a hopeful path toward supporting novice teachers in becoming not only masters of specific professional and disciplinary knowledge, but also in becoming wise practitioners of intellectually and interpersonally complex work. Yet, history reminds us that practice-based approaches can devolve into a technical skills orientation, which will not support teachers' development as ambitious practitioners. This analysis shows us that cycles of investigation and enactment can cultivate professional judgment by supporting the development of interpretive conceptual resources, but that they will not necessarily do so. To support professional judgment, then, we need to design cycles of investigation and enactment in which the problem is *not* framed ahead of time, and to which a number of (unexpected) scientific concepts might apply. With

a more expert other, PTs then need opportunities to see which problem frames others have brought to similar situations and how different scientific concepts, in different combinations, might support different outcomes.

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Appendix A

Rationale for Cycle Design Choices					
Cycle	Rationale for Instructional Activity	Rationale for Placement in the Trajectory of Cycles	Rationale for Investigation	Rationale for Enactment	Rationale for Focal Student Work
Cycle 1: Collaborative Assessment of One Student's Writing	Research on learning to teach writing: The collaborative assessment of student writing can support teachers' learning about writing instruction; Research on preservice teachers across content areas: Looking at student work supports development; PTs need a vocab for talking about S writing so that they can articulate how they are making S thinking visible.	PTs need practice using a new vocabulary for talking about student writing before doing so "live" with students; PTs can use this vocabulary in future enactments and teaching; Difficulty is mitigated because PTs consider only one student's work.	PTs need an introduction to new terms, coupled with examples and a chance to see these terms as they relate to S writing. Meta-message: Because the sample text was written by Henry David Thoreau (when he was in middle school), PTs can view S writing as on a developmental trajectory.	PTs were asked to consider what Ss understood before considering what the S had yet to understand in order to model positioning students as sensemakers.	Common Core State Standards ask for narrative, persuasive, and expository types of writing. ELA teachers will largely be responsible for narrative writing, so focal essay was a narrative piece. Focal essay was chosen because it had a number of errors in conventions, but strengths in other traits. Research suggests that PTs often focus on conventions in determining the quality of student writing, so they need to be challenged to look beyond this.

<p>Cycle 2: Writing conference with a simulated student (SIM)</p>	<p>PTs need time to analyze S thinking in the writing before a live discussion, since interactive sensemaking draws upon a different set of skills; PTs need opportunities to interact "live" with a student around student work.</p>	<p>PTs can use new writing vocabulary to understand S work; PTs can then use this vocab with a student; PTs can experience interacting with one S about S work. Difficulty is mitigated because PTs consider only one student at a time.</p>	<p>PTs need to: identify and see examples of hallmarks of strong writing conferences; to highlight principles that undergird the work of writing conferences. It is easier to highlight those principles when conferences run relatively unproblematically. Meta-message: Students can articulate their thinking about writing when asked.</p>	<p>Metacognitive articulation of one's thinking about writing is part of a writer's development, so students cannot always talk in sophisticated ways about their writing. Therefore, PTs need to complicate the idea that students are unresponsive because they are disobedient or resistant and make adjustments to principles of good writing conferences to support students who cannot yet articulate their thinking.</p>	<p>Same as Cycle 1.</p>
<p>Cycle 3: Collaborative Assessment of a Set of Student Work</p>	<p>Same as Cycle 1</p>	<p>PTs need continued practice using a new vocabulary to discuss aspects of writing. Difficulty is increased because PTs must consider several students' thinking and synthesize their findings.</p>	<p>Same as Cycle 1.</p>	<p>PTs need opportunities to consider more than one student's thinking, to consider patterns within multiple students' thought processes, and to collaboratively articulate instructional responses to that thinking.</p>	<p>Originally, PTs were to use a class set of student papers, but PTs were very deliberate about this process in Cycle 1, so time allowed the consideration of only four essays. Essays were narrative essays by middle school students. They were selected because they represented a range of skill levels in the use of conventions, which research suggests that PTs privilege in their assessment of student writing.</p>

Table 4. Rationales for Design Choices in each Cycle of Investigation and Enactment.

CHAPTER IV

LEARNING TO TEACH WRITING AMBITIOUSLY: CONCEPT DEVELOPMENT DURING STUDENT TEACHING

Introduction

Since the 1980s, process writing instruction has emerged as the “primary paradigm” for teaching writing (Pritchard & Honeycutt, 2006, p. 277). It is also an ambitious form of teaching practice (Cohen, 2011; Lampert & Graziani, 2009), because process writing instruction has the potential to support students as writers, critical thinkers, and problem-solvers in intellectually rigorous, equitable classrooms (Smagorinsky, 2010; Graham & Perrin, 2007; Smagorinsky & Whiting, 1995). In order to be successful, however, teachers need to be able to use process writing instruction flexibly so that they can attend to students’ needs.

Recent conceptualizations of process writing instruction position teachers as guides who support students’ strategic decision-making as students compose for authentic audiences and purposes (Ball, 2006; Ray, 1999; Atwell, 1987). Teachers might support students by modeling the writing process (Gallagher, 2011) or creating mini-lessons in which they help students to recognize and emulate a mentor author’s “craft techniques” (Ray, 1999; Atwell, 1987). Guiding students in this way requires a strong understanding of the particulars of one’s students and context, as well as how those particulars relate to a conception of writing instruction that defines writing as an “exploratory, open-ended process of communication and problem-solving” (Smagorinsky & Whiting, 1995). Thus, in process writing instruction, as in any ambitious approach to instruction, teachers must make decisions with respect to the academic content,

instructional contexts, and the identities and needs of their students (Lampert et al., 2014). In other words, ambitious process writing instruction is situated: Teachers always teach writing with particular students on particular days in particular classrooms, so they must make decisions about how to use a given set of instructional practices.

Yet typical writing instruction in the United States provides teachers with little guidance as to how they might make such teaching decisions in the face of their students' needs and the contexts in which they teach writing. Writing instruction in the United States is generally characterized by a lecture-based focus on grammar, mechanics, and specific formats like the five-paragraph essay, so teachers rarely witness more ambitious forms of writing instruction (Applebee & Langer, 2011; Hillocks, 2002). In addition, textbooks often “translate the [writing] process into a prescriptive, linear formula for producing a paper” (Pritchard & Honeycutt, 2006, p. 277), and district and state writing assessments often require on-demand, formulaic writing (McQuitty, 2012; Johnson, Smagorinsky & Cook, 2003; Hillocks, 2002; Grossman, Valencia, Evans, Thompson & Martin et al., 2000). Thus, typical writing instruction, state and district testing regimes, and textbooks all press toward a presentation of writing as the (re)creation of correct formulae and mechanics.

In this milieu, process writing instruction may be enacted as a lock-step procedure which does not honor either the situated needs of students or the recursive, purpose-driven nature of the writing process (Whitney, Blau, Bright, Cabe, Dewar et al., 2008; Pritchard & Honeycutt, 2006; Hayes & Flower, 1980). This situation is exacerbated by a dearth of attention to writing instruction in teacher preparation programs: 71% of secondary teachers report receiving minimal to no formal preparation for writing instruction. Teachers will need substantially more

opportunities for professional learning to teach writing in intellectually rigorous, equitable, and responsive ways in addition to teaching environments conducive to this practice.

Given the generally inhospitable context, teachers need to understand not only the outlines of process writing instruction, which include seemingly ubiquitous terms like *prewriting*, *drafting*, and *revising*, but also how to think about these practices as they work to incorporate them into their instruction (Pritchard & Honeycutt, 2006; Kennedy, 1987). Whitney and her colleagues (2008) provide an important example of how the same practice can look very different in implementation: In their comparative case study, two teachers used peer editing, a practice associated with process writing instruction. In one classroom, peer editing became an opportunity for students to “catch” errors. In the other, it was an opportunity for students to engage in a community of writers, discussing and developing their own strategies as writers composing for authentic purposes and audiences. Peer editing only reached its potential as an ambitious instructional approach in the hands of a teacher with a strong conceptual understanding of writing instruction as a community-building, problem-solving enterprise. From a teacher learning perspective, the richer implementation reflects a deeper understanding of peer editing as a practice.

For ambitious instruction to be feasible, then, writing teachers need opportunities to develop their concepts about ambitious writing instruction. Yet we still have much to learn about how teachers develop such concepts. Current studies of preservice teachers’ (PT) development often focus on institutional structures for teacher education (Boyle-Baise & McIntyre, 2005; Labaree, 2005), the pedagogies that teacher educators should use (Grossman, Compton, Igra, Ronfeldt, Shahan et al., 2009; Lampert et al., 2014; McDonald, Kazemi & Kavanaugh, 2013), and the practices that PTs should learn (TeachingWorks, 2015). These are important fields of

study. However, they need to be complemented by an understanding of how PTs develop concepts that would support their work as ambitious instructors.

To understand teachers' learning about ambitious writing instruction practices, then, I ground this analysis in sociocultural ideas about concept development (Smagorinsky, Cook & Johnson, 2007; Vygotsky, 1986), asking:

How do preservice teachers develop concepts about an ambitious teaching practice in writing instruction during their student teaching placements?

This study contributes to the literature on teacher education by investigating PTs' concept development around an ambitious practice beyond the context of a methods course and into PTs' student teaching classrooms. It contributes to our understanding of writing instruction by investigating PTs' concept development as they learned to teach writing, pointing to the contextual realities that require negotiations with the ideal types often presented in teacher education. Finally, this study contributes to the learning sciences by investigating how beginners develop complex concepts through practice across multiple settings. Findings have implications for those interested in teachers' learning about ambitious practice, for writing teacher educators, for the design of practice-based teacher education courses, and for those interested in situated concept development in teaching.

Conceptual Framework

Sociocultural theories of learning help me to answer questions about preservice writing teachers' concept development during their student teaching placements, because they assume that concepts develop in particular contexts through an interplay between practice and abstract ideas emerging from formal settings, such as the writing methods course or interactions with mentors during student teaching. Thus, sociocultural theories provide an analytic focus on PTs'

writing instructional practice, abstractions learned in their writing methods course and in their student teaching placements, and the changing contexts of their student teaching to understand PTs' development of ambitious teaching concepts.

Learning and Practicing in Context: Figured Worlds

According to sociocultural theory, contexts influence one's participation in practice, and thus what is available to be learned (Lave, 1996; Lave & Wenger, 1991). In this analysis, influential contexts included PTs' middle school student teaching placement, high school student teaching placement, and writing methods course. Holland and her colleagues (1998) have called contexts like these *figured worlds*. A figured world is a:

socially and culturally constructed realm of interpretation in which particular characters and actors are recognized, significance is assigned to certain acts, and particular outcomes are valued over others. (Holland, Lachicotte, Skinner & Caine, 1998, p. 52)

In other words, figured worlds are “as if” worlds, in which people act “as if” particular stances were true and particular actions were beneficial. As such, particular social and historical discourses and practices comprise figured worlds.

Divergent discourses and practices have emerged in figured worlds of writing instruction. For instance, university-based researchers often critique the five-paragraph essay, arguing that it curtails critical thinking, creativity, and problem solving (Hillocks, 2002; Nunnally, 1991). Teachers in K-12 classrooms, however, often see it as a necessary tool for passing state writing assessments (Johnson, Smagorinsky, Thompson & Frye, 2003; McQuitty, 2012; Whitney et al., 2008). In a figured world of writing instruction where students' proficiency rates on state writing exams are highly valued, it may be seen as reasonable to use instructional activities that explicitly teach the five-paragraph essay. Teachers may also frame instructional problems in

terms of students' facility with the five-paragraph essay. They might define effective writing instruction in terms of its ability to support students in passing end-of-course exams. Finally, discourses and practices about the need to pass high stakes writing exams may lead those in such a figured world to represent students' facility with writing in terms of proficiency rates.

In other figured worlds of writing instruction, these activities, ways of framing instructional problems, claims about writing instruction and students, and representations of classroom life may be considered inadequate or even illogical. There are other activity structures in which writing teachers and their students might engage, other ways to frame instructional problems, other claims to be made about students, teaching, and writing, and other ways to represent classroom events. However, these are more likely to surface in figured worlds that act “as if” different discourses and practices around writing instruction were valid and beneficial.

In other words, the cultural and historical discourses and practices that comprise figured worlds entail particular epistemic stances (Hall & Horn, 2012; Horn & Kane, 2015). An epistemic stance reveals what there is to know about teaching, students, and writing; how to know it; and why it is of value. Epistemic stances are made manifest through four aspects of teachers' work: *activity structures*, which reveal an epistemic stance because activities are only sensible from the standpoint of particular epistemics; *problem frames*, in which teachers frame instructional problems in terms of their epistemic stances on teaching, students, and writing; *epistemic claims*, in which teachers make bald declarations about teaching, students, and writing; and *representations of practice*, in which teachers notice, select, and represent particular aspects of complex classrooms in light—again—of their epistemic stance on teaching, students, and writing (Horn & Kane, 2015; Horn, Kane & Wilson, 2015).

Individuals within figured worlds may take up, reject, or refine epistemic stances

emanating from the cultural and historical discourses and practices that predominate particular figured worlds, but they always do so with respect to those cultural and historical discourses and practices. In other words, figured worlds position individuals in particular ways. An individual teacher may believe that the five paragraph essay is a restrictive genre and may even go so far as to refuse to teach it, but in figured worlds where structured essays are valued, such a refusal will position that teacher negatively, perhaps as defiant, a renegade, or even a lone wolf. Thus, one's own epistemic stances and identities develop in relation to the discourses, practices, and epistemic stances that characterize figured worlds.

These epistemic stances are important not only because they are influenced by the discourses and practices that characterize figured worlds, but also because they shape concept development. To understand this, I will expand on Whitney and her colleagues' (2008) findings about two teachers' different uses of peer editing. Both teachers used peer editing, an instructional activity associated with process writing, but their practice evinced few similarities beyond a common label. These dissimilarities can be traced to differences in the teachers' epistemic stances on students, teaching, and writing. In one classroom, peer editing was a structure in which students discussed their work and built a community of writers. This teacher made epistemic claims about the need to "build an author within [students]" and hoped students would learn to "manipulate words, ideas, and sentences" comfortably (p. 216). In the other classroom, peer editing was about "catching" errors, and the teacher espoused the epistemic claim that students needed to "produce more mature writing by self-correcting" (p. 212). Therefore, teaching writing was about "being very systematic and always going back to the basics," which included paragraphs, grammar, and vocabulary (p. 212). Thus, there is a dialectical relationship between one's epistemic stances on teaching, students, and writing and

his or her practice as a writing instructor.

Preservice Teachers' Concept Development through Practice in Figured Worlds

An understanding of concept development allows us to look deeper to understand why there is an interdependent relationship between epistemic stances and practice. In the following sections, I outline how concept development works from a Vygotskian perspective. I then explain how PTs' concept development is shaped by PTs' practice, identities, and their epistemic stances on teaching, students, and writing. I conclude with a short discussion on the meaning of *practice* and *practices*, since both are important to understanding concept development in teaching.

Vygotsky's theory of concept development. According to Vygotsky (1986), concepts develop through constant interaction between the particular and the general. As he puts it, concept development occurs through an interplay of spontaneous and scientific concepts. Spontaneous concepts are “generalizations learned informally through practical activity and everyday social interaction” (Smagorinsky, Cook & Johnson, 2003, p. 1403). Scientific concepts are abstractions learned in formal environments, such as classrooms. It may sound odd to refer to a concept in teaching, such as *cooperative groups*⁵ or *ambitious instruction*, as “scientific⁵,” but what is important to highlight here is that scientific concepts are generalizable abstractions used to frame and reframe spontaneous concepts. Thus, spontaneous and scientific concepts work in dialectical relation to one another.

Based upon these definitions alone, it is tempting to make sense of Vygotsky's model of concept development in terms of traditional understandings of the theory-practice dichotomy.

⁵ I elected to continue using *scientific* rather than *academic* for consistency with other work on concept development in teaching (Kane, 2015a; 2015b; Smagorinsky, Cook & Johnson, 2003).

One could align the idea of scientific concepts with theory and spontaneous concepts with practice, and assume—as do traditional formulations of the theory-practice divide—that theory can be “applied” to practice from above (Lampert, 2010; Smagorinsky, Cook & Johnson, 2003). However, Vygotsky did not envision such a dichotomous and hierarchical relationship between scientific and spontaneous concepts.

Instead, scientific and spontaneous concepts develop in dialectical relation to one another. They inform one another, because their strengths and weaknesses are offsetting. Spontaneous concepts are advantageous because they emerge from practice, and therefore they are grounded in activity-in-the-world and useful in particular situations. Their particularity, however, is also their downside. The advantage of scientific concepts is that they are generalizable across situations and unified by coherent principles. However, their drawback is that they are not grounded in activity-in-the-world. Through dialectic relations, these drawbacks are counterbalanced and advantages exploited. Scientific concepts become grounded and meaningful in light of spontaneous concepts. Spontaneous concepts, in turn, become more systematic, coherent, and generalizable through the influence of scientific concepts. Together, they support the development of “genuine” concepts (Vygotsky, 1986).

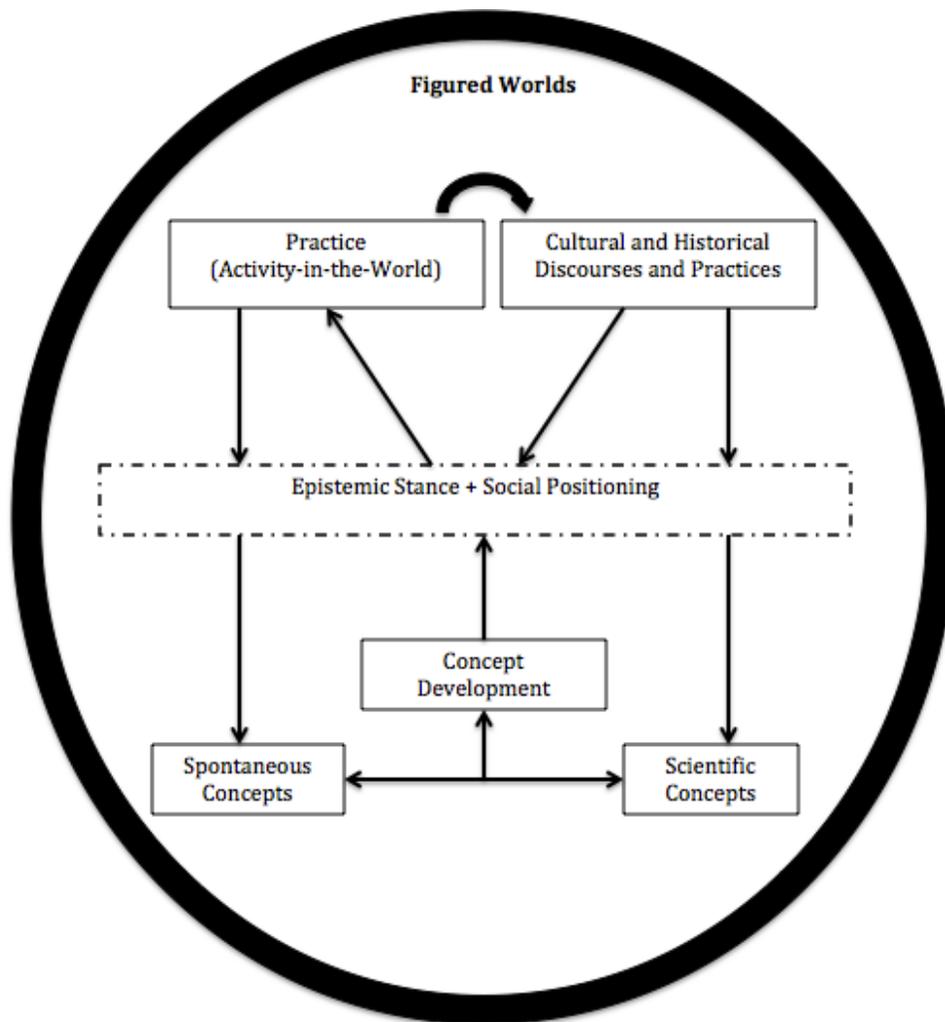
An important entailment of Vygotsky’s theorizing is that genuine concept development cannot proceed without practice. Because spontaneous concepts emerge from practice, and spontaneous concepts ground scientific concepts, practice is “central to the development of spontaneous concepts and implicated in the development of scientific concepts” (Smagorinsky, Cook & Johnson, 2003, p. 1406). Thus practice does not passively await the application of theory; it is an integral part of making abstractions meaningful. Without practice, Vygotsky notes, scientific concepts are reduced to “dead verbalisms.”

The influence of epistemic stance on concept development. Thus, practice is invaluable to concept development, because spontaneous concepts are framings of practice. This is where epistemic stances come into play. Classrooms are intensely complicated, layered environments. There is not some unitary, preexisting or “correct” way to frame practice. Instead, teachers frame their practice in terms of their epistemic stances and social positioning. Research suggests that novice teachers notice—and attach significance to—different aspects of classroom interaction than do their more expert colleagues (Sherin and van Es, 2009). Also, teachers who were more accomplished as ambitious instructors tended to frame their practice in terms of the relationship between students, teaching, and content more frequently than did their less accomplished peers, often revealing a different epistemic stance on students, teaching, and content (Horn & Kane, 2015). In a separate analysis, Horn (2007) reports a complementary finding: Teachers who understood mathematics as the completion of procedural algorithms described students as “fast” or “slow,” while those with an epistemic stance that defined mathematics as problem-solving represented “slow” students as potentially careful, systematic thinkers, which the discipline often requires.

Thus, how teachers represent and frame their practice is influenced by their epistemic stances. Because spontaneous concepts are framings of practice, we can say that spontaneous concepts are framings of practice in light of one’s epistemic stances. Since spontaneous concepts interact with scientific concepts to support the development of more robust concepts, how PTs represent and frame their practice influences the concepts they develop about writing instruction. Teachers’ descriptions, or representations, of practice are one layer of framing. The epistemic claims they make are another, and practice can be reframed in terms of different representations of practice and epistemic claims *ad infinitum*. Indeed, just as spontaneous concepts are first-level

frames of particular events, scientific concepts are generalizable abstractions used to frame and reframe spontaneous concepts. Concept development, then, is a dialectical process of framing and reframing with respect to activity-in-the-world, social positioning, epistemic stances, and cultural and historical discourses and practices. These ideas are laid out below in Figure 1.

Figure 1. A graphic representation of teachers' concept development. Concepts develop through an interplay between spontaneous and scientific concepts. Spontaneous concepts are framings of activity-in-the-world, mediated by one's epistemic stances and social positioning. Scientific concepts arise from cultural and historical discourses and practices, as mediated—again—by epistemic stances and social positioning. As more robust concepts develop, they become integrated back into one's epistemic stance, where they interact with social positioning to influence practice. Over time, the practice of collectives becomes reified, leading to cultural and historical discourses and practices, which influence epistemic stances.



Understanding practice versus practices. Practice is central to concept development, because it is the substrate from which PTs frame and reframe spontaneous and scientific concepts, supporting the development of more robust concepts (Vygotsky, 1986). Yet an understanding of *practice* as a medium through which concepts develop needs to be considered in light of the idea of teaching *practices* (Lampert, 2010). Researchers in teacher education are currently engaged in delineating the “core” practices that might characterize a figured world of ambitious instruction, regardless of content area (Core Practices Consortium, 2014; McDonald, Kazemi & Kavanaugh, 2013; TeachingWorks, 2015). In that context, *practice* refers to a somewhat distinct set of strategies, routines, or actions central to the work of teaching (TeachingWorks, 2015). Current advocates of practice-based teacher education argue that teaching practices should be placed at the center of cycles of *pedagogies of investigation and enactment*. In pedagogies of investigation, PTs read about, view, and analyze teaching practices. In pedagogies of enactment, PTs have opportunities to enact these practices in settings of increased complexity, investigating the enactments after their completion (McDonald, Kazemi & Kavanaugh, 2013).

One practice that characterizes ambitious instruction across disciplines is *making student thinking visible* (MSTV). MSTV is central to engaging students in rich representations of content, because it positions students as sensemakers within particular subject areas and disciplines (Borko, 2004; Cohen, 2011; TeachingWorks, 2015; Windschitl, Thompson & Braaten, 2011). In writing instruction, MSTV can reveal—to both students and their teachers—students’ developing understandings of composing strategies and processes (Kane, 2015a; 2015b), helping teachers to do “work with students that is intellectually demanding, attentive to students’ work, [and] conducted in thoughtful conversation” (Cohen, 2011, p. 47). Because of

MSTV's centrality to ambitious instructional approaches, I sought to understand PTs' concept development around MSTV during their student teaching placements. Although MSTV is a practice, it entails particular concepts, such as the idea that students' thinking needs to be made visible, or that student thinking needs to be guided toward particular learning goals.

Thus, this study highlights the discourses, practices, identities, and epistemic stances available to PTs in the figured worlds of their writing methods course, their middle school student teaching placements, and their high school student teaching placements. It seeks to understand how PTs developed concepts about a core writing instruction practice, MSTV, through practice in these figured worlds. To understand concept development, I attended to the cultural and historical discourses and practices of writing instruction of each figured world, since these position PTs in particular ways and support particular epistemic stances. I analyzed PTs' own articulated epistemic stances about teaching, student, and writing in light of the epistemic stances entailed by the predominant discourses and practices available in their methods course and their figured worlds of writing instruction. I also attended to the epistemic claims, framings, and representations of practice that became available in these worlds in order to understand the scientific and spontaneous concepts PTs used to build more robust concepts about MSTV, a teaching practice central to ambitious writing instruction.

Research Design and Methods

Context of the Study

This article is part of a larger design study that sought to understand how pedagogies of investigation and enactment might support secondary writing teachers' concept development in a writing methods course (Kane, 2015a; 2015b). In this paper, I focused on PTs in Vanderbilt University's writing methods course, because they had participated in designed cycles of

investigation and enactment around an ambitious teaching practice, *making student thinking visible* (Kane, 2015a; 2015b). This analysis broadens the lens on preservice teachers' concept development, foregrounding not the writing methods course, but preservice teachers' interactions with students during their student teaching.

Methods course: Modeling, mentor texts, and writing one's self. Undergraduate preservice English teachers double major in English and Education at Vanderbilt University, taking the majority of their Education courses in the final two years at the university. Masters students seeking licensure must enter with an English major. All English PTs seeking licensure participate in a practicum in the fall of their final year in the program, observing instruction in a middle school and a high school placement once a week and interacting minimally with students. In the spring, PTs become student teachers, spending the first half of the semester in a high school English classroom and the second half in a middle school English Language Arts classroom. Over the course of each placement, PTs took on more and more teaching responsibility until they planned, taught, and graded student work as the teacher of record would. Each of these placements constituted a different figured world of writing instruction, since people acted "as if" different things were true and consequential for writing instruction in each setting. Each figured world also positioned PTs in particular ways. These figured worlds are discussed in the findings section.

Because PTs were being observed and evaluated by a representative from the writing methods course (author), the figured world of writing instruction in PTs' methods course was also influential. The secondary English credentialing program at Vanderbilt University heavily emphasizes teaching in "constructive" or "student-centered" ways, and faculty are working to make the program more coherent across its many courses. As has been found in other university-

based teacher education programs (Grossman et al., 2000), Vanderbilt has a reputation for presenting teaching in strongly theoretical—and perhaps out of touch—terms. Students across the program spoke of “drinking the Vanderbilt Kool Aid” and were often wary about the extent to which they were doing so.

The major professor of the writing methods course was herself a middle school English teacher for over ten years. She forged caring relationships with her PTs, who often took classes with her several times throughout their program. During their student teaching semester, PTs were required to meet for an evening class that the professor also taught. She brought meals to make sure that PTs were still eating their vegetables during such a busy and stressful semester. Thus, this professor supported her PTs in more holistic ways than is typical of most college professors.

The writing methods course reflected the major professor’s interest in developing PTs themselves as both digital and non-digital writers, so PTs composed frequently for the course. There was also a strong focus on teaching the writing process, modeling, and using mentor texts to teach writing craft techniques. The focal teaching practice, *making student thinking visible* (MSTV), did not frame the entire methods course, but three instructional weeks (two class meetings per week) were devoted to it, and the presentation of writing instruction across the course was well-aligned with the need to make student thinking visible. As is discussed in the next section, I co-taught this course, taking charge of the instructional weeks designed around MSTV and leading discussions on the course readings at each meeting.

Researcher Role

I acted as the teaching assistant in the focal PTs’ writing methods. I led discussions intended to support PTs’ understanding of class readings and designed cycles of investigation

and enactment around the focal teaching practice, MSTV (Kane, 2015b). I was also the official university mentor for PTs during their student teaching placements. In this capacity, I visited their student teaching sites weekly in order to gauge their progress and provide feedback and support for future teaching. I also intermittently attended and led their weekly evening meetings with the methods course professor during their student teaching semester, which were intended to support PTs in passing a performance assessment of their teaching (edTPA).

Thus, I acted as a participant-observer who participated centrally in PTs' development (Spradley, 1980). Acting as a participant-observer has trade-offs. Advantageously, I built relationships with PTs and had firsthand involvement in and knowledge of the unique social world of PTs' methods course, practicum, and student teaching experiences. From a research perspective, the disadvantage was that I either directly evaluated PTs' work or was closely aligned with others who did. I managed this tension by making it clear that my weekly observations and debrief sessions were intended to support PTs in the improvement of their teaching and that my evaluative role only came into play if either PT were failing to meet base-level expectations of the program, which focal PTs were not in danger of doing. I also began debrief conversations by inviting their impressions of their work, further underscoring the status of debriefs as feedback conversations, not evaluations.

Still, there were moments when my status as university mentor and teaching assistant in the methods course seemed to exert undue influence on PTs' work, particularly when we co-planned a writing lesson. Thus, I redesigned that portion of my study: Instead of asking PTs to co-plan a lesson with me during their middle school placements, I asked them to reflect upon a lesson they had already implemented in partnership with a peer. This adjustment allowed PTs to frame their perceptions of the strengths and weaknesses of their teaching, their learning goals,

and students' thinking more freely, without my direct presence or intervention.

Case Selection

To address my research question, I needed to understand PTs' concept development through practice. Since I wanted to understand the role of identity and epistemic stances in concept development, I attended to (1) how PTs were positioned within their figured worlds; and (2) PTs' articulated epistemic stances about writing and writing instruction. To understand PTs' positioning within the figured worlds of their student teaching placements, I observed each PT's writing instruction between one and three times, debriefing the observations each time.

To understand PTs' histories and identifications with writing, I made use of PTs' written narratives about their own values and experiences with respect to writing, which were composed prior to the beginning of the writing methods course. To understand PTs' developing epistemic stances related to writing instruction, I adapted an interview and coding protocol, called Views on High Quality Math Instruction (Munter, 2014), for use in writing instruction. The protocol asks a series of questions about what each PT would look for if asked to observe high quality writing instruction. PTs composed narratives on their views on high quality writing instruction at four different times over the course of the methods course semester.

Of the seven PTs in the writing methods course, I selected the pseudonymously named Elise and Celia, because of productive similarities and differences between them. First, their identifications with and commitments to writing and writing instruction differed in ways that reflect common distinctions described in the literature on writing instruction. Second, they were positioned very similarly within the figured worlds of their student teaching placements. Elise and Celia's figured worlds and epistemic stances on writing and writing instruction are described in the findings section.

Data Collection

Field Observations and Debriefing Interviews

Data collection aimed to understand whether and how PTs' practice as writing instructors and their epistemic stances on students, teaching, and writing influenced their concept development around MSTV. Thus, my observations of PTs' practice as writing instructors and our debriefing discussions, which immediately followed my observations of PTs' writing instruction, constituted the focal data for this analysis. As part of my role as a graduate assistant for Vanderbilt's teacher education program, I observed the focal PTs teaching in their student teaching placements weekly. When they taught writing, I took field notes live, filling in details directly after leaving the PTs' classroom. PTs also emailed me their lesson plans prior to the observed lesson and sent a reflection on their teaching to me each week.

Debrief discussions began with a question about how the PT felt the lesson went. This allowed me to understand how the PT represented the successes and problems inherent in their work before I layered in my own perspective. PTs' representations are important theoretically, because how PTs represent and frame classroom interaction influences their spontaneous concepts. If PTs did not bring MSTV up themselves, I asked them how they had planned to make student thinking visible, how these plans played out, and how they made instructional use of the thinking that became visible over the course of the lesson. In this way, debriefing interviews were semi-structured, depending on PTs' initial framing(s) of their writing instruction. They served a dual purpose of supporting PTs' reflection on and investigation of their work while also providing a window into PTs' thinking about their writing instruction. Cooperating teachers (CT) sat in on these conversations at their own discretion. When they attended, they were brought into

the conversation as a valued expert who could support PTs emotionally and conceptually. These debriefing conversations were audio recorded and transcribed.

Writing Instruction Co-planning Session with University Mentor (Author)

In order to more deeply understand how PTs thought about student thinking, how they represented students' writing needs, and how they planned appropriate instructional responses, I co-planned a writing lesson one time with each PT during her high school student teaching placement. PTs were asked to bring representative samples of student work that they regarded as strong, emerging, and in need of attention. I asked PTs why they had categorized student work as they had, and—together—we identified learning goals for PTs' writing instruction. We then planned a lesson based on our analysis of student work. I prompted PTs to consider how they planned to *make student thinking visible* over the course of their lesson. These sessions were audio recorded and transcribed.

Peer Reflection on a Writing Lesson

In order to understand how PTs represented writing instruction when I was not part of the discussion, as well as what role they saw for *making student thinking visible*, I audio recorded PTs' collaborative reflections on a writing lesson plan they taught which had not gone as planned. PTs met with a peer near the end of their student teaching semester. Following a protocol, they described their learning goals for students, students' understandings and misconceptions related to this goal, what particular aspects of the lesson (either design or implementation) may have supported these misconceptions, and what PTs felt they needed to know about students' thinking in order to support students in reaching their learning goals in the future.

End-of-placement Feedback Sessions with University Mentor (Author) and CT

In order to understand CTs' and PTs' holistic views about PTs' development as English teachers, I audio recorded and transcribed, as necessary, end-of-placement feedback sessions. In these sessions, PTs sat down with their CT and I to discuss their progress in areas identified by the larger teacher education program. We discussed aspects of PTs' teaching, such as PTs' "subject matter knowledge for teaching" or "knowledge of learners and learning."

Interviews with CTs

To better understand an emic view of the figured worlds of writing instruction in each student teaching placement (Miles & Huberman, 1994), as well as the CTs' epistemic stances on teaching, students, and writing, I audio recorded and transcribed interviews with CTs in each placement. I asked CTs about their own history with and beliefs about writing and writing instruction, as well as how the school's culture influenced their own writing instruction. In the latter half of the interview, I asked CTs to assess a sample narrative piece by a seventh grade student. PTs had also assessed this piece during their methods course (Kane, 2015b). Including both segments of the interview gave me insight into PTs' figured worlds of writing instruction both from the perspective of an abstract description and from the perspective of a CT's imagined practice—that is, how one might actually assess student writing and set learning goals in light of that writing (Kennedy, 1998).

Artifacts

In order to more fully understand the lessons I was observing, artifacts related to writing instruction were collected during field observations. These included lesson plans, weekly reflections, task directions, graphic organizers, peer feedback sheets, scoring rubrics, PowerPoint

slides, exit slips, tests and quizzes, and other handouts related to writing instruction. A summary of data collected appears below:

Data Collected	Frequency	Purpose
Field notes from writing instruction observations	Weekly (if PTs taught writing in a given week)	Understand PTs' implementation of writing instruction
Audio recordings of post-observation debrief sessions	After each lesson in which PTs taught writing	Understand how PTs framed and represented their writing instruction
Audio recording of co-planning session with university mentor (author)	Once, during high school placement	Understand PTs' planning processes and their thinking about students' thinking and writing needs
Audio recording of peer reflection on a writing lesson	Once, near the end of middle school placement	Understand how PTs framed and represented their writing instruction without university mentor involvement (author)
Audio recording of end-of-placement feedback sessions with university mentor (author) and CT	Twice per PT, at the end of each placement (4 total)	Understand CTs' and PTs' views about PTs' holistic development as English teachers
Interviews with CTs	Once with each CT (4 total)	Understand an emic view of each placement as a figured world; understand CTs' identities and epistemic stances on writing and writing instruction
Artifacts	Collected after each writing lesson	Supported my interpretation of field notes from writing instruction observations

Table 1. Summary of Data Collection, Frequency, and Purpose.

Data Analysis

Using inductive, constant comparative methods (Strauss & Corbin, 1998), I analyzed field notes and transcriptions of audio records in iterative phases, using the constructs from my

conceptual framework to understand how PTs developed concepts around MSTV. The goal of each iteration was to refine my understanding of how PTs developed concepts about ambitious writing instruction through a focus on MSTV.

Data analyses proceeded as follows: (1) understanding PTs' identity as writing instructors; (2) understanding PTs' figured worlds of writing instruction; (3) understanding PTs' instructional practice; and (4) understanding PTs' concept development. I have numbered these phases for ease of reference, but as my conceptual framework points out, there is not a linear relationship between these constructs. Thus, I focused each phase of inductive analysis on one of these constructs, layering in information from other phases by writing narrative memos. In this way, I made refinements to earlier phases of data analysis as findings emerged in later phases, as is common in inductive analyses (Strauss & Corbin, 1998).

Phase 1: Understanding PTs' Identity as Writing Instructors

Because the concept development of persons-in-practice cannot be understood apart from one's social positioning and epistemic stances, I turned my analytical attention to data that would reveal PTs' viewpoints as writing instructors. I analyzed PTs' accounts of their views of high quality writing instruction, which were written over the course of their methods course and student teaching semester, as well as their post-observation debriefs, co-planning sessions, and peer reflections on a writing lesson, for evidence of their social positioning and epistemic stances about teaching, students, and writing. In particular, I attended to PTs' *epistemic claims*, because these are bald assertions about teaching, students, or writing (Horn & Kane, 2015; Horn, Kane & Wilson, 2015). I used constant comparative analysis (Miles & Huberman, 1994) to compose initial memos on PTs' social positioning within their figured worlds, as well as how PTs'

epistemic claims related to scientific concepts propounded by their figured worlds of writing instruction, with particular attention to MSTV.

Phase 2: Understanding PTs' Figured Worlds of Writing Instruction

To better understand each student teaching placement as a figured world of writing instruction, I drew primarily from my interviews with CTs. I transcribed these interviews, coding them for CTs' epistemic claims on students, teaching, and writing. I refined my findings about the figured worlds through additional coding of CTs' epistemic claims in end-of-placement feedback discussions and any post-observation debriefs they attended. As in other analytic phases, I wrote memos on these figured worlds, layering in findings from earlier phases, such as PTs' descriptions of their social positioning within each figured world.

Phase 3: Understanding PTs' Instructional Activity

To understand PTs' practice as writing instructors, I began by locating field notes in which writing instruction took place, as defined by either the PT or the university mentor (author). Over the course of my weekly observations of each PT, Celia taught writing eight times, and Elise taught writing five times. I divided my field notes from PTs' writing lessons into instructional segments, according to the transitional phrases that PTs used during class. When questions about segmentation arose, I consulted PTs' lesson plans and/or debriefing sessions for clarification. Using grounded theory (Glaser & Strauss, 1967), I categorized each instructional segment's relationship to its potential to make student thinking visible. Using grounded theory to categorize different approaches to MSTV is critical to a situative account of learning, because it draws analytical attention not only to canonical versions of a teaching practice, but also to developmental, partial attempts (Horn, Nolen, Ward & Campbell, 2008). Categories that emerged included class logistics; opportunities for student thinking, but no visibility to others

(i.e., silent reading); opportunities for students to respond, without adequate time for thinking (i.e., quick initiation-response-evaluation [I-R-E] discussions; Cazden, 1988); and making student thinking visible with adequate time for students to develop thoughtful responses (i.e., small group discussions). This phase gave me a broad view of PTs' practice as writing instructors with respect to MSTV.

Phase 4: Understanding PTs' Concept Development about MSTV

To understand PTs' concept development about MSTV through practice, I focused on PTs' discussions about student thinking in post-observation debriefs, co-planning sessions, and peer reflection sessions. I used a unit of analysis called Episodes of Pedagogical Reasoning (EPRs), which are moments when teachers elaborate some reasoning, explanation, or justification as they discuss teaching problems or decision-making (Horn, 2005). Changes in topic signal the beginning and end of EPRs. Since PTs often conceptualized MSTV as selecting an instructional activity that would make students' thinking available, such as a gallery walk or a peer editing session, I broadened my initial coding scheme to include EPRs about selecting instructional activities. In this way, I accounted for descriptions of activity that were related to MSTV from the emic perspective of PTs (Miles & Huberman, 1994).

Within these EPRs, I sought to attend to concept development as an interplay between scientific and spontaneous concepts. To do so, I operationalized spontaneous concepts as *representations of practice* and *problem frames*. *Representations of practice* are descriptions of real or imagined classroom activity (Horn, 2010; Horn & Kane, 2015; Horn, Kane & Wilson, 2015). They are an initial layer in which PTs frame the complexities of classroom activity, and thus they provide a window into spontaneous concepts. *Problem frames* also operationalize spontaneous concepts, because they reveal how PTs frame instructional problems. I also attended

to *epistemic claims*, or bald assertions about students, teaching, and writing (Horn & Kane, 2015; Horn, Kane & Wilson, 2015), because epistemic claims can reveal how participants frame and reframed their practice. I tried to differentiate between epistemic claims that indexed spontaneous concepts and those that referenced scientific concepts by using the following heuristic: Spontaneous concepts are framings of particular situations, while scientific concepts are framings and reframings in terms of generalizable abstractions (Vygotsky, 1986).

However, because concepts are—by their very nature—interrelated, consistent differentiation proved difficult. Thus, as is common in inductive analysis (Strauss & Corbin, 1998), I created a new code, *reframings*. *Reframings* are instances in which participants used *epistemic claims* to frame and reframe their *representations of practice*. In *reframings*, *representations of practice* and *epistemic claims* were typically closely linked. These tight linkages can signal a negotiation between scientific and spontaneous concepts, and thus *reframings* mirror the dialogism inherent to concept development. Simultaneously, I coded for which participant contributed what to a discussion, since I—as the university mentor—and the CT represented different and overlapping figured worlds in which PTs learned to teach writing.

As in other analytic phases, I wrote narrative memos about PTs' concept development around MSTV. Using constant comparison, I layered in data from previous analytic passes and looked for disconfirming evidence. These memos provided within case comparisons, because I compared each PT's concept development across their middle and high school student teaching placements. They also provided cross-case comparisons, since I compared Elise's concept development about MSTV with Celia's. Thus, I tested and refined findings about how PTs' developed their concepts about a focal teaching practice, *making student thinking visible*, through their student teaching practice.

Phase	Code	Example	Purpose of Code
One: Understanding PTs' Identities as Writing Instructors	Epistemic Claims <i>*Bald assertions about teaching, students, or writing</i>	"I don't want to just sit there and like, lecture. Because that's telling more than teaching." (Elise, Co-planning session, February 5, 2014)	To understand PTs' epistemic stances on teaching, students, and writing
Two: Understanding Figured Worlds of Writing Instruction	Epistemic Claims <i>*Bald assertions about teaching, students, or writing</i>	"[Dodd students] suffer tremendously from a sense of not being good enough." (Ms. Ward, CT Interview, Feb. 27, 2014)	To understand epistemic stances that characterized figured worlds of writing instruction
Three: Understanding PTs' Writing Instruction	Class logistics	Announcements at the beginning of class	To categorize PTs' writing instruction with respect to MSTV
	Opportunities for student thinking without visibility to others	Sustained silent reading; independent writing	
	Opportunities for student thinking without adequate response time	Some I-R-E discussions	
	Opportunities to make student thinking visible with adequate response time	Small group discussions; Student presentations	
Four: Understanding PTs' Concept Development around MSTV	EPRs about student thinking or PTs' activity selection <i>*Moments of talk in which PTs provided reasons and justifications for teaching decisions</i>	Discussions ranging from single utterances to multi-party constructions which were several minutes in length	To identify discussions where PTs reasoned about student thinking and its relationship to instruction
	Epistemic Claims <i>*Bald assertions about teaching, students, or writing</i>	"It didn't seem like a moment when they needed to be thinking." (Celia, Post- observation debrief, March 28, 2014)	To understand the generalizations (spontaneous concepts) and abstractions (scientific concepts) that PTs connected to

			their practice
	Problem Frames <i>*Participants' framings of instructional problems</i>	“They all want to participate.” (Celia, Post-observation debrief, March 28, 2014)	To understand how PTs framed spontaneous concepts about problematic aspects of instruction
	Representations of Practice <i>*Descriptions of real or imagined classroom activity</i>	“The seniors were semi-engaged or like asleep.” (Celia, Post-observation debrief, March 28, 2014)	To understand how PTs represented the practice from which spontaneous concepts arise
	Reframings <i>*When participants revise epistemic claims they have made about representations of practice</i>	Celia: [The student's] answer was the same as the question. That won't cut it. She was looking at her phone. Britnie: I don't think she had enough time to answer. (Post-observation debrief, Feb. 13, 2014)	To understand how participants used spontaneous and scientific concepts to frame and reframe classroom interaction.

Table 2. Analytic Codes, Definitions, and Purposes, by Phase.

Findings

PTs' concept development around MSTV differed across the figured worlds in which they learned to teach writing. In figured worlds that valued ambitious approaches to writing instruction, the focal PTs and I used MSTV as a way to reframe their visions of the teacher-student relationship. Elise and Celia both struggled to strike a balance between building relationships with students and supporting students in intellectually rigorous thinking. Viewing classroom events in terms of concepts entailed by ambitious versions of MSTV helped Elise to a more robust concept of student-centered instruction. Reframing classroom interaction in terms of concepts entailed by MSTV helped Celia to a more ambitious concept about what it means to keep students engaged. In this way, PTs began to see how concepts entailed by MSTV could work in conjunction with scientific concepts about teaching to yield new visions of classroom

practice. As Vygotsky (1987) might put it, MSTV's conceptual entailments became scientific concepts that PTs and their university mentor (author) used to negotiate, frame, and interpret PTs' spontaneous concepts. PTs had initially built spontaneous concepts in terms of other potentially ambitious scientific concepts about teaching, such as the idea that classrooms should be student-centered and that students need to be engaged. In conversation, then, concepts associated with MSTV helped PTs to build concepts about their roles in the relational and intellectual work of teaching.

In figured worlds of that valued traditional approaches to writing instruction, however, PTs' identities and epistemic stances as writing teachers afforded differing opportunities for them to use MSTV to negotiate more robust concepts about writing instruction. In her middle school placement, Celia continued to reframe her understanding of student engagement in terms of the need to make student thinking visible. Elise, however, eschewed ambitious approaches to writing instruction. Instead, she taught literature and decontextualized grammar, as her own identity as a writing instructor and the figured world of her middle school placement would anticipate.

In the sections that follow, I explain (1) my findings on PTs' identities and epistemic stances on writing and writing instruction; (2) the epistemic stances that characterized PTs' figured worlds of writing instruction; (3) PTs' practice as writing instructors; and (4) PTs' concept development in their figured worlds of writing instruction.

Focal PTs' Identifications with Writing and Writing Instruction

Celia: Modeling process and strategies. During her student teaching semester, Celia was in her senior year as an English and Education double major at Vanderbilt University, as is required by the teacher certification program. She had no prior teaching experience and described herself as a struggling

analytical writer until she entered college. For her, strong writing was about communicating clearly in a fresh voice. Hence, she looked for clarity, style, and readability to determine the quality of writing. As a future writing instructor, Celia described herself in ways that align with the literature on high quality writing instruction (Kane, 2015a): She consistently emphasized modeling the writing process and teaching students writing strategies.

Elise: Grammar and the writing process. Elise had completed her undergraduate degree in English at another private university in the southeast and had immediately entered a one-year masters degree program to receive her teaching license from Vanderbilt University. She had no prior teaching experience, but Elise frequently referenced her work as a tutor in a local writing club for K-12 students. Elise considered herself a writer, but noted that she wrote because she “had to” much more often than because she wanted to.

Elise consistently evinced an epistemic stance on writing and writing instruction that was a hybrid between traditional and more ambitious approaches to writing instruction. She described writing as a process and a powerful means of communication—a stance the literature on effective writing instruction would applaud—but also claimed that writers are born rather than made—a traditional stance. Her descriptions of high quality writing instruction focused on ambitious approaches, such as emphasizing the purpose of writing and writing multiple drafts, but also revealed a more traditional emphasis on grammar and mechanics: Elise defined good writers as those who spell correctly, use conventions correctly, and go through several drafts of editing.

PTs’ Figured Worlds of Writing Instruction

Celia and Elise completed their student teaching at two different sites: a high school, where they student taught from January until the end of February, and a middle school, where

they student taught from March until the end of April. I observed PTs’ instruction once a week. If PTs taught writing in that week, I asked to observe. If they taught writing more than once during a week, we selected a time based on what was most advantageous for both of our schedules and would allow us to debrief immediately after the observation. In one case, this meant that I observed Celia twice in one week. Table 3 provides a chronology of my observations of PTs’ instruction.

	High School Student Teaching Placement							Middle School Student Teaching Placement							
Wk.	Jan 13	Jan 20	Jan 27	Feb 3	Feb 10	Feb 17	Feb 24	Mar 10	Mar 17	Mar 24	Mar 31	Apr 7	Apr 14	Apr 21	Apr 28
C:					X X	X				X	X	X	X	X	
E:				X	X	X	X						X		

Table 3. A Chronology of PTs’ Writing Instruction Observations. “C” stands for Celia. “E” is for Elise. Observations of PTs’ writing instruction are marked with an “x.”

Celia’s high school: Valuing diversity and skills in AP Language and Composition.

Riverdale High School is a public, comprehensive high school in a large city. Celia’s CT, Ms. Sharpe, described Riverdale as a “premier” high school in the city and a “diverse school with very high standards,” although she lamented that the larger community did not view it in these terms. Demographic information on Riverdale and the other student teaching placements is provided below in Table 4.

	Riverdale High School	Dodd High School	Conifer Middle School
PT	Celia	Elise	Celia and Elise
CT	Ms. Sharpe	Ms. Ward	Celia: Ms. Donald Elise: Ms. Jeffries
Student Demographics⁶			
African American	55%	20%	5%
Asian	<5%	10%	10%
Hispanic/Latino	5%	5%	5%
White	35%	65%	80%
English Language Learners	<5%	<5%	<5%
Economically Disadvantaged	50%	20%	<5%
Percent Proficient or Advanced on State Test	60%	100%	90%

Table 4. Summary of Demographic Information in Student Teaching Placements.

Ms. Sharpe noted that Riverdale was diverse not only in terms of race or socioeconomic status, but also in terms of students' life experiences. She valued this diversity:

We want that multi-perspective interaction and dynamic happening in our extremely rigorous world of teaching and learning...The fostering of those things makes a lifelong learner, and that's what we're building. Internationally-minded lifelong learners. (CT Interview, Feb. 26, 2014).⁷

Ms. Sharpe taught Advanced Placement (AP) Language and Composition and International Baccalaureate (IB) English IV, noting that, "I'm not a writing teacher. I just teach people, and writing happens to be part of it." Instead, she valued teaching people strategies for "how to do things" in both reading and writing. Although both the AP and IB programs provide a number of prescribed writing tasks, Ms. Sharpe did not feel as though she were teaching to the test:

⁶ Data is from the Tennessee Department of Education. I have used their labels for racial/ethnic categories, rounding to the nearest five percent to preserve confidentiality.

⁷ For ease of readability, I have limited transcription markings to ALL CAPS for emphasis. Text within /slashes/ denotes overlapping speech, and = shows latching, which occurs when one speaker begins speaking before the first speaker pauses.

But the cool thing about AP, and IB especially, is that the tasks are things that they need to do in LIFE, at university, in the world beyond. So, to develop an argument is a real life situation, to analyze a piece of text is a real life situation that we all encounter, really daily...So, you know, doing research and synthesizing what we know to build interpretations or to further inquiry. Those are the kinds of things that I think are happening in my classroom...

When teaching writing, Ms. Sharpe stressed the importance of modeling and letting the process “last however long it needs to last.” Thus, Ms. Sharpe shared Celia’s commitment to modeling, the writing process, and teaching writing strategies. In these ways, the figured world of writing instruction at Riverdale was coherent with the writing methods course.

Elise’s high school: Supporting confident critical thinkers in AP Language and Composition. Like Celia, Elise’s main teaching assignment in her high school placement was AP Language and Composition. Elise student taught at Dodd High School, a magnet school with a sterling academic reputation. In English Language Arts, over 99% of students passed the state exam: Indeed, a student could not be admitted to the school unless he or she scored proficient or above on the state exam in middle school.

Elise’s CT, Ms. Ward, noted that the high performance expectations that characterized Dodd High School affected students as writers. For her, NCLB had “created a nation of kids looking for the right answer,” which caused students to struggle when asked to generate their own text or engage in critical thinking. Ms. Ward felt her students were terrified of not being “good enough,” and concluded that Dodd students needed to be “nurtured. They cannot be instructed” (CT Interview, Feb. 27, 2014).

In addition to nurturing students, Ms. Ward named *making student thinking visible* as a major goal in her teaching, recommending a book on the subject by Harvard's Project Zero (Ritchhart, Church & Morrison, 2011). Her board was adorned with a sign reading, "We will make our thinking visible," and she noted that one important means of encouraging students to make their thinking visible was the use of graphics, flow charts, and drawings, which would depict how students were making sense of their writing strategies.

Thus, the figured world of writing instruction that Elise entered aligned with messages from her writing methods course, in which *making student thinking visible* was valued, and with her own stance on the importance of writing as a communicative process. However, it did not support her emphasis on grammatical conventions and spelling, which Ms. Ward placed "at the bottom of the list" in terms of importance in writing instruction (CT Interview, Feb. 27, 2014).

Celia and Elise's middle school: Influenced by traditional state tests. Both Celia and Elise student taught at Conifer Middle School during the second half of the spring semester. Situated in a wealthy suburban district, almost 80% of students at Conifer were classified as White. Like their high school placements, Celia and Elise's middle school placement courses were capped by an end-of-course test. Unlike the high school AP and IB exams that required persuasive or expository writing, teachers at Conifer Middle School emphasized the need to prepare for a multiple choice test with a heavy emphasis on conventions and mechanics.

Celia's placement: Pressure to teach to the test. At Conifer, Celia taught with Ms. Donald. Ms. Donald's writing instruction was characterized by a concern that her students continue to pass the state test at high rates. She explained:

There is SO MUCH PRESSURE for us to produce those test scores. I really cannot explain the pressure. Reading and Language Arts at Conifer has been the top in the

county for the last several years too. So um you know, we have very high achieving students, but I mean, the message is loud and clear. Those test scores HAVE TO—we have to show growth, and we have to show high achievement. It's like, a lot of pressure since we're at the top to maintain that and you know, we're supposed to be teaching bell TO bell, and it's all about that... (CT Interview, April 24, 2014)

This pressure shaped Ms. Donald's writing instruction: "It's sad to say, but you know, writing and delivering a speech—it's in the standards, you know it's in the curriculum, but. You know, it's not gonna be on that test." She noted that her own teacher education program—from "years and years ago"—had emphasized *not* teaching to the test, but "Well, the kicker of the football team is not gonna go to practice and practice throwing the whole time." She described past years in which she did not have to "live and die" by the district's scope and sequence, noting that she used to begin the year with a poetry unit in order to solidify her students' understanding of how to write with images. This year, however, her poetry unit would be relegated to the weeks after the state test.

Elise's middle school: Modeling and grammar. Ms. Jeffries was Elise's CT at Conifer Middle and also the English department head. Unlike Ms. Donald, Ms. Jeffries did not feel that her instruction was determined by state testing, although she admitted that parents were particularly vocal about the need to keep test scores high (CT Interview, April 25, 2014). She described a writing instructional program influenced by her own love of writing whimsical, funny, Southern short stories, often modeling the work of a writer by "going through the process with them." She also highlighted the use of mentor texts as a support for students' descriptive language. She then taught students how to put that descriptive language into the format for which the state or county asked. Thus, like Elise, Ms. Jeffries described aspects of writing instruction—

such as the use of mentor texts and modeling—that were strongly represented in the writing methods course, though the writing “formats” that state and county tests would require were not far from her mind.

When confronted with a sample of student writing, however, Ms. Jeffries focused on grammar and mechanics. In her initial response to a seventh grade student’s essay, which was given to Elise, Celia, and all of their CTs, Ms. Jeffries noted problems with sentence fragments, run-ons, their/there, commas, spelling, sentence variety, dependent clauses, and subjunctive mood, before ending with, “There’s probably ten more grammar things on here” (CT Interview, April 25, 2014). This is particularly notable given that Elise’s CT at Dodd High School, Ms. Ward, acknowledged the problems with grammar and conventions, but highlighted the student’s great use of imagery and potential as an excellent storyteller. Thus, Ms. Jeffries was much like Elise in that she emphasized certain aspects of ambitious writing instruction, such as modeling and using mentor texts, but was also greatly concerned with grammar and mechanics. They both had a hybrid traditional-ambitious stance on writing instruction, which sometimes complemented and sometimes conflicted with the figured world of the writing methods course. Table 3 summarizes this information.

Pseudonym	Experience as Writing Instructor	Identification with Writing and Writing Instruction	Figured Worlds of Writing Instruction		
			Methods Course	High School Placement	Middle School Placement
Celia	<ul style="list-style-type: none"> *No formal experience *Senior in undergraduate secondary English education program *Double English and education major, as required by the university 	<ul style="list-style-type: none"> *Struggling writer until college *Strong writing=clear communication in a fresh voice *Emphasized modeling the writing process and teaching writing strategies (ambitious) 	Ambitious	<ul style="list-style-type: none"> *Ambitious *AP Language and Composition (10th grade) *IB English IV (12th grade) 	<ul style="list-style-type: none"> *Traditional *Language Arts (7th grade)
Elise	<ul style="list-style-type: none"> *No formal experience *First-year masters student in secondary English education program *Completed English major at another university *Acted as a writing tutor at a local writing club for middle school students 	<ul style="list-style-type: none"> *Writing is a process for communication, but writers are born not made. *Strong writing=correct spelling and conventions, must go through several rounds of editing (ambitious-traditional hybrid) 	Ambitious	<ul style="list-style-type: none"> *Ambitious *AP Language and Composition (11th grade) 	<ul style="list-style-type: none"> *Traditional-Ambitious Hybrid *English (8th grade)

Table 5. Summary of Focal Preservice Teachers’ Identities and Figured Worlds of Writing Instruction.

Understanding PTs’ Concept Development through Practice

In the following, I describe my findings about how PTs developed concepts about ambitious writing instruction through a focus on MSTV, beginning with PTs’ high school placements, since PTs began their student teaching in high schools.

Elise: MSTV and relationally responsible, student-centered teaching. In her time at Dodd High School, Elise and I used ideas entailed by MSTV as scientific concepts—generalizable frames—with which she might make sense of ambitious approaches to writing instruction. Elise’s concepts about MSTV co-developed with her understanding of concepts

about being a caring, student-centered teacher. This was most evident toward the end of Elise's time at Dodd High School, so I highlight a debriefing meeting that occurred then. Elise, Ms. Ward, and I attended.

On February 19, 2014, Elise taught an AP Language and Composition lesson on making connections between claims and evidence in argumentative writing. In line with the figured worlds of writing instruction suggested by both Elise's high school placement and her writing methods course, Elise asked students to read an argumentative essay by a professional author as a mentor text. In small groups, students then identified a claim the author made, the evidence for that claim, and how they connected the claim to the evidence. After writing this information on chart paper, student representatives from each group presented it, and Elise led a class discussion on the presentations.

During the post-observation debriefs, neither Celia nor Elise generally framed their representations of the classroom in terms of MSTV, and this debrief conversation with Elise was no different. When asked how she felt the lesson went, Elise simply said "ok" (turn 3). By asking students to present their work and holding a discussion afterward, Elise had made student thinking visible. However, the discussion had been unfocused and often unclear in terms of what Elise hoped students would learn from their presentations and discussion. I wanted to support Elise in arriving at a more robust scientific concept related to MSTV, which included an understanding that once students' thinking is made visible, teachers need to facilitate its movement toward particular learning goals. Thus, I asked: "So what is it—when they were sharing, what did you hope they would get out of that?" (turn 16).

Instead of answering this question directly, Elise pointed to a number of moments that she did not know how to frame as spontaneous concepts. For instance, she noted, "I really

struggled with group three, because it [their presentation] didn't really work. And I didn't know how to say that" (turn 34). Thus, Elise had built a vague spontaneous concept about her activity-in-the-world: Students' presentation "didn't really work." She was aware of the inadequacy of this framing of classroom interaction, since she "didn't know how to say that" to students. In her next turn, Elise continued to build spontaneous concepts by describing classroom interaction. Notably, she framed these interactions in terms of the relationships she was building with students:

38 Elise: Because [a student] is looking at me with these big doe eyes, she's the one I went to see the play and everything, and I just have trouble shootin' her down, and I don't know why.

39 Ms. Ward: 'Cause you still want 'em to like you. /We all do want that./

40 Elise: /I'll get over it./

41 Ms. Ward: We all do want that.

Thus, Ms. Ward interpreted Elise's framing of classroom interaction in terms of a concept she held about teaching, "you still want 'em to like you. We all do want that" (turn 39, 41). Elise, however, interpreted her work in terms of a different concept about teaching: Teachers should be emotionally supportive of students.

42 Elise: I don't want to discourage 'em. After that whole [student who passed away] incident, I feel like Dodd students need a little affirmation.

43 Ms. Ward: They do. They also don't need you to tell 'em they're right when they're wrong.

44 Elise: True=

45 Ms. Ward: ='Cause they need to have feedback that's gonna lead them to more

success.

46 Elise: True.

Thus, Elise revealed a central aspect of her struggle to make use of students' thinking: How could she be protective of the emotional relationships she had built with her students, while publically disqualifying their thinking? When Elise perceived that students' presentations "didn't really work" (turn 34), she elected to allow those contributions to stand, unremarked, in light of the spontaneous concept she had built about supporting student relationships: "I feel like Dodd students need a little affirmation" (turn 42). The figured world in which Elise taught likely influenced Elise's choice in building this spontaneous concept, since Ms. Ward frequently described her students as emotionally vulnerable about their intelligence and self-worth. In our interview, Ms. Ward said:

[We have] Lots of really smart children here, who suffer TREMENDOUSLY from a sense of not being good enough. Even though they're all bright, they don't think they're good enough...They all think that somewhere there's just gonna be one right answer. Because that's what NCLB has created. It has created a nation of kids looking for the right answer, and when you ask them to write something that comes from—that they have to generate all of it. It's like—they're frozen...They're afraid of being wrong, they're afraid I'm gonna take out my red pen and say, "Oh, this is terrible. F." Because that's the way it's always been. So, they have to be nurtured, they cannot be instructed. (CT Interview, Feb. 27, 2014)

In this instance, however, Ms. Ward, challenged Elise's spontaneous concept about student-teacher relationships. She agreed with Elise that students need "a little affirmation," but reframed Elise's claim in terms of the intellectual goals of teaching: "They do [need affirmation]."

They also don't need you to tell 'em they're right when they're wrong. 'Cause they need to have feedback that's gonna lead them to more success" (turn 43, 45). Thus, Ms. Ward refined Elise's spontaneous concept about the need for teachers to be emotionally supportive of students, placing this idea next to a scientific concept, or an abstraction that could generalize across teaching situations: Students need feedback "that's gonna lead them to more success" (turn 45). After discussing shortcomings in other groups' presentations, Ms. Ward offered a suggestion for how Elise might respond to students' thinking so that class discussions might accrue toward particular learning goals.

62 Ms. Ward: The question you can always follow up with is, *((walks to lectern and turns it around))* if you need one, is *((points to sign taped to lectern))*.

63 Britnie: *((reads sign))* "What makes you say that?"

64 Ms. Ward: Yeah. It forces them to look at, What are we saying, and why is it important? It is just talk to hear ourselves talk, or is there some point behind it. Because too often—we all do this—especially when we're in a hurry, we get worried about time and stuff, and we—we tell 'em. Why it's right or wrong, but if we can get them—if we can pause long enough—if we can get them to do it, then it's a lot more meaningful.

65 Britnie: Right. The point is for the student to be doing the thinking, and you're just allowing them.

66 Ms. Ward: You're guiding them. Restating.

Thus, Ms. Ward offered a suggestion for future teaching work in light of yet another scientific concept about teaching: The point is for the student to be doing the thinking, and the teacher guides them (turn 64, 66).

Interestingly, this scientific concept butted up against scientific concepts with which Elise had previously identified and which were a defining feature of Elise’s teacher education program: the need to be student-centered. To understand Elise’s development of a more robust concept surrounding “student-centered teaching,” we need to look at prior examples of her practice and her thinking about that practice. Two weeks earlier, Elise, Ms. Ward, and I had discussed plans for this lesson. Elise had been unsure about whether she wanted to model the process of making connections between a claim and evidence, noting, “ ‘Cause I don’t want to just sit there and like, lecture. Because that’s telling more than teaching” (Co-planning Session, February 5, 2014). Indeed, in early observations of her writing instruction, Elise often provided students with a task and then did not intervene, allowing her high school students—in one case—to write with a partner for fifty-seven uninterrupted minutes (Field Notes, February 5, 2014). Taken together, Elise’s tendency to set students up with a task and let them go, to offer little feedback on their presentations, and to be suspicious of teacher modeling, suggest that her initial conceptualization of the scientific concept “student-centered instruction” led her to envision the teacher’s role as almost entirely non-interventional.

This aligns well with theories of natural development, which dominated writing instruction research in the 1980s (Calkins, 1981; 1983; Graves, 1981). However, these theories have been questioned on methodological grounds (Hillocks, 1986) and critiqued for providing too little assistance for struggling writers or writers outside the culture of power (Delpit, 1995; Graham & De La Paz, 2002). After Ms. Ward and I suggested the importance of teacher guidance, Elise began to reframe her vision of the scientific concept of student-centered teaching:

67 Elise: Would I be correct in saying that there's a tricky balance in giving them supports, tools, like language tools, and doing the work for them?

68 Britnie: Yes. There's a point where your scaffold can become an enabling. And you don't wanna enable them. Yeah. Yeah. Absolutely. But you also don't want to leave them unsupported. So you're doing a dance.

Thus, Elise initially framed her instructional practice in terms of two concepts about the student-teacher relationship: Teachers should take relational care of their students, and teachers should teach in student-centered, non-interventionist ways. By bringing scientific concepts about MSTV into the discussion, Elise had to negotiate her understanding of these other concepts in light of concepts related to MSTV, reframing her sensemaking about the class discussion she had led. Initially, Elise had seen this discussion as having gone "ok." She then reframed this interpretation as questionable, since she had not known how to deal with unexpected student responses given her understanding of the teacher's need to be emotionally supportive of students. Our suggestions about how to provide guidance in class discussions required further refinement in her eyes, since they contradicted her concept of student-centered instruction. To Elise, the guiding questions we suggested seemed overly-invasive and teacher-centered.

Elise's final question, about the "tricky balance" between giving students supports and enabling them, offered a new concept about student-centered teaching that Elise could use, in the future, to understand her own role in the classroom: Teachers could care for students by giving them feedback that would lead them to more success. Thus, Elise negotiated concepts entailed by MSTV in light of other concepts she had developed about teaching. This negotiation helped her reframe spontaneous concepts she was deriving from classroom interaction. This re-framing, in turn, helped to ground her newly negotiated scientific concepts. Notably, Elise did not bring

scientific concepts related to MSTV into the conversation herself. She needed the support of more expert others to understand how the many scientific concepts she held about teaching could work together to reframe her vision of what it means to teach in ways that are student-centered and relationally responsible.

Celia: Managing student “engagement.” Like Elise, Celia used MSTV to negotiate her understanding of scientific concepts about relationally effective and intellectually rigorous teaching in her high school placement. Celia wished to maintain her authority and keep students “engaged” through strong classroom management. This stance was buoyed by Celia’s short history at Riverdale High School. After her initial visits to the school during the semester prior to her student teaching, a Riverdale student told a staff member in the teacher education program that students were not taking Celia seriously. As her university mentor, I discussed this concern with Celia, and Celia’s demeanor and approach to students changed dramatically once she formally entered Riverdale High as a student teacher. Celia explained that she was following her CT Ms. Sharpe’s advice in creating a teaching persona, since Ms. Sharpe was well liked and modeled a snappy, sarcastic persona in the classroom.

60 Celia: I’m learning. They [students] do well with sarcasm. I’m just like, sass.

61 Britnie: Well, they’re used to it with Ms. Sharpe.

62 Celia: Ms. Sharpe was like, if you’re going to get anywhere with them, you need to have personality. Like, don’t just be the nice teacher. (Post-observation debrief, February 13, 2014)

Concepts about not being the “nice teacher” and concerns about student manipulation, then, highlighted scientific concepts about the importance of classroom management for Celia. From this perspective, it makes sense that Celia interpreted her classroom practice in terms of

spontaneous concepts in which student “engagement” was about paying attention. Celia’s micro-history of student-teacher relationships at Riverdale influenced her concept development.

Although the figured worlds of writing instruction that Elise experienced at Dodd and Celia experienced at Riverdale supported different scientific concepts about students, we used concepts entailed by MSTV in both contexts to reframe and refine Elise and Celia’s spontaneous concepts about student-teacher relationships. As was the case for Elise, Celia did not frame her writing instruction in terms of the need to make student thinking visible, so I brought that frame into our discussion:

44 Britnie: So...how do you think your response to students’ thinking in the discussion influenced students’ learning about writing?

45 Celia: ...I had them go around and say what their thoughts were, and you could kind of tell that some people were gauging what other people were saying, and building off of that, and being like, “Oh, wait.” Like. “I had to work on that too,” and there were a lot of really great points...And I tried to push back when someone was saying something generic, like Samantha at the beginning, she’s like, “I learned how to write an argument,” and I was like, “That’s not gonna cut it.” Like, that’s literally what I asked you in question form...

46 Britnie: Yeah. There was another time, though, I think she didn’t have enough time, so she just kinda said something.

Thus, Celia’s framing of the student’s response as “literally what I asked you in question form,” subtly implied fault or disobedience on the student’s part, which Celia sought to control by “pushing back” (turn 45). I tried to reframe Celia’s spontaneous concept about this student’s

inadequate response in terms of the quick pace of Celia's questioning. By suggesting that the student did not have enough time to process and respond thoughtfully to the question, I tried to make connections between the student's lackluster response and the ways that Celia had supported the student in making her thinking visible. In the next turn, Celia adopted this reframing of her initial spontaneous concept of Samantha as at fault:

47 Celia: Yeah. I think I need to watch out with her, 'cause I only ever call on her when I notice that she's on her cell phone, but I might just let her know that she is next. *((writing notes on our debrief discussion))*

48 Britnie: Yes. Right. Because what that does is draws attention to, "I see you on the phone, but I'm giving you a fair shot. I want you to actually think about this question."

Thus, Celia admitted that her decision to call on Samantha had little to do with a desire to make student thinking visible and more to do with classroom management. Later in this same debrief, Celia again connected her patterns of making students' thinking visible to her desire to develop classroom management techniques.

56 Celia: I know the girls are taking notes, they're writing things down, but I have no idea what's going on with those guys, because they don't take notes, and like, probably zoning out in wonderland, so I make sure that they're actively engaged, but I guess I definitely have to provide opportunities for the girls to participate, be it through writing or calling on them more. Because I shouldn't have called on Nick six times. My bad *((laughs))*.

57 Britnie: It's nice of him to take those notes for you. *((laughs))*

In this excerpt, Celia revealed a scientific concept about the importance of students being “actively engaged.” Yet Celia seems to use “engagement” to mean “looking attentive.” She framed classroom interaction in terms of the following spontaneous concept: The girls were engaged because they were taking notes, but the boys were “probably zoning out in wonderland” because they took no notes. In light of this spontaneous concept, Celia had elected to ask academic questions of students who seemed disengaged, either because they were looking at their cell phones (like Samantha) or because their body language did not appear “engaged.”

For instance, Nick, to whom Celia referred above, appeared to be day-dreaming and disengaged, frequently placing his head on his desk. To keep him “actively engaged,” Celia called on him, using academic questions, six times during a class discussion. In this debrief, Celia began to question this practice, realizing that she should not have called on Nick so many times.

Yet she did not come to this conclusion by herself: Nick had been taking a tally of the number of times Celia called on him, and he had eventually refused to answer her question on the grounds that he was being disproportionately called upon. Thus, Celia’s use of academic questions as a management technique was apparently noticeable to the students as well. Nick had found a way to implicitly question Celia’s understanding of engagement: He used his tally to prove that he was indeed paying attention, but simultaneously refused to make his academic thinking visible. In the language of concept development, Celia framed her spontaneous concepts about her work in terms of a scientific concept about the need for teachers to make sure students look attentive. This is likely why she understood Samantha’s lackluster answer as the result of inattentiveness and described “the boys” as disengaged, needing to be reined in through questioning.

Perhaps this is also why Celia was proud of the “sassy” teaching persona she was developing: It supported her in her goal of keeping students “engaged.” However, using academic questions to maintain classroom control was having adverse effects in terms of supporting an intellectually rigorous classroom. Samantha had not had time to formulate a thoughtful response to Celia’s question, and Nick had refused to answer it. Thus, we worked to reframe Celia’s questioning technique in light of the need to make student thinking visible, a scientific concept about teaching. I concluded with a suggestion for how Celia’s scientific concept about the need for a “snappy” teaching persona might co-exist with MSTV. Celia signaled her agreement by noting that the need to achieve this balance “is a big one” and drawing stars all over her notes to highlight its importance:

- 71 Britnie: Yeah. I just see one thing to watch even in this instance, is—in the
snappiness, is there still time to think. Which is that wait time thing. Um.
- 72 Celia: Which is a big one. Stars! Stars all around. *((Draws stars on the notes she is taking))*...

In both cases, Celia and Elise had derived scientific concepts about teaching from their micro-histories within the figured worlds of their high school student teaching placements. For instance, Elise drew upon a scientific concept that students need emotional affirmation, and Celia framed classroom interaction in terms of the need to keep students attentive. They attempted to use their writing instruction (activity-in-the-world) to ground those scientific concepts, creating spontaneous concepts that framed their work in particular ways. However, the scientific concepts they used to frame their spontaneous concepts sometimes created interpretations at odds with other scientific concepts about teaching they encountered in both their writing methods courses and their ambitious high school placements. Together, then, we used concepts related to MSTV

as scientific concepts with which Elise and Celia might negotiate other scientific concepts to develop concepts about intellectually rigorous classrooms. As we will see, the story was somewhat different in more traditional figured worlds of writing instruction.

Elise and Celia in traditional figured worlds: Different trajectories. Elise and Celia's writing instruction changed dramatically when they left their high school student teaching placements and entered their middle school placements at Conifer Middle. As figured worlds, both middle school classrooms focused on preparation for a state test with a heavy emphasis on grammar, conventions, and mechanics—to the exclusion of authentic opportunities for students to compose. This focus was particularly evident given that Elise and Celia entered these placements during the last half of the spring semester, when test preparation was considered to be most crucial.

Celia, whose identity as a writing instructor conflicted with the figured world of Ms. Donald's classroom at Conifer Middle, continued to use concepts entailed by MSTV as a scientific concept through which she could reframe and refine spontaneous concepts about what it means for students to be engaged. Elise, on the other hand, had epistemic stances on writing instruction that aligned with the figured world of writing instruction found in Ms. Jeffries's classroom at Conifer. Interestingly, this alignment limited Elise's opportunities for teaching writing and thus her opportunities to develop concepts around MSTV in writing instruction. Because Celia's concept development about student engagement continued across contexts, we will continue telling her story before returning to Elise.

Celia: Developing concepts about student engagement in a traditional figured world. At Riverdale High School, Celia and I had used ideas related to MSTV as scientific concept through which Celia could negotiate her understanding of student engagement, by which she meant making

sure students had attentive body language. We reframed Celia’s spontaneous concepts about student engagement in terms of the need to make student thinking visible, and Celia had begun to differentiate between asking questions for the purposes of intellectual development and asking questions for classroom management. These opportunities for concept development arose in the context of several ambitious approaches to writing instruction, in which Celia had—for example—asked students to collaboratively analyze mentor texts and to peer edit one another’s work, supporting students in the creation of a community of writers.

Thus it was surprising that, in my first observation of Celia’s writing instruction in her middle school placement, Celia appeared to abandon her commitments to ambitious writing instruction—which she had both articulated and displayed—in favor of a more traditional focus and style: At Conifer, Celia taught decontextualized grammar exercises in an I-R-E format (Cazden, 1988). In the following illustrative excerpt from my field notes on Celia’s writing instruction, Celia began by pointing to a sentence on a Prezi slide, “Mrs. Brown recommends the book to the class.”

Celia: In this case, *the book* is the direct object. Who is the subject?

Students: *((choral response))* Mrs. Brown.

Celia: What is she doing?

Students: *((choral response))* Recommending.

Celia: To whom?

Students: *((choral response))* The class.

Celia: So *the class* is the indirect object. *((Reads next sentence on Prezi.))* “The book’s pages were worn from reading.” Also, the pages belong to the book. Do they not? They do. So, you turn to 512. I should hear pages turning now. *((Pause))* Does that kinda makes sense, guys? I hear some

“whats.” There will be lots of examples [on page 512 of the workbook], so we will be able to practice this. (Field Notes, March 28, 2014)

Perhaps more surprisingly, Celia’s ambitious stance on writing instruction was not only invisible during our post-observation debrief, but she also defended this style of writing instruction vigorously. Celia began our debrief by framing her instructional challenges not in terms of the need to make student thinking visible, but in terms of coverage: “That was close. We just barely got it all done...the pace is a lot faster [here at Conifer Middle], and there’s no time to delve deep, so like I probably engaged them more than I should have, and I probably should have just trucked along” (Post-observation Debrief, March 28, 2014). Over the course of the next nineteen minutes and twenty-five seconds, Celia repeatedly justified her traditional approach to writing instruction in terms of the need to cover content within the time allotted, since making student thinking visible would take too much time, and “It didn’t seem like a moment where they actually had to be thinking about it” (Post-observation Debrief, March 28, 2014).

The following excerpt is my first attempt at reframing Celia’s need to “truck along”—or to cover one standard per day as Ms. Donald had asked—in terms of MSTV:

18 Britnie: This is what I think. I think the lesson I just saw is a great example of traditional instruction. They [students] aren’t being asked to do that much thinking. I know there’s a structure that exists here. Find ways within that structure to make them think.

19-21 Celia: I started out the speech unit and it was more like [Vanderbilt]-esque, and everyone was engaged because there was technology...So I tried to make it more engaging with a Prezi that moves. (Post-observation Debrief,

March 28, 2014)

As if in self-defense, Celia invoked her use of teaching strategies that were “Vanderbilt-esque” (turn 18), which highlighted her understanding that the writing instruction she just showcased and the instruction that her teacher education program would expect were in conflict. She depicted Vanderbilt as insisting upon engagement and defended her work on that ground. Celia claimed that “everyone was engaged because there was technology” (turn 19), and that she “tried to make it more engaging with a Prezi” (turn 21).

Thus, Celia relied upon the same spontaneous concept of engagement that she had implied during her high school placement: Student engagement looks like students paying attention. Given the conflict in her figured worlds of writing instruction, Celia improvised by using a “Prezi that moves” to “engage” students, a move that was permissible because of her concept of *engagement* (turn 21). Thus, Celia continued the work she had begun in her high school placement: She was differentiating a classroom management version of engagement, in which the teacher’s role was to support students in paying attention, from a version that would understand student engagement in terms of students’ intellectual response to a topic.

Developing this concept across placements had become more difficult, because Celia’s spontaneous concepts about what student engagement looked like differed substantially in her two placements. As Celia described, her struggles with student engagement at the middle school did not resemble those at the high school:

75 Celia: I didn’t have to worry about that [so many students wanting to be “engaged”] at the other placement, because they were seniors, and they were either semi-engaged or like asleep. Everything is much different here, it’s so much more frenetic, and if I call on them, they might be upset.

They all want to participate.

76 Britnie: More interpersonal pressure to call on them?

77 Celia: It's so weird that so many want to participate, so it's a different, a different energy flow. (Post-observation Debrief, March 28, 2014)

Thus, Celia was struggling to negotiate two concepts she had developed about the teacher's role: Teachers should be in control, and teachers should support students in paying attention. In this case, Celia's spontaneous concept of the classroom environment gave her conflicting information: Students were paying attention, but she was not in control. To help Celia resolve this conflict, I reframed Celia's struggle as a "good problem to have" (turn 78), connecting this instructional problem to the types of questions Celia was asking, or—in the language of this study—ideas related to MSTV:

78 Britnie: It's a good problem to have. It has to do with the kinds of questions you're asking. Today, as an introductory thing, you were asking a lot of quick, easy questions, and they are more than willing to answer that. As you start to ask questions about really getting them to analyze these speeches, you'll have a different participation pattern. It's good you've started a precedent of having them really engage with you.

Over the next three turns, Celia noted that her students were all "super sweet" (turn 79), and that:

80 Celia: ...I'm very thankful that I get to work with students who are like this, because I know there are students who are like, "No."

Here again, then, Celia referenced a spontaneous concept of students who are non-compliant and not "super sweet," implying that such students would be problematic. In the next turn, I attempted to reframe this spontaneous concept, again, in light of teachers' need to make students'

thinking visible. Instead of using the words MSTV, however, I tried to reframe a word Celia had used repeatedly, “engagement,” by pointing out the differences between students engaging with the teacher and students engaging with the ideas:

It has a lot to do with how you try to engage them. Another strategy you can always use of course is groups. I think the next goal is, you want them to engage with you, of course, but what you really want them to engage with is the ideas...SO, right now, I saw kids dutifully listening along, they're fine with that, but they haven't generated any of their own questions yet, because they haven't really worked with it. You wanna draw out their questions. (turn 81, Post-observation Debrief, March 28, 2014)

Thus, I reframed a spontaneous concept of students in the lesson. In this formulation, they were framed not as sweet and frenetically overly-engaged, but as “kids dutifully listening along,” which was problematic because they had not “generated any of their own questions yet” (turn 81). This reframing of students, which came about through the introduction of an idea related to MSTV as a scientific concept, supported Celia in envisioning a new role for students:

- 98 Celia: ASKING QUESTIONS, that's my big thing this time around. Last time it was teaching persona. Now it's asking questions.
- 99 Britnie: Right. And not just you asking questions=
- 100 Celia: =No. Them asking questions.
- 101 Britnie: YES! Right. Get them to wonder about the ideas. That's a big—that's a good big overarching goal, Celia.
- 102 Celia: It's a tough one.
- 103 Britnie: It is, but it's a good one, so I like it.

By the next week, Celia had considered her own epistemic stance with respect to the figured world of writing instruction represented by her teacher education program and that represented at Conifer Middle. For the first time, Celia began to frame spontaneous concepts of her writing instruction in terms of student thinking:

1 Britnie: Ok. So, what did you think about the lesson?

2 Celia: Ok. Um. The analyzing speech took longer than I thought it would, because I gave them more time to think, which they needed, but I had to cut out grading homework and answering questions about grammar, but I can move that until tomorrow... (Post-observation Debrief, April 1, 2014)

Celia then noted that the lesson went “better” because students had to “verbalize their thinking process” (turn 2, 4). A few turns later, Celia again framed spontaneous concepts from her classroom in terms of the advantages of MSTV:

4 Celia: ...Watching a classmate thinking made everyone else like contemplate— “Do I know? Could I answer this?” They are all quite engaged in terms of looking engaged, but they have that look on their face, where it’s like there are some understanding things they need to work on more.

5 Britnie: I think that’s really insightful.

6 Celia: Yeah, because your comment about getting them to think more. That really got to me this weekend, so I was like, “Ok. How do I do this more?” And the dynamics of the class have shifted. Fewer people are like, “Yeah! I wanna answer this,” but the ones who do, it’s like. I’m glad you actually do understand this.

In this excerpt, we see shifts in both Celia's understanding of *engagement* as a concept and in Celia's identity as a teacher. Instead of making connections between engagement and classroom management issues, Celia understood that students could "look engaged" without fully understanding. Notably, Celia developed this concept of *engagement* through spontaneous concepts of her classroom that were framed in terms of the need to make student thinking visible. For her, "watching a classmate thinking" made other students begin to consider their own understandings of classroom content.

We also see examples of a newfound identity for Celia, in which she emphasized the need to "get students to think more." She noted that she was "trying to provide more opportunities for students to think, but now pacing is a real concern" and that she felt "a lot more conflict here [at Conifer Middle]" because of the emphasis on coverage as opposed to "critical thinking." Thus, Celia's developing identity as a teacher who placed student thinking at the center was problematic in the figured world of writing instruction at Conifer Middle. Celia elaborated:

So, I'm struggling with pacing right now. And I understand that coverage is important, because it's coming down to the deadline [before the state test], but I feel like I'm doing the students a disservice, and I didn't realize there's such a fine line between coverage and allowing students to think. (Post-observation Debrief, April 1, 2014)

In response, our debrief discussion questioned and reframed the need to cover one standard per day, imagining a figured world of writing instruction for Celia's future in which Celia could "think about the standards as a skill with an arc, and you build along that arc" (Britnie, Post-observation Debrief, April 1, 2014). Celia herself felt that the Common Core State Standards would be supportive in this regard, since they build upon one another. She also expressed

gratitude, because she had just been hired by a principal who was thrilled to hear of Celia's commitment to "critical thinking" and had referred to instruction in Conifer Middle's district as "old school schooling."

Over the course of Celia's high school and middle school placements, then, she and I used ideas entailed by MSTV as a scientific concept that could be negotiated with other concepts about teaching—such as, teachers should support students in paying attention, and teachers should maintain control—in order to reframe Celia's spontaneous concepts of what was happening in her student teaching classrooms. Ideas related to MSTV were most salient for Celia as a means of refining her understanding of *engagement*, a process which began in her high school placement and became more urgent in her middle school placement, where the figured world of writing instruction contrasted sharply with that of her high school placement and her writing methods course. Indeed, Celia began to perceive a strong dissonance between the normative style of grammar instruction at Conifer Middle and the prerogative to make student thinking visible. As a result, Celia began to build a teaching identity around the need to MSTV, declaring in the final moments of her end-of-placement feedback conference: "...I want them to think more. Because if there's no thinking, then the learning is not as strong" (Celia, End-of-Placement Feedback Conference, April 29, 2014). Early in her middle school placement, Celia had declared that it was not necessary for students to be thinking during the introductory lesson of her speech unit. Given that, Celia's declaration, "I want them to think more," is a strong indication of the ways that our focus on MSTV supported Celia in concept and identity development around student engagement and the teacher's role in the classroom.

Elise: Epistemological alignment as an obstacle to concept and identity development.

Unlike Celia, Elise did not build a strong identity around MSTV at the end of her student teaching semester. In her high school placement, Elise, Ms. Ward, and I had used ideas entailed by MSTV as scientific concepts with which to reframe spontaneous concepts about Elise's writing instruction, particularly around what it looks like to facilitate students' thinking toward instructional goals without becoming overly directive or relationally insensitive. Thus, where Celia had used concepts related to MSTV to clarify her understanding of student engagement, Elise had used it to better understand student-centered instruction. However, neither this concept nor others related to MSTV in writing instruction continued to develop over the course of Elise's middle school placement.

Indeed, in her nine weeks at Conifer Middle, Elise taught writing for 11 minutes: Students analyzed the difference between a summary and a paraphrase of a short passage. Elise then asked students to summarize and paraphrase an article about the musical genre dub step for homework. This, then, was a clear example of using mentor texts and collaborative analysis to support students' understanding and use of writing strategies, all approaches that are lauded in the literature on high quality, ambitious writing instruction.

However, Elise did not define this short mini-lesson as writing instruction. From Elise's perspective—and that of her CT Ms. Jeffries—the lesson was state test preparation. Elise and Ms. Jeffries consistently differentiated between writing instruction and state test preparation, and the distinction led them to decide that Ms. Jeffries should teach the majority of state test preparation lessons. They also advised me to observe lessons in which state test preparation was not a focus. In the end, this meant that Elise's full time instruction focused on literature: She designed and taught units on both *The Diary of Anne Frank* and *To Kill a Mockingbird*, but did not incorporate writing instruction into these units. Near the end of the semester, Elise and Ms.

Jeffries decided to “nix” a writing lesson Elise had planned to teach in order to make more time for *To Kill a Mockingbird* and state test preparation (Field Notes, April 24, 2014). In this way, reading instruction and state test preparation took precedence over writing instruction in Elise’s middle school placement.

Elise did not suggest that this decision frustrated her. Instead, she saw it as a necessity, given the need to give *To Kill a Mockingbird* its due and to prepare for the state test. Elise and Celia’s reflection upon a past writing lesson, which occurred near the end of their student teaching placements at Conifer Middle, reveals Elise and Celia’s differing epistemic stances with respect to grammar instruction, which had consequences for their concept and identity development as writing instructors. Celia and Elise worked together to reflect upon writing lesson plans they had taught, but Elise did not have a writing lesson plan from her middle school placement. As she explained:

- 67 Elise: Yeah. Ok. So, this writing assignment was from last placement at Dodd [High School], because this placement I haven’t done any serious writing with them yet, because we’ve just been doing so much reading, and=
68 Celia: =Yeah, discussions. (Peer Reflection Session, April 15, 2014)

By this time in the year, Celia, as we have seen, had become critical of the writing instruction she saw at Conifer Middle. Elise, however, did not reveal a deep criticism of the heavy emphasis on grammar in writing instruction at Conifer Middle. Later in the same discussion, Celia remarked:

- 89 Celia: I don’t think, like, revising is even that much of a standard. I was looking at like the ELA standards, and a lot of them are just grammar.
90 Elise: For what grade?

- 91 Celia: Seventh.
- 92 Elise: Yeah. Seventh and eighth grade is so much grammar.
- 93 Celia: It's *((whispers))* SO MUCH GRAMMAR.
- 94 Elise: So that doesn't leave a lot of room for writing, that's why I=

Thus, for Elise, the number of standards on grammar did not “leave a lot of room for writing” (turn 94). Instead, she simply defined grammar instruction as a separate entity from writing instruction, as she had throughout her middle school placement. Celia did not accept grammar and writing instruction as separate, noting that grammar could be taught in the context of more authentic writing instruction, as Harry Noden suggested in one of their writing course methods books, *Image Grammar*:

- 95 Celia: =See, but here's the thing. Technically, we could use like Noden, but the grammar that they [at Conifer Middle] do is like, drill kill worksheets, multiple choice.
- 96 Elise: Oh, 'cause they [students in your class] do a lot of creative writing?
Yeah, that would work great. You could do the participial phrases lesson [a lesson from Noden that we modeled in the methods course].
- 97 Celia: That would've been a good one, but my grammar was like, predicate nominatives=
- 98 Elise: =Yeah, 'cause [the end-of-course state test].

Here again, Elise partitioned writing instruction, seeing Noden's suggestions for teaching grammar, mechanics, and conventions in the context of authentic writing as useful only in classrooms where students “do a lot of creative writing” (turn 96). In her student teaching placement, students did not do much creative writing, so Noden was an irrelevant tool. For her,

teaching predicate nominatives through workbook exercises was simply the result of the state test's contingencies. Elise saw the "drill and skill and drill and stuff" as a necessary evil, insisting that the "grammar foundation is really important, but it's just—we're not used to doing that kind of teaching" (turn 127). Thus, Elise expressed little disappointment or criticism around the state test and its focus on grammar. Instead, decontextualized grammar instruction was simply part of the figured world of writing instruction, and something she had to do. If there were extensive creative writing going on in her CT's classroom, more contextualized approaches to grammar instruction would "work great" (turn 96), but there was not, and grammar needed to be taught one way or another.

Given this identity with respect to the importance of grammar in writing instruction, Elise agreed with Ms. Jeffries's assessment that there was not enough time for reading instruction, state test preparation, and writing instruction. Thus, writing instruction was relegated to an 11-minute mini-lesson on the differences between paraphrasing and summarizing, which—notably—the state test required. With so little writing instruction to discuss, Elise and I did not use ideas entailed by MSTV as scientific concepts for understanding writing instruction more deeply, as Celia and I had done. Instead, we focused our limited time and attention on Elise's reading instruction⁸.

Summary

In this analysis, I sought to understand how two PTs developed concepts about ambitious writing instruction using a focal teaching practice, MSTV, in their student teaching experiences. In consultation with their university mentor (author), Celia and Elise developed concepts about ambitious writing instruction by reframing their spontaneous concepts, or their framings of

⁸ Making student thinking visible would be useful to consider in reading instruction as well, but reading instruction falls outside the scope of this analysis.

classroom events, so that scientific concepts related to MSTV and other concepts they held about teaching worked together. Celia initially framed classroom interaction using scientific concepts that stipulated that teachers should make sure students were engaged (which she defined as paying attention), while Elise relied upon scientific concepts that defined teachers as emotionally supportive of students and student-centered. In both cases, bringing ideas related to MSTV, as scientific concepts, into debrief discussions helped PTs reframe their spontaneous concepts of classroom interaction, helping them to build more robust concepts and visions of their own roles in the classroom.

However, only Celia ultimately developed a strong teacher identity around the need to make student thinking visible. She was spurred to do so because of the conflict that she began to perceive between the figured worlds of writing instruction she found in her high school placement and her writing methods course—with which she expressed strong alignment—and the figured world of writing instruction that characterized her middle school placement. Developing a more robust concept about her own role as a teacher—that she was responsible for engaging students not simply on a behavioral level but on an intellectual one—supported her in taking on a strongly articulated identity about the need for teachers to make student thinking visible.

However, Elise did not take on such a strong identity with respect to MSTV in writing instruction. Because she entered her student teaching placements with an identity as a writing instructor that was a traditional-ambitious hybrid, she did not experience strong dissonance in either placement. Indeed, Elise's CT in her middle school placement had a teaching identity that aligned strongly with Elise's own: They both advocated students' analysis of mentor texts, and they both placed a heavy emphasis on the importance of grammar and conventions. Because

Elise did not frame the figured world of her methods course and high school placement as in conflict with that at Conifer Middle, Elise was content to accept her middle school CT's assessment that reading instruction, state test preparation, and writing instruction needed to be prioritized, and writing fell to the bottom of the list. Thus, discussions which might have supported Elise's continued development of concepts or an identity related to MSTV in writing instruction did not occur.

Implications

Perhaps, then, the most obvious implication to be drawn from this analysis of how PTs develop concepts in their student teaching placements is that PTs need support in making sense out of the complex worlds of classroom interaction. In particular, PTs will not—without support—necessarily know how to frame spontaneous concepts about classroom events in terms of more than one scientific concept about teaching, such as the idea that teachers must guide student thinking and that classrooms need to be student-centered. Yet we know that how PTs frame classroom events really matters. This framing influences the scientific concepts that PTs use to make sense of their spontaneous concepts, their future decision-making and practice, and their development of teaching identities.

This analysis also highlights the influence of figured worlds on PTs' opportunities for concept development. Elise and Celia's concept development around MSTV, a teaching practice that is often referred to as "core" or "high leverage" across content areas (TeachingWorks, 2015; Windschitl et al., 2011), was influenced particularly by scientific concepts related to teacher-student relationships that were salient in their varied contexts for student teaching: Celia negotiated concepts around MSTV in terms of the need for teacher control, whereas Elise drew upon scientific concepts about teachers' need to care for students. Because these concepts were

salient in Elise and Celia's respective student teaching placements, it should not be surprising that they used these discourses to frame spontaneous concepts about their student teaching practice.

Yet scientific concepts about caring and control are not idiosyncratic to either Celia or Elise, or to the figured worlds of their respective student teaching placements. Studies of PTs have noted that a predominant discourse of control often leads novice teachers to a deeply felt concern that they must be able to control a classroom before they can teach the students within it (Britzman, 1996). Interviews with preservice writing teachers suggest that novices most highly rate their desire to "care" for students, but deeper probing reveals that "caring" is really about asserting authority without appearing to be authoritarian (Kennedy, 1998). Thus, it may be that tensions around caring for and controlling students are central to PTs' development of identities as teachers (Charles, 2014). By inserting concepts related to MSTV into discussions grounded in these discourses, PTs were able to re-envision the spontaneous concepts they saw arising from their student teaching classrooms in terms of how caring and control might relate to students' intellectual engagement with writing.

Re-envisioning student-teacher interactions in terms of the need to make student thinking visible and respond to it is deeply complex and important work, and it is particularly important for students of color and those hailing from other underserved groups. As Anyon (2005) and Gutierrez, Rymes & Larson (1995) have pointed out, students in schools serving large proportions of historically marginalized groups are more likely to be faced with teachers whose work is informed by hard, authoritarian versions of a discourse of control, often to the detriment of intellectually rigorous instruction. Both advocates and critics of practice-based teacher education are concerned with equitable instruction that supports social justice (McDonald,

Kazemi & Kavanaugh, 2013; Zeichner, 2012), so the finding from this analysis that a focus on MSTV supported PTs in negotiating and building concepts around the tension between caring and control and teacher- and student-centric instruction provides more support for understanding MSTV as a foundational aspect of teacher education.

Yet, the ways in which concepts develop should underpin for us that it will not be enough to claim that students' thinking—all students' thinking—needs to be made visible. It is true that PTs need a strong understanding of the history of discourses of control and caring, and lecture-based versus inquiry-oriented instruction, as well as the educational and social implications of these discourses and practices. However, even armed with this understanding, we must remember that *PTs will not necessarily be able to identify these discourses and practices in their own teaching*. In the language of concept development, PTs may not frame their spontaneous concepts about their own teaching in terms of these tensions, and thus they may miss the implications for equity and for intellectual rigor that their framings entail.

This is yet another argument for ensuring that PTs have continuous feedback and support in framing their spontaneous concepts, not only about instructional practices, but also about how those practices influence and are influenced by students. We cannot expect any practice-based program of teacher education to seriously support PTs' ability to frame spontaneous concepts about their work productively absent the gloriously unexpected—and oftentimes frustrating—input of students. Novice teachers need more opportunities, over a longer timespan, to frame and reframe their work with students with someone more expert than themselves, because teaching concepts are not developed in isolation. Teaching concepts develop in relationship to one another and to the students we serve.

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CHAPTER V

CONCLUSION

As I have said, as a set, these three papers contribute to an understanding of how novice writing teachers develop concepts about ambitious instruction. In Chapter II, I outlined design conjectures for supporting preservice teachers' development as ambitious writing instructors. Importantly, these conjectures came out of a review of the literature on how teachers learn to teach writing and research on teacher education, viewed through the lens of a sociocultural understanding of concept development. Research on how teachers learn to teach writing has not yet been considered in light of sociocultural views of concept development, which keep contexts firmly in view. In the realm of writing instruction, this is particularly important, since preservice teachers' practice is commonly influenced by the contexts in which they learn to teach (Johnson, Smagorinsky, Thompon & Frye, 2003).

This focus on context helped me to see how particular figured worlds of writing instruction entail situated epistemic stances on teaching, students, and writing. The finding, in Chapter III, that preservice teachers viewed a "core" teaching practice differently across activity structures (Chapter III) highlights the ways that these small-scale contexts influenced the epistemic stances from which preservice teachers viewed *making student thinking visible*. Importantly, these epistemic stances, in turn, mediated the concepts that preservice teachers developed, because they were reflected in both the ways that preservice teachers represented their practice, the ways that they understood instructional problems (spontaneous concepts), and the generalizations that preservice teachers used to make sense of those representations

(scientific concepts).

Thus, a major contribution of this analysis is an exploration of how pedagogies of investigation and enactment, as contexts, influenced the types of concepts preservice teachers developed. This analysis helps us to move away from naïve conceptualizations in which all concept development is thought to support professional judgment. I differentiate between concept development that mobilized preservice teachers toward an understanding of disciplinary principles and that which supported them in becoming thoughtful interpreters of their work. Findings from Chapters II highlight that preservice teachers need more opportunities, during their teacher education programs, to enact instructional activities in which many interpretive decisions must be made. Chapter II's distinction between prescriptive expertise and deliberate action is a useful heuristic for understanding how preservice teachers' concept development mobilizes them for future work. Right now, the balance is weighted too heavily toward the development of prescriptive expertise, which emphasizes codified, generalizable knowledge from a given field, but does not present opportunities for novices to learn how to frame activity-in-the-world productively. Carefully designed simulations may be one means of supporting preservice teachers' development of interpretive concepts.

Another contribution of this analysis is that it follows preservice teachers into their student teaching placements. In student teaching placements, preservice teachers had to negotiate epistemic stances about writing, teaching, and students other than those they had encountered in their methods course. A main finding from this analysis is that preservice teachers needed support in framing student-teacher interaction in terms of the focal ambitious teaching practice, *making student thinking visible*. Even preservice teachers rooted in writing methods courses invested in ambitious instruction struggled to make sense of their practice in terms of scientific

concepts about ambitious instruction. The complexity of classrooms is great, and preservice teachers had access to many competing concepts about writing instruction from their own apprenticeships of observations, narcissistic errors, and various figured worlds in which they learned to teach (Grossman et al., 2000; Hargreaves, 1994; Johnson, Smagorinsky, Thompson & Frye, 2003; Lortie, 1975).

Thus, they needed support not only in framing activity-in-the-world, but also in making sense of scientific concepts about ambitious teaching in combination with other messages about students, teaching, and writing. Preservice teachers' concepts about *making student thinking visible* developed in conjunction with other concepts and epistemic stances they encountered in their figured worlds of writing instruction. Because ambitious writing instruction is rare in secondary schools in the U.S., preservice teachers are likely to learn scientific concepts about writing instruction that advocate more traditional approaches to writing instruction, such as a focus on grammar and mechanics (Applebee & Langer, 2006; Hillocks, 2008). Thus, preservice teachers need more opportunities, over a longer timespan, to interpret their classroom practice with a more accomplished teacher, teacher coach, or teacher educator.

Of course, as with any analysis, this one has limitations. The design conjectures in Chapter II were founded on a slim research base on writing instruction. In Chapter III, pedagogies of investigation and enactment occurred in an ambitious figured world of writing instruction. Concepts would likely develop much differently had the methods course frequently represented other epistemic stances about teaching, students, and writing. Chapter IV follows only two preservice teachers, both from this same methods course, into their student teaching, where preservice teachers' agency was necessarily limited since they were not the teachers of record.

By carefully theorizing these cases, I hope to provide ideas that can generalize to other methods courses and other preservice teachers. In the end, though, it is only a single study, and—currently—the only one that focuses on concept development in writing instruction. I look forward to future research that might complement, refine, or even reject these findings. Specifically, we need to understand how concepts about ambitious writing instruction accrue across other courses in teacher education programs, working to understand how we can support preservice teachers in making sense of seemingly disparate scientific concepts from, for example, a diversity course and a writing methods course. We also need to know more about how concepts about ambitious writing instruction develop not only in teacher education, but also as novices become teachers of record. Writing teachers in the United States often report feeling under-supported (Kiuahara, Graham & Hawken, 2009), and the rise of the Common Core State Standards and digital technologies will soon ask even more of novice writing teachers. As a field, we owe it to them to understand more about how concepts of ambitious instruction develop.

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