

CHAPTER 5.

MAKING CONNECTIONS BETWEEN THEORY AND PRACTICE: PRE-SERVICE EDUCATOR DISCIPLINARY LITERACY COURSES AS SECONDARY WAC INITIATION

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In the absence of widespread Writing Across the Curriculum programming in secondary schools, the near-nationwide adoption of the Common Core State Standards—with their focus on disciplinary literacy—features a watershed moment for disciplinary writing instruction in teacher certification programs. Through required disciplinary literacy courses, pre-service teachers (PSTs) are initiated into the WAC/WID community. This chapter examines the context and development of a second disciplinary literacy course at one teacher certification institution, reviews the debate on the place of theory and practice in teacher education, and traces the ways PSTs' identity development occurs alongside their course learning. This chapter concludes by suggesting how discussions about reading can help to expand notions of disciplinary writing. Furthermore, the findings suggest that the PSTs' conversations around theory deepened their understanding of disciplinary writing characteristics and refined their identities as teachers of writing, leading to more skillful incorporation of writing strategies in their teaching.

Saying that disciplinary literacy is simply “how to read in a particular subject matter” is like saying learning to SCUBA dive is “learning to breath[e] in airless environments.” It may be technically true, but it lacks the nuance to the point of being meaningless.

—Joe Foster, English education pre-service teacher

Although Writing Across the Curriculum (WAC) programs have existed at the secondary level for decades (see Childers & Lowry, 2012), the implementation

of the Common Core State Standards (CCSS) in 2010 and, later, the Next Generation Science Standards (NGSS) “required a new level of buy-in and a new possibility for secondary WAC” (Lillge, 2012, p. 2). Eight years later, as states increasingly choose to opt out and write their own content standards, we find ourselves largely in a post-CCSS era; however, policymakers and administrators continue to set goals of measurable literacy achievement across the curriculum. As Michelle Cox and Phyllis Gimbel (2012) noted, the focus on measurable literacy outcomes “creates a mandate for schools to include more writing across the curriculum, but doesn’t engage with the other pieces of a WAC program that would lead to a school-wide or district-wide culture of writing” (p. 2). In short, this push toward a quantifiable increase in students’ writing skill leads to an increase in practical strategies disconnected from the theoretical support necessary for a sustained improvement in writing pedagogy.

Confirming these challenges for secondary WAC, Jacob Blumner and Pamela Childers (2015) cited the CCSS and the popularity of STEM education as catalysts for the rise in successful secondary/postsecondary WAC partnerships. And yet, beyond the stellar examples they cite in the volume, secondary WAC programming continues to be a challenge. We’ve not yet achieved the “futurist” notion of “an educational system that completely breaks down the barriers of moving from the K-12 system to higher education” that they imagined in their conclusion (Blumner & Childers, 2015, p. 173).

Perhaps secondary/postsecondary WAC partnerships are still rare because secondary WAC continues to feature unique considerations, namely, that “disciplines, as they are conceived in higher education, do not exist in secondary schools” (Lattimer, 2014, p. xi). The National Council of Teachers of English (2011) defined this distinction in their policy brief, *Literacies of Disciplines*, suggesting that school *subjects* function to “constrain or control how knowledge is presented” (p. 1), leading Heather Lattimer to label subjects as content-focused “silos” (2014, p. xi). In contrast, *disciplines* “emphasize the creation of knowledge” (National Council of Teachers of English, 2011, p. 1) and have “increasingly porous” boundaries (Lattimer, 2014, p. xi). Furthermore, secondary WAC initiatives ask teachers not only to reframe their conceptions *of* their disciplines but also their place within their disciplines. Whereas university instructors are recognized as experts in their disciplines through their educational experiences and publications (Fang, 2012; Shanahan & Shanahan, 2008), secondary teachers are often seen as subject-area teachers rather than disciplinary experts, which means that secondary teachers often feel unprepared to discuss—and teach—disciplinary discourses.

As a teacher educator at a public land-grant university, I have seen firsthand the ways pre-service education compounds these issues as students must learn to teach writing at the same time they are learning to teach. Not only are secondary

pre-service teachers (PSTs) still college students who are novices in their disciplines, because they are learning to teach, they are also novices in pedagogy. Secondary PSTs are still learning the language of their disciplines while being expected to apprentice their own students to field-specific writing practices. Also, unlike university instructors, PSTs receive the bulk of their WAC/WID training prior to entering the profession (mostly through their methods of teaching coursework). This incongruity requires secondary school educators to reframe what it means to teach within their disciplines, and it led me to ask the question: How can we simultaneously develop secondary pre-service teachers' disciplinary literacy identities while also making them effective teachers of writing across the curriculum?

Specifically, my inquiry arose from the conflict between how teacher education courses have historically been taught on this research-intensive university campus—heavy in theory—and what pre-service teachers often see as most useful—practical applications. This disconnect, to me, seemed related to how PSTs characterize their own identities. As they are shifting from identifying as mere students to considering themselves teachers, their knowledge priorities also shift. In this chapter, I take up these questions through an exploration of the development and launch of a new disciplinary literacy course for pre-service educators in the teacher certification program. I overview the larger educational context which led to the course invention, consider the place of educator identities within this context, investigate the ways theory and practice converge through class discussion, and suggest findings about PSTs reshaped conceptions of disciplinary writing and pedagogy.

THE CONTEXT OF SECONDARY WAC AND INFLUENCES ON TEACHER EDUCATION PROGRAMS

American public education has, in many ways, been defined by a series of literacy crises. Perhaps the most significant literacy crisis arose in 1974 when the landmark National Assessment of Educational Progress (the NAEP or the Nation's Report Card) showed that writing proficiency had declined from the inaugural test in 1969. This crisis soon swept the public sphere when, in the now infamous 1975 *Newsweek* article "Why Johnny Can't Write," Merrill Sheils exclaimed, "Willy-nilly, the U.S. educational system is spawning a generation of semi-literates" (p. 58). Around this same time, Britton et al. (1975) noted how the burgeoning information age affected sentiments towards writing: "It is often enough claimed that in this telecommunication age the importance of writing is declining rapidly" (p. 201). Britton et al.'s study of "language across the curriculum" in British secondary schools paired with the process writing movement in America (Atwell, 1987; Calkins, 1983; Elbow, 1973; Emig, 1971, 1977; Graves,

1983; Murray, 1980, 1982, 1985) and the advent of the National Writing Project in 1973 (Gray, 2000) led to a renewed focus on the process and manner of writing instruction in all content areas at the secondary level.

Although, as Pamela Childers and Michael Lowry (2012) remarked, secondary teachers have long been working across the hallway, pairing with teachers of other disciplines to create engaging cross-curricular lessons, in the burgeoning WAC moment of the late 1970s, we began to see individual teachers of various disciplines using writing to further learning. In the 1980s, secondary WAC programs shifted from “the individual classroom into the wider social arena of school, district, and state” (Farrell-Childers et al., 1994, p. 2). Like university WAC programs, these large-scale WAC initiatives in secondary contexts are as geographically, philosophically, and administratively diverse as the schools in which they reside.

With the rise of secondary WAC programs (e.g., the McCallie School in Tennessee, Minnetonka High School in Minnesota, and the Windward School in California), teacher education programs began to take note of the need to support disciplinary writing pedagogy (see Childers & Lowry, 2012, for more on exemplary secondary WAC programs). Childers and Lowry discussed how secondary WAC programs impacted teacher education:

By [the 1980s], colleges’ and universities’ undergraduate and graduate secondary education departments were beginning to discuss WAC and writing process in their courses to reinforce what teachers brought to their own classrooms. The repercussions continued with these postsecondary institutions adding required courses in the teaching of writing for education majors across disciplines. (2012, p. 2)

Since the 1990s, most education programs have required at least one course in writing pedagogy—often in the form of a content area reading and writing course—for secondary pre-service teachers (Romine et al., 1996).

The twenty-first century features a continued concern for adolescents’ writing abilities. Drawing from the data in the 2002 NAEP, the National Commission on Writing in America’s Schools and Colleges (2003) released *The Neglected “R”: The Need for a Writing Revolution*. Since the NAEP found that adolescents “cannot systematically produce writing at the high levels of skill, maturity, and sophistication required in a complex and modern economy” (National Commission, 2003, p. 16), the Commission made a series of recommendations to reform writing instruction. Namely, the report recommended that (1) writing be taught in all content areas and grade levels and that (2) pre-service educators of all disciplines take required coursework in writing pedagogy. At the same time, researchers such as Timothy Shanahan and Cynthia Shanahan (2008) tracked the development of

teaching specialized writing practices starting in the 1990s when the global information age required more demanding writing tasks for all types of workers. And, finally, in 2009, in response to these perceived crises, the CCSS were developed as “a clear set of college- and career-ready standards for kindergarten through 12th grade in English language arts/literacy and mathematics” (Common Core State Standards Initiative, 2020). Specifically, the CCSS require non-English Language Arts teachers to have a role in writing instruction. They also require a variety of writing modes, lengths, and processes, including short and extended time frames for writing, and advocate for discipline-specific language use (Lillge, 2012).

DEVELOPING A DISCIPLINARY LITERACY COURSE: CONTEXT, PROCESS, AND PST IDENTITIES

The convergence of these three challenges—the subject position of pre-service secondary teachers as pedagogical and content area novices, the continued perceived writing crisis, the standards’ insistence that all teachers be writing teachers—occurred around the same time my colleague (a writing program administrator) and I were tasked with developing and teaching a second disciplinary reading/writing course to be added to secondary teacher education coursework at our university.

Necessitating the creation of this new course, the State¹ Department of Elementary Secondary Education made a shift in focus, opting out of the CCSS in favor of developing and implementing their own learning standards. These newly created State Learning Standards (SLS), like the CCSS, placed an emphasis on college and career readiness. Even more than the CCSS, the SLS doubled-down on the necessity of disciplinary writing activities and support for struggling readers/writers, asking all content area teachers to support all students in reading complex disciplinary texts and writing evidence-supported arguments.

This second course in content area reading and writing would go beyond the first course’s engagement with strategies to interrogate elements of disciplinary discourses. Following Judy Richardson, Raymond Morgan, and Charlene Fleener’s (2009) findings that secondary pre-service teachers needed more training and disciplinary literacy knowledge to teach writing at a high level, this course would focus on moving all students to high levels of disciplinary writing. The new course would also be situated in the tensions Zhihui Fang (2014) raised for teacher education programs: “An emphasis on disciplinary literacy presents new challenges for teacher education because it requires deep understanding of both disciplinary content and disciplinary habits of mind” (p. 444). A further

1 To protect institutional and participant anonymity, I omit the state name and instead use State. This applies to acronyms as well.

challenge is the separation of disciplinary literacies—making a space for writing as a mode of instruction and moving beyond content area reading as the focus of such a course. Among other goals, as we developed this new class, we sought to highlight ways in which writing “can support a more complex kind of reasoning that is increasingly necessary for successful performance in our complex technological and information-based culture” (Langer & Applebee, 1987/2007).

The existing disciplinary literacy course—Reading and Writing in the Content Areas I (RWICA I)—provided PSTs with general reading and writing strategies to supplement their content teaching. This second course—Reading and Writing in the Content Areas II (RWICA II)—would involve disciplinary literacy as conceptualized by Shanahan and Shanahan (2008) and others (Fang, 2012; Lattimer, 2014; Moje, 2011; National Council of Teachers of English, 2011), focusing on writing as a discrete, disciplinary-related skill available to learners of all abilities. With the new requirement of a second disciplinary literacy course, our institution was able to seize the moment to work explicitly towards improvement of disciplinary writing instruction in secondary education.

However clear the task, course creation and implementation is fraught with challenges. The particular challenge of RWICA II was mostly owing to the historical debate regarding the place of theory and practice within teacher education. Educators and philosophers—Aristotle, David Hume, Immanuel Kant—have long written about the theory/practice dichotomy. Extending this discussion to teacher education, John Dewey advocated for a productive balance, viewing theory and practice as complementary rather than opposing (see Goodnaugh et al., 2016, for a more detailed discussion of theory/practice in teacher education). Dewey (1933) conceptualized theories as ideas—or “hypothetical possibilities” (p. 164)—that arise from the process of research and thinking. Therefore, as a pragmatist, Dewey (1974) argued “for the proper balance of theory and practice” (p. 314), considering the relationship between “reflective action” and “routine action” (1933). However, as Emily Remington Smith (2007) noted, teacher education researchers and practitioners are still interrogating the manner and method of achieving Dewey’s desired balance. She pointed out a common reaction to theory-based discussions that is particularly applicable to the teaching context in this study: “Attempts to discuss the driving theories behind fundamental teaching practices, for example, are always met with questions from teacher candidates about when they are really going to start learning how to teach” (2007, p. 31).

IDENTITY AND PST EDUCATION

In addition to the theory/practice tensions, Leigh Hall (2005) found that identity affects the ways in which pre-service teachers interact with disciplinary lit-

eracies. Elizabeth Moje (2011) built on this idea, suggesting that disciplinary literacy is intricately connected to identity. For pre-service teachers, identity can be conceptualized as communal (O'Connor & Scanlon, 2005), contextual (McCarthy & Moje, 2002), and performative (Gee, 2000). John Smyth (2007) described identity—for teachers especially—as a “socially constructed ‘production’ which is never complete and always in process” (p. 409). And, as novices being inducted into the professional field, the pre-service teachers in this class are situated at the beginning of this recursive process.

Further, as PSTs work to become “disciplinary insiders” (Fang & Coatoam, 2013), and as they learn to teach the discipline to which they are apprenticed, their identities evolve. Their *becoming* highlights the “kind of person” (Gee, 2000)—or, as we’ll discuss here, the “kind of teacher”—they become through their teaching. It only makes sense, then, to investigate the implementation of the RWICA II course alongside the PSTs’ identity development to consider how their identity becoming affects their learning and teaching of disciplinary writing. These three overarching concepts—the tensions between theory and practice, the distinction of subjects versus disciplines, and the shifting nature of PST identities—became the foundation for my inquiry.

THE INQUIRY

Following Randy Bass’ (1999) call to reframe the concept of a problem in teaching to more closely mirror how we consider problems in research or scholarship, I posited the above questions of identity development processes, the theory/practice dichotomy, and disciplinary writing pedagogy as “intellectual problems” inherent in the process of teaching a new course. In line with scholarship of teaching and learning philosophy (Bass, 1999; Hutchings, 2000), I invited my RWICA II students into this investigation of WAC teaching and learning, asking them to also engage in questioning and reflection during our semester together.

Teacher action research (an already established practice in many public school settings) asks for practitioners to do the work of investigating and theorizing—work previously left to academics. Because, as Marilyn Cochran-Smith and Susan Lytle (1999) stated, the most powerful new knowledge of teaching and learning comes from instructors investigating their own teaching practices and conducting inquiry in the courses they teach, educators are a powerful resource for improving teaching. Pat Hutchings (2000) extended this practice of instructor-led inquiry to the university level, tracing how the scholarship of teaching and learning can solve pragmatic questions of instruction, turning problems into “opportuni[ties] for purposeful experimentation and study” (p. 3). To this end, I placed “inquiry as stance” (Cochran-Smith & Lytle, 1999) at

the forefront in my teaching of the inaugural RWICA II course. Grounding my teaching and inquiry in sociocultural notions of teaching and learning (Dewey, 1916; Vygotsky, 1978), I asked these questions:

- How do disciplinary PSTs view literacy acts—especially writing acts—within their disciplines?
- How do disciplinary PSTs characterize their roles as both disciplinary writers and teachers of writing?

DATA COLLECTION AND ANALYSIS

In Spring 2017, I taught this inaugural RWICA II class of 18 middle and high school PSTs from a variety of disciplines including English, social studies, science, and math. As second semester junior undergraduates, these PSTs were truly novices in pedagogy, content, and actual teaching experience. Though most were in their second field experience in local public school classrooms, few had the experience of teaching a lesson to “real” students.

Our course objectives were multifaceted. First, I hoped that by the end of the course, the PSTs would be able to identify and explain disciplinary literacy frameworks, including how disciplinary literacies interact with academic identities of the teacher and students (we might label this the *theoretical* aim). Perhaps more importantly, I hoped the PSTs would adapt and implement disciplinary writing strategies in their pre-service teaching (the *practical* aim). Of course, also implicit in these objectives was an exploration of the PSTs’ disciplinary identities—or their perceived place within in their disciplines. Since this was the second course in the curriculum, these PSTs had an awareness of the many types of disciplinary literacies; therefore, it was my goal to move them from a place of disciplinary writing awareness to a place of disciplinary writing implementation.

This inquiry took place with these PSTs, and as we worked through the semester’s assignments and teaching opportunities together, we embedded reflection into each class session. Therefore, the following findings are built from a diverse set of classroom data:²

- PSTs’ informal post-class reflections
- my field notes from class discussions
- artifacts from in-class literacy building activities
- PSTs’ formal essays with my written feedback
- rubrics from teaching experiences
- peer-to-peer feedback on these teaching experiences

2 I obtained IRB approval to collect the forms of data listed here on April 2, 2017.

After our semester was over, I analyzed the data using nominal and spatial thematic analysis (Riessman, 2008) to read both horizontally across individual participant data and vertically down all participants for a singular data point. Instead of isolating the course data into discrete categories, I employed narrative methods to approach the data set as a whole (Clandinin & Connelly, 2000; Riessman, 2008). The recursive process of analysis paired with engaging PSTs in classroom discussion about the data allowed me to establish themes that spoke to the PSTs' literacy development and the theoretical/practical WAC aims of the course. This form of analysis also allowed me to relate the themes to the larger context of the RWICA II sequence and the teacher education program. At the end of the process, I hoped to understand how the elements of inquiry interacted with and spoke to the larger question of WAC/WID teacher training at the postsecondary level.

FINDINGS

The semester of inquiry led to two distinct findings. These findings build on one another, contributing to our understanding of the theory/practice interaction of WAC pedagogy and teacher education. Most notably, the findings trace the participants' identity development as they work to become instructors of disciplinary writing. As one English PST wrote in his final synthesis essay, "As we moved deeper into the semester, it became apparent that disciplinary literacy moves beyond the ivory tower. After all, it is the responsibility of high schools to provide their students with a rounded education that prepares them for life in the real world—if the 'real world' requires a new kind of disciplinary literacy, teachers should step up and instruct it." Through our exploration of theory and application to practice, this future teacher—like many of his colleagues—came to recognize the necessity of disciplinary writing instruction to deepen secondary students' post-high school preparation.

FINDING #1: PSTs' READING/WRITING IDENTITIES AND THE PROCESS OF *BECOMING*

Recognizing how literacy performances contribute to identity development (McCarthy & Moje, 2002), in our course design sessions, my colleague and I created an introductory assignment we titled "Reading and Writing in My Discipline Essay." In this assignment creation and implementation, we considered the research on ways disciplinary experts read and write differently than do disciplinary novices (Shanahan & Shanahan, 2008) to ask students

- What does your reading look like?
- What does your writing practice look like?

- How has your discipline shaped how you think about text, knowledge, and the world?

My own essay concerning how English teachers read—a model I provided for the PSTs—included statements such as

- We read for subtext, at times neglecting plot for meaning.
- We find connections in reading and spend much time expressing those connections in writing.

Similarly, my model included an explanation of how those in the English discipline write, beginning with generalities like

- Voice matters.
- Mechanics are more than correctness.

And then it moved to more specific statements about field-specific discourses such as

- In my field, punctuation is more than a matter of correctness; it's a matter of impact.
- We use dashes to highlight interludes or to represent scatteredness.

This assignment was the first of the semester, and, when we created it, we assumed it would be a low-pressure way for students to begin to make the switch from being a student of their disciplines to *becoming* a teacher of their disciplines (with all the reflexivity that involves).

As with most best-laid plans, that did not turn out to be the case. On this assignment, 12 of the 18 PSTs wrote about their academic identities—who they are as readers, students, and writers—and how they handle general activities in the academic sphere. Most notably, the PSTs' discussion focused on the *reading* portion of their academic identity while a discussion of the *writing* portion of their identities was largely absent.

For example, one social studies pre-service teacher wrote, "I do not like reading . . . I love thinking and making connections while thinking." Similarly, a science PST wrote, "I wouldn't consider myself a good reader. I don't read for fun." The four PSTs who included mentions of writing in their essays expressed their love of writing in general or their disdain for it altogether. One middle school language arts teacher exclaimed, "My strength is creative writing. I love to tell stories!" In contrast, a physics secondary PST bluntly stated, "I do not like writing . . . I think [it] can become extremely overwhelming from time to time." Two social studies PSTs wrote, "I hate writing because I'm bad at grammar," and "Grammar makes writing less than enjoyable for me."

As I read these essays in the second week of the semester, it quickly be-

came clear that these pre-service teachers viewed reading in a limited, traditional way—as connected to fiction books, enjoyed in their free time, or avoided altogether. Even more stark was their depiction of themselves as writers—focusing on missing the mark of one “correct” Standard English, noting how writing was difficult, and saying they rarely felt confident in the act. They did not, it seemed, view reading *or* writing as intimately connected to disciplinary ways of knowing and being. Both of these literacy activities were separated from the process of thinking. In fact, an English PST who, in one sentence celebrated his skill in writing, quickly followed up with the statement: “But thinking is a less focused/developed skill at this point.” Two questions emerged from this data analysis:

1. Why did the PSTs talk so much about reading while mostly neglecting writing?
2. And how might I access this existing knowledge to help the PSTs redefine the idea of reading and/or text to expand their disciplinary writing knowledge and pedagogy?

Regarding the first question, secondary disciplinary scholars focus most often on reading in the content areas rather than writing in the content areas (see Fang, 2014; Shanahan & Shanahan, 2008). For this population of PSTs, especially, it is notable that the textbook (Buehl, 2014) for the first course in the RWICA sequence focuses extensively on reading as the primary method for teaching disciplinary literacy. Finally, these undergraduate students were deeply immersed in the course content of their majors at the same time they were enrolled in the RWICA II course, so they were engaging with disciplinary texts nearly every day. However, these courses were also early in their major course sequence, so they also had less experience with disciplinary writing tasks as students.

Furthermore, as I considered ways to build on the PSTs’ existing disciplinary knowledge to expand their conceptions of disciplinary writing, I considered ways disciplinary experts like faculty members learn and express disciplinary writing characteristics. In doing so, I echo Mary Lou Odom’s (2013) assertion that “the ways faculty read—and learned to read—disciplinary texts are . . . transparent” (p. 3). Through making reading practices opaque, we are able to make disciplinary writing norms explicit. Alice Horning (2007) supported this assertion, noting the necessary connectedness of reading and writing instruction: “If teachers want students to produce solid academic prose, they must read such prose extensively and carefully in order for the ‘din’ of that language to get into their heads” (p. 9). So too, I would argue, must pre-service teachers absorb characteristics of disciplinary texts to effectively teach disciplinary writing to their own students.

Engaging in the “cycles of action” (Reason & Bradbury, 2008 p. 1) common in teacher research and the scholarship of teaching and learning, I sought to rec-

tify misconceptions in my classroom. I decided to approach the discussion of disciplinary reading as a way into a discussion (and implementation) of disciplinary writing. After reading these essays, I revised my plans for the following week, and we spent the following class period working through definitions of *reading* and *text*. As the examples in Figure 5.1 demonstrate, most PSTs characterized reading as something done in English class or while writing a research paper.

Define Reading		
1a. "A way of gathering information"	2a. "Taking in images or information"	3a. "Observing a text and trying to make sense of it"
1b. "The observing of a text using the senses"	2b. "Being able to decipher a text"	3b. "Using the info and info you know to understand"
1c. "The ability to understand references"	2c. "Interpreting a text"	3c. "Making sense of the text and the world around you"

Figure 5.1. Pre-service teachers' definitions of reading in Week 2 (written on notecards in class). Entries 1a-2c have no shading; entries 3a-3b have light yellow shading; entry 3c has dark yellow shading.

Many PSTs (boxes 1a through 2c) viewed reading as "understanding" text, an act generalizable to all texts. A few (boxes 3a and 3b) moved toward viewing reading as a transaction (Rosenblatt, 1994), realizing that the reader's background knowledge and worldview affected the practice of reading. One PST (box 3c) connected reading to the world outside of the text, noting that reading is a complex "making sense" process.

Overall, most of these RWICA II pre-service teachers viewed reading as a one-directional, information-gleaning process. For them, reading involved little analysis. As we know, these missing elements are required for effective disciplinary reading (Fang, 2012; Shanahan & Shanahan, 2008) and, further, for disciplinary writing. They also conceptualized disciplinary writing in the same homogeneous way. In these early essays, PSTs often highlighted writing as adhering to one, correct Standard English, and there was little discussion of purpose, audience, or context—all elements integral to disciplinary writing tasks. To many of them, reading was simply gathering information, and writing was simply documenting information correctly. Through these discussions, it became clear that we had a lot more ground to cover in expanding understanding around writing than reading, and as we know, writing is often a more difficult endeavor.

Additionally, as I asked students to theorize what disciplinary writing *is* and *does*, they had first to feel like they had some element of disciplinary literacy expertise. This reading/text discussion allowed us to consider the PSTs' existing knowledge, broaden preconceived notions, and provide a way to grow their knowledge

of disciplinary writing practices. This realization helped me understand why, when the PSTs were asked in the first assignment to write about their processes of disciplinary reading/writing, they defaulted to speaking about their academic identities. These academic identities were comfortable; as college juniors, many of these PSTs had been cultivating their academic identities for more than fifteen years. Their disciplinary expert identities, however, were in process. These PSTs knew the *what* of their disciplines; they were strong in content knowledge. But they didn't know the *how* of disciplinary literacy; they were unsure of how experts in their fields approached literacy acts. Though these pre-service teachers had completed one Reading and Writing in the Content Areas course and at least one Methods of Teaching course in their subject area, they still viewed themselves as novices both in their disciplines and in the teaching profession. Their identities-in-process meant that they were not qualified (or, at least they did not feel as though they were) to speak to the reading and writing practices of their discipline. This realization on their part (and also on mine) opened up space for an exploration of theory—a discussion that might have been less welcome had they not first done the identity work to reveal the necessity.

FINDING #2: THE INTERACTION OF DISCIPLINARY THEORY AND PRACTICE

In her study of the theory/practice balance in an English education methods course, Remington Smith (2007) found that when PSTs take ownership of theories, they are more likely to internalize them. She writes, “Perhaps one of the difficulties teacher candidates have with educational theories is that they belong to someone else” (2007, p. 34). The PSTs’ responses to this RWICA II study confirm and extend Remington Smith’s findings. Specifically, through theoretical readings, response essay writing, and small/large group discussion, the RWICA II pre-service educators were able to begin internalizing the theories.

In the early weeks of this course, we read discourse and identity theory (Gee, 2000), sociocultural learning theory (Gee, 2001; Vygotsky, 1978), theories about the specialization of disciplinary literacies (Moje, 2008; Shanahan & Shanahan, 2008), critical literacy theories (Beck, 2005; Lee, 2011; Morrell, 2012; Perry, 2012), and multimodal literacy theories (O’Byrne & Murrell, 2014). These texts are notoriously tough to parse and quite abstract in nature. Even though they found these texts difficult, according to their written and verbal reflections, the most useful element of the course was not—as PSTs often say—the practical activities. In fact, one English PST actively worked against this traditional paradigm, remarking that merely doing literacy activities was not enough. “Activities don’t always imply learning,” he wrote. Based on their early semester disdain for texts which “didn’t directly transfer” to the classroom, I was surprised when

these PSTs suggested it was the class discussions (often following a response paper engaging a theoretical text) which helped them decipher the difficult theory readings and try out new ideas. One high school math PST valued the discussions to help her “foster new questions and move the conversation [about literacy] along.”

Early in the semester, these theoretical readings and discussions reshaped PSTs’ conceptions of literacy and their place within the writing community. When discussing Fang’s (2012) text on linguistic elements of challenging disciplinary texts, one social studies PST considered the role of nominalizations in history disciplinary texts. She discussed the ways these nominalizations cause readers of historical texts to “get caught up or focus on the words rather than the content,” and she explored reasons why historical writers use these linguistic structures. Then she began to imagine ways to use writing in her classroom to dissect these nominalizations. She designed assignments for her students to work at the word, phrase, and sentence level to understand the linguistic structures of her discipline’s texts, dissect the meaning within the structure, and transfer these nominalizations to their own writing when appropriate. In this way, the theory helped her understand how the language of disciplinary texts is connected to content, and it helped her overturn the one-size-fits-all conception of “correct” writing she had when she entered the course.

Other PSTs found the critical literacy texts to be the most novel and applicable theoretical readings. As they learned about critical literacy in multiple modes and genres, PSTs shifted their views of their role in teaching writing in their disciplines. Teaching writing was no longer just about extending what their students learned in elementary or middle school or teaching students how to write “correctly.” Instead, they began to see their role as working from what students know about general writing practices to complicate the process and highlight nuanced disciplinary differences. After reading Ann Beck’s (2005) and Cheu-jei Lee’s (2011) texts, PSTs, in class discussion, expanded their view of critical writing practices from, as one English PST noted, “writing that demonstrates critical thinking” to “writing that requires students to be critically engaged with the content and also the larger world around them.” In the same discussion, a social studies PST noted that the critical literacy theories highlighted, for her, the ways writing practices are changing for her twenty-first century students. Applying this to their practice, she and her social studies colleagues discussed ways to incorporate multimodal and multimedia writing opportunities into their classrooms to “show students how important writing is in our modern world.” So, rather than desire to jump directly into my bag of literacy tricks, through engaging with theory, these PSTs realized their own gaps in knowledge regarding the learning and teaching of writing.

The importance of theory notwithstanding, the transfer to practice is always

our ultimate goal, and it was within these whole class and small group discussions where the theory-practice transfer began. We saw a reconfiguring of what kind of knowledge is important to future teachers. After they had a chance to play with theory, to try it out via writing and class discussion, they were able to meaningfully incorporate practical and effective writing activities into their content instruction.

The final assessment in this RWICA II course was an interdisciplinary lesson plan and in-class teaching opportunity. In the last half of the semester, teachers from different content areas worked together to create a lesson around a theme common to both disciplines. They then taught this lesson to their RWICA II colleagues who acted as secondary students. The interdisciplinary nature of this lesson allowed PSTs to “negotiate the conflicts among motives” in different disciplines and “[learn] about interdisciplinarity, disciplinarity, and the role of writing in the disciplines” (Nowacek, 2012, p. 397). Within this lesson, PSTs were required to incorporate reading and writing to further students’ disciplinary learning. These strategies needed to be appropriate to the lesson’s goals and effective in the stated aim. In this cohort, PSTs’ incorporation of disciplinary reading activities was 77.5% proficient³ while their incorporation of disciplinary writing activities was 87.5% proficient. Within the 87.5% proficiency, PSTs included a variety of disciplinary writing activities to showcase their understanding of WAC/WID theory. One group comprised of a math and English PST used informal quick-writes to allow students to write-to-learn their way through a tough computational process, concluding their lesson with a formal argumentative paragraph where students had to use evidence to prove that their method was the most logical method. Other groups’ writing-to-learn strategies included close-readings of short quotations, visual analysis of primary documents using sentence stems, and a write-around activity where students engaged in a pen-and-paper version of the old telephone game. Formal writing assignments asked students to construct graphs, blog posts, if/then statements, lab procedures, poetry, and formal letters.

It is important here to note that, in their shorter lessons earlier in the semester, the PSTs struggled with choosing the right strategy to pair with the content area objective. They often chose a strategy for strategy’s sake, but, as these findings suggest, the continued theoretical reading and the corresponding classroom discussions helped PSTs to match the aim with the strategy, and their final teaching opportunity reflects this improvement. They moved beyond seeing writing activities as valueless and generic as they engaged more deeply in the linguistic practices (after reading/discussing Fang, 2012; Gee, 2001), organiza-

3 As scored by the instructor according to a two-part rubric provided to the PSTs ahead of the teaching opportunity.

tional methods and modes (after reading/discussing O’Byrne & Murrell, 2014), and critical approaches (after reading/discussing Morrell, 2012; Perry, 2012) of disciplinary writing. Their writing assignments moved from asking students to display learning to asking students to interrogate disciplinary language, organization, and power structures through writing.

In a way, through our parsing of theory, PSTs considered and, perhaps, *re-*considered what counts as knowledge in their disciplines. As they inquired *with* me on the best practices for supporting pre-service teachers’ WAC/WID development, the line between theory and practice became permeable. Or, as Gerald Pine (2009) wrote regarding the act of teacher research, the “distinctions between formal and practical knowledge” (p. 51) began to disappear.

IMPLICATIONS FOR SECONDARY WAC/WID PROGRAMS AND TEACHER EDUCATION

As these findings demonstrate, pre-service teachers started to connect course theory to teaching practice when they began to view themselves as *becoming* experts in the discourses of their disciplines. By forefronting the ways in which their existing definitions of reading and writing neglected disciplinary distinctions, and by accessing their growing body of theoretical knowledge, PSTs were able to begin to see themselves as teachers of their disciplines rather than just teachers of their subjects. They began connecting what they learned in their methods course about how best to approach disciplinary content teaching to the theoretical readings about disciplinary literacy to choose the best mode of writing instruction for the task, context, text, and student need. In this way, they began to move away from a content-focused view of disciplinary education and toward a more literacy-focused view. Through interdisciplinary discussion with PSTs in other fields, they discarded subject “silos” for disciplines more broadly conceived. In doing so, they expanded their views of what counts as writing, and they included more discipline-specific writing in their courses (see Wardle et al. this volume for a similar impact of theoretical conversations on university faculty’s writing pedagogy).

This inquiry opens up a space for theory in the RWICA II classroom. When they realized their narrow views of reading and writing, and when they engaged in rigorous reading, writing, and discussion practices themselves, the pre-service teachers were able to view the purpose behind the writing strategies I was advocating. This allowed the PSTs to see theory and practice as two sides of the same coin rather than as diametrically opposed foes, and as we saw in their interdisciplinary lessons, it allowed them to connect their writing assignments to the purpose, content, and aims of their disciplinary teaching. Most significantly, the transfer happened when they were able to do as students and then reflect as

teachers, reinforcing Dewey's reflective thinking model (see Rodgers, 2002, for the article that the RWICA II PSTs read regarding reflective thinking).

LOOKING FORWARD

This study provides interesting starting points for further investigation. Most importantly, it encourages teacher educators to engage pre-service teachers in literacy identity work prior to the RWICA courses and subsequently throughout their time in teacher education. Just as disciplines are more than individual silos, and just as it takes a village to raise a child, so too is the education of postsecondary students. A campus culture which cultivates college students' disciplinary literacy identities from the moment they step into their math, science, literature, and history (and more) classrooms as freshmen produces stronger teachers which, in turn, produces stronger university students in the years to come. Therefore, these findings encourage the teacher education community and the larger WAC campus community to become allies in the education of postsecondary students.

Speaking to the power of the scholarship of teaching and learning, Bass (1999) suggested that inquiries such as this one "can begin to chart what is yet uncharted terrain, a landscape that will feature the convergence of disciplinary knowledge, pedagogical practice, evidence of learning, and theories of learning and cognition" (p. 8). This RWICA II inquiry, situated in the convergence of teacher education, disciplinary education, and WAC pedagogy, provides insights and raises more questions to add to the robust field of WAC/WID scholarship.

REFERENCES

- Atwell, N. (1987). In the middle: Writing, reading, and learning with adolescents. Heinemann.
- Bass, R. (1999). The scholarship of teaching: What's the problem? *Inventio: Creative Thinking About Learning and Teaching*, 1(1). <https://my.vanderbilt.edu/sotl/files/2013/08/Bass-Problem1.pdf>
- Beck, A. S. (2005). A place for critical literacy. *Journal of Adolescent and Adult Literacy*, 48(5), 392-400. <https://doi.org/10.1598/JAAL.48.5.3>
- Blumner, J. S., & Childers, P. B. (2015). What we have learned about WAC partnerships and their futures. In J. S. Blumner & P. B. Childers (Eds.), *WAC Partnerships Between Secondary and Postsecondary Institutions* (pp. 167-174). The WAC Clearinghouse; Parlor Press. <https://wac.colostate.edu/books/perspectives/partnerships/>
- Britton, J., Burgess, T., Martin, N., McLeod, A., & Rosen, H. (1975). *The development of writing ability (11-18)*. Macmillan.
- Buehl, D. (2014). *Classroom strategies for interactive learning* (4th ed.). International Reading Association.

- Calkins, L. (1983). *Lessons from a child: On the teaching and learning of writing*. Heinemann Educational Books.
- Childers, P. B., & Lowry, M. J. (2012). Introduction to Writing Across the Curriculum in Secondary Schools. *Across the Disciplines*, 9(3). <https://wac.colostate.edu/docs/atd/k12/intro.pdf>
- Clandinin, D. J., & Connelly, F. M. (2000). *Narrative inquiry: Experience and story in qualitative research*. Jossey-Bass.
- Cochran-Smith, M., & Lytle, S. L. (1999). Relationships of knowledge and practice: Teacher learning in communities. *Review of Research in Education*, 24, 249-305. <https://doi.org/10.2307/1167272>
- Common Core State Standards Initiative. (2020). *Overview: Frequently asked questions*. Retrieved on February 4, 2020 from <http://www.corestandards.org/about-the-standards/frequently-asked-questions/>
- Cox, M., & Gimbel, P. (2012). Conversations among teachers on student writing: WAC/Secondary education partnerships at BSU. *Across the Disciplines* 9(3). https://wac.colostate.edu/docs/atd/k12/cox_gimbel.pdf
- Dewey, J. (1916). *Democracy and education*. Free Press.
- Dewey, J. (1933). *How we think*. Heath.
- Dewey, J. (1974). The relation of theory to practice in education. In R. D. Archambault (Ed.), *John Dewey on education* (pp. 313-338). University of Chicago Press.
- Elbow, P. (1973). *Writing without teachers*. Oxford University Press.
- Emig, J. (1971). The composing process of twelfth graders. NCTE. <https://doi.org/10.2307/356095>
- Emig, J. (1977). Writing as a mode of learning. *College Composition and Communication*, 28(2), 122-128.
- Fang, Z. (2012). The challenges of reading disciplinary texts. In T. L. Jetton & C. Shanahan (Eds.), *Adolescent literacy in the academic disciplines* (pp. 34-68). Guilford Press.
- Fang, Z. (2014). Preparing content-area teachers for disciplinary literacy instruction: The role of literacy teacher educators. *Journal of Adolescent and Adult Literacy*, 57(6), 444-448. <https://doi.org/10.1002/jaal.269>
- Fang, Z., & Coatoam, S. (2013). Disciplinary literacy: What you want to know about it. *Journal of Adolescent & Adult Literacy*, 56, 627-632. <https://doi.org/10.1002/JAAL.190>
- Farrell-Childers, P., Gere, A. R., & Young, A. (Eds.). (1994). *Programs and practices: Writing across the secondary school curriculum*. Boynton/Cook.
- Gee, J. P. (2000). Identity as an analytic lens for research in education. *Review of Research in Education*, 25(1), 99-125. <https://doi.org/10.2307/1167322>
- Gee, J. P. (2001). Reading as situated language: A sociocognitive perspective. *Journal of Adolescent and Adult Literacy*, 44(8), 714. <https://doi.org/10.1598/JAAL.44.8.3>
- Goodnaugh, K., Falkenberg, T., & MacDonald, R. (2016). Examining the nature of theory-practice relationships in initial teacher education: A Canadian case study. *Canadian Journal of Education*, 39(1), 1-28.
- Graves, D. H. (1983). *Writing: Teachers and children at work*. Heinemann Educational Books.

- Gray, J. (2000). *Teachers at the center: A memoir of the early years of the National Writing Project*. National Writing Project.
- Hall, L. A. (2005). Teachers and content-area reading: Attitudes, beliefs, and change. *Teacher and Teacher Education, 21*, 403-414. <https://doi.org/10.1016/j.tate.2005.01.009>
- Horning, A. S. (2007). Reading across the curriculum as the key to student success. *Across the Disciplines, 4*. <https://wac.colostate.edu/docs/atd/articles/horning2007.pdf>
- Hutchings, P. (2000). Introduction: Approaching the scholarship of teaching and learning. In P. Hutchings (Ed.), *Opening lines: Approaches to the scholarship of teaching and learning* (pp. 1-10). Carnegie.
- Langer, J. A., & Applebee, A. N. (2007). *How writing shapes thinking: A study of teaching and learning*. <https://wac.colostate.edu/books/landmarks/langer-applebee/> (Original work published 1987)
- Lattimer, H. (2014). *Real-world literacies: Disciplinary teaching in the high school classroom*. National Council of Teachers of English.
- Lillge, D. (2012). Illuminating possibilities: Secondary writing across the curriculum as a resource for navigating common core state standards. *Across the Disciplines, 9*(3). <https://wac.colostate.edu/docs/atd/k12/lillge.pdf>
- Lee, C. J. (2011). Myths about critical literacy: What teachers need to unlearn. *Journal of Language and Literacy Education, 7*(1), 95-102.
- McCarthy, S. J., & Moje, E. B. (2002). Identity matters. *Reading Research Quarterly, 37*, 228-238. <https://doi.org/10.1598/RRQ.37.2.6>
- Moje, E. B. (2008). Foregrounding the disciplines in secondary literacy teaching and learning: A call for change. *Journal of Adolescent and Adult Literacy, 52*(2), 96-107. <https://doi.org/10.1598/JAAL.52.2.1>
- Moje, E. B. (2011). Developing disciplinary discourses, literacies, and identities: What's knowledge got to do with it? In G. Lopez Bonilla & K. Englander (Eds.), *Discourses and identities in the contexts of educational change: Contributions from the United States and Mexico* (pp. 49-74). Lang.
- Morrell, E. (2012). 21st century literacies, critical media pedagogies, and language arts. *The Reading Teacher, 66*, 300-302. <https://doi.org/10.1002/TRTR.01125>
- Murray, D. M. (1980). Writing as process: How writing finds its own meaning. In T. R. Donovan & B. McClelland (Eds.), *Eight approaches to teaching composition* (pp. 3-20). National Council of Teachers of English.
- Murray, D. M. (1982). *Learning by teaching*. Heinemann
- Murray, D. M. (1985). *A writer teaches writing*. Houghton Mifflin.
- National Commission on Writing in America's Schools and Colleges. (2003). *The neglected "R": The need for a writing revolution*. The College Board.
- National Council of Teachers of English. (2011). *Literacies of disciplines: A policy research brief*. <https://secure.ncte.org/library/NCTEFiles/Resources/Journals/CC/0211-sep2011/CC0211Policy.pdf>
- Nowacek, R. S. (2012). Why is being interdisciplinary so very hard to do? Thoughts on the perils and promise of interdisciplinary pedagogy. In T. M. Zawacki & P. M. Rogers (Eds.), *Writing across the curriculum: A critical sourcebook* (pp. 380-398). Bedford.

- O'Byrne, B., & Murrell, S. (2014). Evaluating multimodal literacies in student blogs. *British Journal of Educational Technology*, 45(5), 926-940. <https://doi.org/10.1111/bjet.12093>
- O'Connor, K. E., & Scanlon, L. (2005, July 4-5). "What I do is who I am": Knowledge, skills, and teachers' professional identities. Paper presented at the AARE Annual Conference, Cairns, Australia.
- Odom, M. L. (2013). Not just for writing anymore: What WAC can teach us about reading to learn. *Across the Disciplines*, 10(4). <https://wac.colostate.edu/docs/atd/reading/odom.pdf>
- Perry, K. H. (2012). What is literacy? A critical overview of sociocultural perspectives. *Journal of Language and Literacy Education*, 8(1), 50-71.
- Pine, G. J. (2009). Conducting teacher action research. In *Teacher action research: Building knowledge democracies* (pp. 234-263). Sage.
- Reason, P., & Bradbury, H. (2008). Introduction. In P. Reason & H. Bradbury (Eds.), *The SAGE handbook of action research: Participative inquiry and practice* (2nd ed., pp. 1-14). Sage. <https://doi.org/10.4135/9781848607934>
- Remington Smith, E. (2007). Integrating theory and practice in an English methods course. In M. Gordon & T. O'Brien (Eds.), *Bridging theory and practice in teacher education* (pp. 31-45). Sense. https://doi.org/10.1163/9789087900991_004
- Richardson, J. S., Morgan, R. F., & Fleener, C. E. (2009). *Reading to learn in the content areas* (7th ed.). Wadsworth Thomson Learning.
- Riessman, C. K. (2008). *Narrative methods for the human sciences*. State University of New York Press.
- Rodgers, C. (2002). Defining reflection: Another look at John Dewey and reflective thinking. *Teachers College Record* 104(4), 842-866. <https://doi.org/10.1111/1467-9620.00181>
- Romine, B. G., McKenna, M. C., & Robinson, R. D. (1996). Reading coursework requirements for middle and high school content area teachers: A U.S. Survey. *Journal of Adolescent & Adult Literacy* 40(3), 194-198.
- Rosenblatt, L. M. (1994). *The reader, the text, the poem: The transactional theory of the literary work*. Southern Illinois University Press.
- Shanahan, T., & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Rethinking content area literacy. *Harvard Educational Review* 78(1), 40-59. <https://doi.org/10.17763/haer.78.1.v62444321p602101>
- Sheils, M. (1975, December 8). Why Johnny can't write. *Newsweek*, 92(8), 58-65.
- Smyth, J. (2007). Pedagogy, school culture and teacher learning: Towards more durable and resistant approaches to secondary school literacy. *Language & Education: An International Journal* 21(5), 406-419. <https://doi.org/10.2167/le802.0>
- Vygotsky, L. S. (1978). *Mind and society: The development of higher psychological processes*. Harvard University Press.