Professional Identity Formation as a Framework in Working with Preservice Secondary Teacher Candidates

By Betina Hsieh

Over the last 10 years, a growing body of literature has focused on professional identity as related to teachers' sense of their own roles and their professional thinking (Assaf, 2008; Chong & Low, 2009; Cohen, 2008; O'Connor, 2008). The ability to construct a teacher self based on one's experiences, beliefs about teaching, and professional environments has been found to be critical to establishing a strong sense of self-efficacy among teachers (Settlage, Southerland, Smith, & Ceglie, 2009), thereby promoting their likelihood to remain in the profession (Day, Elliot, & Kington, 2005). Although some work has focused on the role of preservice teacher education in providing models for teacher candidates as they establish emergent professional identities (Olsen, 2008; Ronfeldt & Grossman, 2008), little explicit work has used professional identity as a framework for instruction in preservice education. In this article, using the context of a secondary literacy course, I argue that personal experiences, praxis-based reflective opportunities, and pedagogically minded assessments are important in shaping an emergent professional identity that effectively integrates literate practices with content instruction. This is a particularly relevant area to explore given the emphasis of the Common Core State Standards on disciplinary literacy in all

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content areas (National Governors Association Center for Best Practices & CCSSO, 2010) and in light of the traditional struggle of teacher educators (TEs) to support teacher candidates (TCs) in understanding the importance, relevance, and value of literacy to their roles as teachers, particularly outside of the humanities (Almerico, 2011; Barry, 2002; Cantrell, Burn, & Callaway, 2008). Keeping in mind a professional identity framework, TEs, both inside and outside of literacy, can better understand the influence of personal and professional experiences in shaping TCs' perspectives on classroom instruction to help TCs develop practical knowledge and understand the value of particular pedagogical frameworks in their specific contexts.

Professional Identity Development

The field of teacher professional identity is based on a view of teachers as professionals engaged in ongoing forms of development to establish a distinct sense of what their roles, purpose, and values are as professionals. According to two major literature reviews on the field (Beauchamp & Thomas, 2009; Beijaard, Meijer, & Verloop, 2004), one of the most difficult aspects of understanding teacher professional identity is the absence of clear, consistent definitions of this concept. Despite the lack of an agreed-on definition of professional identity, Beijaard et al. discuss several key features that emerge from the early professional identity literature, including the ongoing process of identity construction and the importance of considering individual and contextual factors related to identity. Factors influential in professional identity establishment include personal factors (e.g., experiences as students, conception of work), programmatic factors (e.g., teacher education contexts), and/or workplace or political contextual factors (e.g., isolationism vs. collaboration in the workplace setting, accountability measures that define good teaching in particular ways). Teachers, as active agents, continually negotiate their professional identities, based on prior beliefs, values, and experiences, in light of ongoing experiences and contexts, making choices to integrate and adapt their senses of their "teacher selves" or to retain essential elements of their professional identities based on their experiences and environments.

As noted, personal factors play a large role in shaping one's teacher professional identity. Prior works connecting personal and professional identity focus on discrete areas such as the roles of experiences (Olsen, 2008), emotion (O'Connor, 2008; Reio, 2005; Shapiro, 2010), self-efficacy (Settlage et al., 2009), conception of work (Sutherland, Howard, & Markauskaite, 2010), and knowledge and/or passion (Chong & Low, 2009; Hobbs, 2012) as influencing teachers' professional identity development. Taken together, these studies demonstrate that how a teacher perceives himself or herself and his or her role in the classroom, based on his or her own experiences and sense of self, are critical in the establishment of the teacher's professional identity, particularly upon entering the field, when professional classroom-based experiences are somewhat limited.

Preservice teacher education's role in identity development has been connected to early professional models and theoretical understandings of professional identity (Flores & Day, 2006; Olsen, 2008). In preservice programs focused on supporting the establishment of a professional identity, TCs may receive support in negotiating multiple images of teacher professionalism that they encounter (i.e., negotiating personal experiences outside of the program and preprofessional experiences inside and outside of the program) to form their own sense of professional identity (Ronfeldt & Grossman, 2008). Programs can also challenge candidates to actively examine and discuss beliefs about effective teaching as they build professional identities (Breault, 2013). Explicit examination of effective teaching beliefs and practices may come through apprenticeship opportunities (Van Huizen, Van Oers, & Wubbles, 2005), may involve TCs engaging in conversation with one another to reflect on and interrogate previous perceptions of professional identity (Doecke & McKnight, 2002), or may involve partnerships between TEs at the university level and mentors at sites who introduce content expertise, theoretical understanding, and practical experiential knowledge as lenses through which preservice TCs can construct their emergent professional identities (Burn, 2007). In each of these cases, preservice teacher education programs presented TCs with multiple models of teaching and supported their negotiation of these models as part of their development rather than focusing on skills and strategies divorced from a teacher self.

Professional Identity as a Framework for Instruction

Because professional identity establishment has been viewed as an ongoing, iterative, developmental process, it has not been explored as a tool or framework with principles to guide pedagogical practice at the preservice teacher education level. Negotiating personal educational experiences in light of new instructional practices has generally been seen as a pedagogical task or professional learning experience (designed to increase professional knowledge) rather than in relation to professional identity. However, my previous work (Hsieh, 2015) exploring the interplay between praxis (theory-based practice) and personal educational experiences found the negotiation of praxis and personal experience as critical to professional identity establishment. Furthermore, this initial study found that professional identity orientation (or the ways in which teachers negotiated their identities in negotiating personal, theoretical, and practical contextual frameworks) was a powerful factor in influencing teacher receptiveness to professional development opportunities. In relation to secondary TCs' attitudes toward literacy, Lesley (2011) found that personal experience shapes attitudes toward pedagogical learning. In combination with my findings about teacher professional identity orientation and interest in disciplinary literacy practices, I began exploring the ways in which a literacy course designed on principles related to professional identity establishment

might impact preservice TC learning in relation to professional development. The following research questions thus drive this study:

1. What models of literacy instruction do TCs bring to a content area literacy (CAL) course?

2. How do these previous models impact TC perceptions of the relevance of literacy to their professional work?

3. How do newly introduced models and practices impact TCs' emergent professional identity as demonstrated through their professional practices?

Methodology

This article examines professional identity as drawn from previous models TCs bring into a course and as negotiated through the course, as TCs encounter new practices, models, and opportunities for reflection. The study focuses on a single postbaccalaureate mixed-discipline, CAL course taught over a 15-week semester. The course was taught using sociocultural perspectives of literacy (Bakhtin, 1981; Moll, Amanti, Neff, & Gonzalez, 1992; New London Group, 1996; Rosenblatt, 1968; Vygotsky, 1978) as a framework for instruction, with a heavy emphasis on pedagogy. Language- and literacy-based strategies were drawn in part from two course texts, Vacca, Vacca, and Mraz (2011; CAL strategies) and Echevarria, Vogt, and Short (2012; strategies for support language development with English language learners) as well as being modeled explicitly for TCs during each course session.

The course followed a general structure in which candidates were assigned readings from the course texts related to a particular aspect of literacy or language development (e.g., vocabulary, writing to learn, textbook reading) each week and attended a lecture in which several strategies were modeled for students, using particular content area material as a model (e.g., gallery walk jigsaw readings on systems of the body or a think-aloud that modeled metacognitive thinking in relation to analysis of a math textbook using text features of the text). Each strategy was discussed in one of the course texts, introduced in class by the instructor, demonstrated using authentic secondary text material (with TCs taking the part of content area secondary students), and then debriefed in partners or small groups before being discussed as a whole class. TCs were also asked, in weekly exit slips, to reflect on their specific "take-aways" in relation to each topic.

In addition to weekly lectures and reading, TCs participated in regular discussion boards and had course assignments (e.g., a literacy autobiography, final reflection) in which TCs examined their literacy experiences as students. The TCs were also required to submit four lesson plans that asked them to apply specific literacy strategies to their content area standards and give a rationale for why the strategies were selected and five blog posts, each of which asked them to reflect on the way their thinking

and practice were being shaped by either the course readings, an outside reading or resource, course lectures, or a combination of any of these sources.

Data Sources

Drawing from a larger study of 150 secondary TCs across multiple semesters, data for this study were examined from 52 secondary TCs enrolled across the three sections of the CAL course that I taught in a single semester. Participation in the study was voluntary, with an approximate participation rate of 67% across all sections. Pre- and post-surveys were administered to determine whether TCs reported professional growth and learning in their perspectives on literacy and their professional practice in relation to literacy-based practices (see Table 1). Across all content areas, in all survey categories, TCs, as a group, showed significant growth. The statements related to literacy's perceived relevance and candidate self-efficacy are included in Table 1 for the semester from which the focal cases were drawn.

Content areas represented in the sections were diverse ($n = 10$), with a majority of study participants coming from math and English ($n = 11$ for both). From the initial survey data, a closer examination of the nature of change for TCs in relation to professional identity was conducted. Evidence and findings of this article were drawn from course-based assignments ($n = 9$) that were designed to reflect elements specifically related to a professional identity framework. Prior experiences with literacy as learners and observers were recorded in literacy autobiographies; praxis-based reflective evidence asking students to relate theory and text-based learning to pedagogical implications were recorded in five blog posts throughout the semester; pedagogical impact and professional thinking were demonstrated in TCs' abilities to integrate literacy strategies into three content-based lesson plans.

Table 1
Paired t-Test Survey Data

	M (SD)		
Statement	Presurvey	Postsurvey	Two-tailed *p*-value
Literacy is relevant to my content area. (relevance)	4.52 (0.66)	4.87 (0.34)	.0003
Teaching literacy is an important part of my role as an educator. (relevance)	4.52 (0.69)	4.89 (0.38)	.0006
I feel confident in my ability to integrate literacy skills into my instructional practice. (self-efficacy)	3.47 (0.99)	4.56 (0.60)	.0001

Note. $n = 52$.

Data Analysis

Data analysis focused initially on a subgroup (n = 17) of students who showed the most growth according to statistical pre- and postdata collected as part of a larger study, with 3 focal students selected from this group for closer case study analysis: Sophia (English), Kristina (math), and Paul (music). In addition to showing strong growth in the pre- and postsurvey data analysis, the focal students were selected to reflect a range of secondary areas (humanities, STEM, and fine arts), including the two most represented content areas in the participating group. These three cases allowed me to more deeply explore professional identity development in relation to literacy, a focus that was not present in content-specific pedagogy and methods courses. After selecting the focal students, I used constant-comparative analysis (Glaser & Strauss, 1967) to examine their literacy autobiographies, course blogs, and course lesson plans for precourse experiences related to literacy learning (generally and discipline specific), professional understandings related to literacy as they evolved throughout the course, and citations related to literacy theory. Analysis took place first through general theoretical memos and then using codes related to the professional identity framework: personal "experiences" with literacy, "classroom learning," and "praxis"-based[1] reasoning. Codes and theoretical memos were cross-referenced and examined for themes related to professional identity development, literacy relevance, and literacy self-efficacy. These initial categories were measured by quantitative survey questions (see Table 1) before being discussed and refined with a graduate student assistant and research partner to promote interrater reliability with data and consistency of findings.

Initial Identities:

Drawing From Prior Ideas and Student Experiences

The importance of the cultural, disciplinary, personal, and linguistic knowledge that students brought with them to text- and language-based interactions was highlighted in students' literacy autobiographies. The literacy autobiography asked students to tell their history of language and literacy learning, considering home experiences with language, literacy development in school, literacy development in their disciplines, and whether they considered themselves readers and writers as adults. By introducing the concept of *funds of knowledge*, which Moll et al. (1992) discussed as the local- and community-based resources students bring into a classroom, connections were made between literacy histories and experiences and how they shape current understandings of literacy, both for TCs and their prospective students. The use of the funds of knowledge framework and literacy autobiography connected to professional identity in having TCs specifically draw from their prior experiences as a frame of reference from which to begin an examination of the relevance of the course concepts to their own future pedagogical practice.

All three focal students drew powerfully from their literacy histories, discussing ways in which their experiences with literacy had shaped their experiences as students and perspectives as future teachers. Whereas Sophia had positive home and school experiences with literacy that provided her with clear models of literary instruction and identity, both Kristina and Paul discussed a lack of connection between home and school environments that led to mixed experiences with literacy. Kristina discussed an absence of adult models from which to base an idea of literacy instruction, particularly in her content area of mathematics, and an independent approach to literacy generally. Paul, similarly, lacked models of disciplinary literacy integration in music and was critical toward most of his teachers, who failed to support his general literacy development. He did, however, have one particular high school teacher who inspired him to see the importance of literacy development and teaching and supporting the development of literacy skills through instruction. Paul's experience with this particular teacher (who was outside of his content area) drove him to think deeply about his own role in promoting music literacy development with his students as a music teacher.

Sophia described in her autobiography an early love of literacy in Spanish in her home country that was fostered by her mother but was then interrupted temporarily by her immigration to the United States:

> Reading for me began at a young age back in Costa Rica when my mom would read to me after school. After kindergarten let out she'd sit down next to me and read to me the most wonderful stories. It wasn't long before I wanted to read on my own. We practiced daily and I remember the day that I was finally able to read *Los Pendientes* all by myself. A few months after that, my mother, sister, and I moved to California and I had to start again.

Sophia's early model of literacy, with her mother as teacher, revolved around safety and repeated practice. Despite the temporary interruption to Sophia's early literacy, she recalled with fondness the patience and dedication of early English as a second language (ESL) teachers who supported her literacy transition to English and promoted her love of language and literacy in a very similar way:

> It was difficult, to say the least, to get a full grasp on the English language. [My ESL teachers] sat with me hours on end with repetition techniques and having me write short prompts. There were so many rules, and exceptions, and odd memorizing that I had to do. But their patience and understanding were astounding, and when I finally got it, I loved it.

Sophia attributed her successful language transition to English directly to the patience and understanding of her ESL teachers. Although the skills-based repetition that Sophia mentioned could have been construed as boring and tedious, she portrayed the dedication of her teachers as inspiring and reflective of the patience necessary to support language development. With her solid literacy skills in her native language that had also been born of repetition and patience, Sophia devel-

oped a cohesive model of literacy instruction. Sophia's model of teaching included teachers with virtues such as patience and understanding. This view of a teacher's role in providing persistent support for students is a theme drawn from her experiences that provided a clear model for her own practice. Sophia's thoughts, from the beginning of the course, were focused on ways to support her students in seeing the value of reading and writing in their own lives and schooling experiences, just as her teachers had supported her when she was younger.

Unlike Sophia, Kristina felt that there was an absence of relevant literacy support from teachers. Although she had a strong literacy background at home, most of her personal reading was independent. Kristina discussed the up-and-down journey of her literacy development at school, particularly with an early literacy focus on oral reading:

> Even though I loved reading as my own personal escape, I was extremely shy . . . so I had a lot of trouble reading in front of classes. We frequently moved . . . so each time I changed schools I would get retested and put into a different reading level. At most schools I was considered to be well above the average reading level, but in some classes where they put an emphasis on reading aloud, I was considered to be average or even below reading level.

Unlike Sophia and her transition to the United States, which was difficult but consistent, with patient teachers who supported the early literacy foundation her mother had built at home, Kristina noted how the numerous transitions that she went through in her early schooling led to frequent reclassification in reading, sometimes based primarily on her oral reading skills rather than on her comprehension levels. Although Kristina used reading personally as an escape from difficult childhood situations that she faced, her home–school experiences did not consistently validate or support her early literacy development, and she did not mention a significant adult teaching figure who supported these transitions.

Kristina did not initially identify literacy as an important part of her content-based instruction, based on her own experiences with her content learning:

> I never really felt the need to read math textbooks. For one thing, I was generally advanced in my class, so I didn't need to access the information through the textbook because I already knew it. The other problem, though, was definitely that the information was inaccessible. There wasn't any interesting story line to the text, they [the textbooks] used vocabulary that was too difficult, they tried to explain abstract concepts without many useful visuals. As I progressed in school, I read my textbooks less and less.

Kristina, in her analysis of her literacy experiences in mathematics, brought forth two reasons that she did not use texts in her content area. First, she noted not needing textbooks to support her understanding of the information because she already knew it. Although she did not specify how she gained this knowledge, likely classroom-based instructional methods replaced the textbook as her source

of information. Kristina also noted the lack of accessibility of textbooks. Kristina found math textbooks to be "less and less" of a resource to her during her secondary math experiences.

Aside from briefly mentioning her mother, who told her to look things up when she had questions and provided resources at home, Kristina did not discuss any significant adult literacy models in her autobiography. Rather, Kristina determined the relevance of literacy to her life and content based on what she could figure out on her own without support. Literacy, in Kristina's schooling experiences, was inconsistent at best and inaccessible or irrelevant at worst, leaving her without a strong model on which to construct a professional identity as a teacher of literacy in relation to math. Without models of literacy integration in the classroom, Kristina entered the course somewhat skeptical of the relevance of literacy in mathematics but open to exploring literacy-related strategies as resources to her teaching, even if she didn't know what those might look like in relation to her content area.

Whereas Sophia had strong positive literacy teaching models and Kristina did not discuss significant literacy teacher role models, Paul, a music teacher candidate, characterized his experience with literacy in schools as largely stigmatizing and detrimental. In his literacy autobiography, he spoke of the home–school dichotomy he felt and how it impacted his identity as a reader and a student:

> Reading at home was always enjoyable. . . . Reading in school . . . contained anxiety and feelings of inadequacy. . . . Though I enjoyed reading at home, I often felt inadequate and lost at school. . . . As my friends and I made the transition from elementary school to middle school, I continued to see them succeed while I struggled to keep up. . . . I found myself separated from them. My self-esteem took a dive and I struggled to pass my classes. . . . Throughout this time I continued to read at home for my own enjoyment, yet I could not transfer my reading abilities to my work in the classroom.

For Paul, lack of success and feelings of inadequacy with reading at school led to a social separation from many of his friends and impacted his own self-esteem as he struggled to pass classes and transfer reading abilities from home to work done at school. Many of these early experiences were painful and left a tone of anger related to literacy in his autobiography. Similar to Kristina, in his early literacy development, Paul did not mention a strong example of a teacher or school-based adult figure who supported his literacy development. However, unlike Kristina, Paul later discussed the impact of a single teacher in high school who held him to high expectations (teaching a "regular" class with similar strategies and expectations to an "honors" class) and supported him in the development of stronger general literacy skills. Because of the impact of this teacher (who was not a music teacher), Paul noted the importance of teachers (generally) in impacting and supporting the literacy skills of their students in all content areas, including his own. He spoke of music literacy in the following way in his literacy autobiography, drawing connections to his own experiences with literacy:

> As a music teacher, content literacy involves the ability to read, interpret, understand, and communicate musical thoughts. The struggles I had in reading and writing in school are similar to challenges that many students face in a performance ensemble class. They may enjoy music but find the process of reading and performing music in class difficult because they have not been given the necessary skills to understand what they are (or should be) doing.

Here Paul explicitly connected music literacy as a form of disciplinary literacy that, while seemingly different in terms of text type, actually could be seen as similar to students' struggles with any form of literacy. Paul took a view of literacy as skills-based and teachable, noting that, by developing particular literacy skills, students could better "read, interpret, understand, and communicate musical thoughts." Just as Paul's own experiences struggling with more standard text-based literacy and getting support from a single teacher helped him to develop more nuanced general literacy skills (and a metacognitive understanding of these skills), his goal, even from early in the course, was to support students in developing similar skills related to a music literacy context.

In each of their cases, the three focal TCs brought experiences with informal and formal literacy teaching and learning that shaped their perspectives entering the class. Sophia brought powerful and cohesive models of patient, understanding language teachers who helped her develop competency in (and eventually a love for) her content area. With these strong models, Sophia was eager to learn literacy strategies that could provide similar supports for her own future students. Kristina, largely left to determine the relevance of literacy on her own without teacher models, based her view of literacy's power on early encounters with literature, entering the course with uncertainty about how literacy could authentically connect to mathematics. Paul, like Sophia, found the role of the teacher in literacy development to be incredibly powerful but lacked teacher models in his own content area, similar to Kristina. This led him to approach the course thinking deeply about how to adapt more general literacy strategies to context-specific applications related to music.

Praxis-Based Experiences:

Connecting Texts and Practice to Impact Professional Identity

All three focal TCs brought to the study powerful literacy experiences that shaped their initial views of literacy in relation to content teaching; however, these personal experiences with literacy were solely one, albeit powerful, part of their professional identities. A key objective of the study was to examine the ways in which new models for literacy integration in content-based instruction might impact students' professional identity, as introduced through the modeling of praxis-based (research-grounded, pedagogical) strategies that took place during the course. Through interweaving literacy strategies with an introduction to a sociocultural

literacy framework, the goal for TCs was that the course work impact their professional practice both by drawing from and influencing their professional identities.

For students outside of the humanities, like Kristina and Paul, the general CAL strategies found in the textbook (even when modeled with specific content-based applications in class) did not occur as authentic models for literacy integration. As this happened, both Kristina and Paul looked for outside resources to support their disciplinary literacy instruction. Through their interactions with texts, either assigned or chosen, Kristina, Paul, and Sophia began developing stronger connections between their professional identities as content teachers and the literate practices they were encountering. The focal students demonstrated how, drawing from both course texts and outside texts, they were pushed to think about literacy in new ways related to their professional practice. In doing so, candidates began considering their professional identities in relation to literacy-based instruction.

Intersections of Content-Based Instruction
and Literacy Learning Impact Professional Perspectives

Sophia's strong personal connections with literacy learning, literature, and her own teachers led to a deep investment in her professional identity as a teacher of students and a teacher of English. Ironically, this sometimes led Sophia to wrestle with particular concepts that she felt were important for her future teaching but that were not always initially clear. Her deep urgency and desire for greater professional growth pushed Sophia toward particular texts focused on English language learners (ELLs). Referring to her emergent understanding of language development strategies for ELLs, concepts discussed in a course text (Echevarria et al., 2012) and in lecture, Sophia noted,

> These [concepts] aren't just words on a blackboard but strategies I'll use in my career for the rest of my life. There are students out there who will depend on my proper integration of SDAIE [specially designed academic instruction in English] strategies and that I am upholding the learning objectives I've listed on the projection screen. Suddenly the weight of the world is on my shoulders when I remember that this is my career that I'm preparing for.

Sophia, in struggling with the "proper integration" of SDAIE strategies, drew on her views of the teacher as a central figure in learning and literacy development. The importance of her commitment to teaching and to her students' language development was clear, as this knowledge was not just theoretical (or "words on a blackboard") to her but reflected "strategies I'll use in my career for the rest of my life." Despite her commitments, Sophia struggled with how to embed these specific strategies into her teaching. Because Sophia's initial models of language teaching were based on dispositional qualities, like patience and understanding, rather than an awareness of specific language-based pedagogical strategies, it seemed

to be initially difficult for her to understand and integrate new strategies as they were presented to her or as she read about them. Her negotiation with these new concepts and adoption of these new ideas proved challenging, possibly because of the strength of more traditional models of repetitive drills that supported her own learning experiences. Sophia's negotiation of these new concepts was critical to her professional development as she sought to be the best literacy instructor that she could be, pushing herself to incorporate a more strategically and pedagogically based model of teacher identity into her existing framework of an ideal teacher as someone who is patient and understanding.

Kristina also encountered a new model of literacy-aware instruction. Interestingly, just as Kristina struggled as a student to relate to textbooks in her content area, she initially also struggled as a TC to connect the assigned textbook to authentic mathematics-based instruction. However, Kristina found a clear relationship between the course concepts and her own instructional practice by reading an external text and connecting it to the ideas that she encountered in the course. In an early blog post, Kristina discussed an epiphany about the importance of literacy-related principles in conjunction with content area material:

> In our textbook, *Content Area Reading: Literacy and Learning Across the Curriculum* (Vacca et al., 2011), it is emphasized how it is important to activate prior knowledge in order to encourage readers to want to continue reading. They talk about how self-efficacy, or a student's judgment of how well he or she is able to understand a text, and motivation, a student's readiness to explore new text, both play a key role in how well the student will be able to read and comprehend new information.

Kristina first drew from literacy-related principles found in the text, then connected this information on activating prior knowledge to promote content area comprehension to an online article that she had found (independently) on imaginary numbers (Azad, 2013), using the principle of prior knowledge in relating imaginary numbers to negative numbers:

> In the online article "A Visual, Intuitive Guide to Imaginary Numbers," the author, Azad, first relates the new concept of imaginary numbers to negative numbers. He includes a chart comparing the two types of number systems and how they are related before diving in and showing why the relationships hold true. Doing so helped me to see how imaginary numbers actually can make intuitive sense and gave me one of the biggest "AHA!" moments I've had in a long time.

In addition to drawing on the idea of relating prior understandings to new learning, this article invoked other principles discussed in class, such as graphic organizers (charts), visualization, and real-world examples. By engaging with the authentic, math-based concept of imaginary numbers and gaining insight into how interacting with imaginary numbers could draw from knowledge of other number systems, Kristina developed a new perspective on the relevance of teaching math with literacy-related strategies:

> Before I'd read that article, I'd only been taught how to use imaginary/complex numbers, not what they meant or how they related to me. Relating new concepts to prior knowledge improves self-efficacy, makes it interesting, and makes you feel like you're able to tackle a new topic.

Kristina's final take-away from the article echoed the textbook passage that she initially quoted in her blog. Just as activating prior knowledge can improve self-efficacy with traditional texts, Kristina discovered the ways in which connecting prior knowledge can also serve as an important tool in helping students engage with and tackle new topics, ideas, and representations (or texts) in mathematics.

While Kristina's main complaint about textbooks was their lack of relevance and utility in terms of her (personal) learning, by connecting the course textbook to a discipline-specific online article, Kristina demonstrated a praxis-based connection that supported her understanding of connecting prior knowledge in mathematics and how this literacy-based learning principle could be used in her classroom, thus impacting her professional perspectives and professional identity. As in her student experiences with literacy, Kristina found authentic connection through a text that she read "on her own." However, in a teacher education setting, this outside reading was framed within the context of her professional understandings and models presented in the course. Her professional identity was being reshaped by learning experiences with texts, as she began to connect literacy-based principles with mathematics concepts, establishing new models and ideas for literacy–math integration. Although Kristina constructed her personal understandings semi-independently, blog posts, assigned as reflective tasks, provided opportunities to frame her understandings in a larger context that connected theory and practice.

Entering the course, Paul sought to develop students' literacy in relation to his content area, music, to make a powerful impact on students' literacy development, as his own high school teacher had done for him. However, Paul lacked content-specific models for musical literacy development, and he often found the general strategies presented in texts to lack clear connections to the music classroom. Because he, like Kristina, struggled with the authenticity of examples found in course texts, he began to look at texts outside of the course to help support his thinking and movement toward his professional goals. In doing so, Paul developed a nuanced framework for musical literacy development in response to an online source. Paul cited this quote from Afflerbach, Pearson, and Paris (2008), taken from a Grant Wiggins (2013) blog critiquing common definitions of reading strategies, which he had found on his own:

> The progression from effortful and deliberate to automatic use of specific actions while reading occurs at many levels—decoding, fluency, comprehension, and critical reading. Beginning readers need to associate visual patterns of letters with their phonemic pronunciations. A hoped for consequence of instruction is that students' decoding progresses from deliberate to fluent actions.

Paul then used these four levels as a starting point to frame his thinking around music literacy and performance, forming an argument about levels of music literacy and performance development:

> Decoding . . . : At this [very basic] level, a musician must be able to look at notes on a staff and understand what they are and how to play them on a given instrument. . . .
>
> Accuracy . . . : Prefluency—the ability to play notes and rhythms of an excerpt of the music accurately at a steady (not performance) tempo. . . .
>
> Fluency: At this level the musician can play his or her music accurately at or near performance tempo. Once a musician can play his or her part fluently, ensemble rehearsals can really be effective.
>
> Ensemble: At this level, the musician thinks about other musicians and what they play, in addition to what he or she is playing. The parts begin working together toward a coordinated, coherent reading of the music.
>
> Interpretation: At this level, the ensemble works beyond mere coordination to making a single, unified musical statement. As an ensemble, the musicians address issues of balance, articulation, and style.

Paul developed this framework in thinking about literate practice and applied it specifically to the disciplinary work that musicians do. His development of this music-based literacy framework tied closely to his personal literate identity, in his desire to see the big picture of literacy and be able to apply literate practices across multiple contexts, as well as connecting to his professional identity as an aspiring music teacher. He did not simply adopt an established literacy framework by mapping corresponding musical skills onto it; rather, he adapted a reading framework to be authentic to stages of ensemble musical performance that were at the core of his instructional practice. Because Paul was concurrently teaching at a private high school, he was able to implement his framework, noting in his blog that "students responded well to it and felt like it gave them a better context for asking questions, as well as their own evaluation of how they were performing." Paul's professional identity and professional practice were informed by his thinking about literacy frameworks in relation to content-based instruction, and he felt empowered to take steps toward making an impact on students' musical literacy development through his newly developed ideas.

For all three TCs, the opportunity to engage with new perspectives and practices related to literacy and content instruction impacted professional perspectives, thus prompting professional identity negotiation. All three TCs moved beyond their anecdotal and personal experiences as students to develop a broader perspective on literacy integration through textual interaction. This was supported and observed in opportunities for reflection prompted by student professional blogs.

Students Integrate Literacy Into Lesson Planning:

Examining the Impact of New Literacy Models and Ideas on Practice

Evidence of the expanded literacy perspectives TCs gained in relation to their professional identities could be seen in their ability to integrate literacy-based practices into content area lesson plans. Authentic disciplinary literacy integration reflected evolving models of literacy's relevance in the content area classroom. Each candidate employed literacy and language-based strategies in content-specific lesson plans. However, each focal TC did so in nuanced ways reflective of his or her professional identity, demonstrating a connection between professional identity and professional practice. Sophia, true to her allegiance to the strong professional models from her personal experience, often relied on traditional literacy strategies in the English class-room, trying newer strategies only when they had been modeled in class. Kristina, seeking relevant approaches to integrating literacy-based principles into mathematics content, used course-demonstrated models exclusively as strategies to supplement and support her mathematics instruction. And Paul, true to his stated goals, adapted general literacy frameworks and strategies to music-specific texts and contexts.

Sophia, in her vocabulary lesson plan, chose traditional strategies of finding words in a text, making vocabulary lists with flashcards, and using a quiz for as-sessment. These methodologies were consistent with standard instruction in the English classroom and with the models of repetition that she had encountered as a student. These strategies were also consistent with Sophia's positive experiences with traditional literacy instruction, including repetitive memorization, mentioned specifically in relation to her vocabulary learning as an ELL. For her reading com-prehension plan, Sophia chose to look at a historical, expository text, the Declaration of Independence, to help students examine rhetorical strategies. In this plan, she used her least traditional strategy, a think-aloud protocol, to model for students how to analyze an argumentative text using a rhetorical strategies (ethos, pathos, logos) framework. The choice to examine an expository, historical text and integrate a less traditional strategy could be tied to Sophia's desire to push herself beyond her own experiences to be a better teacher for students who are not like herself, something that she discussed in a blog post related to a comment that her first lesson plan was very "traditional." She incorporated this strategy after a lecture-based model of the think-aloud protocol in relation to an expository (math-based) text. In her third lesson plan, Sophia returned to a more traditional narrative, creative writing prompt in response to literature, again showing a loyalty to traditional forms of literacy instruction in the English classroom. Although Sophia consistently saw the importance of integrating explicit literacy instruction into her practice as a core part of her professional identity, her lesson plans demonstrated her struggle to move away from more traditional strategies central to her own learning experiences and professional models, despite the introduction of alternative strategies and models.

In Kristina's lesson plans, there was a focus on scaffolding authentic content

through language-based and literacy-informed strategies. Like Sophia, Kristina used the think-aloud protocol to help students understand how to analyze text using a content-based framework; however, Kristina's texts were percent-mixture word problems based on real-world scenarios rather than traditional literary or expository texts. Kristina's other language- and literacy-based strategies included guided or scaffolded (CLOZE-based) notes, think-pair-shares, and graphic organizers, all of which were used to support student thinking about and understanding of mathematics content. Each plan was clearly a math lesson plan first that used language- and literacy-based tools (in the form of strategies) to support understanding, a reflection of Kristina's commitment that literacy integration be relevant to mathematics and practical and useful in supporting students' understandings related to the content. Unlike Kristina's personal experience of having to seek out and find connections completely on her own, however, all of the strategies incorporated into her lesson plans were ones demonstrated at least once (and often used more frequently) in lecture. Once Kristina initially developed a connection between math content and literacy-based strategies to promote understanding, she was able to integrate these strategies in ways that allowed her to create relevant mathematical applications despite having no professional models from which to draw prior to entering the course. Her ability to connect the importance of ideas like background knowledge (schema) and expanded notions of text as symbolic language to be interpreted helped Kristina to use more general CAL strategies in ways that supported students' organizing their thinking in mathematics. Kristina's ability to integrate literacy into math demonstrates the importance and potential impact that praxis-based modeling can have on professional practice through integrating new professional models and pushing professional identity integration.

Finally, Paul, consistent with his desire to focus on music-specific disciplinary literacy, used authentic music-based texts, particularly in his vocabulary and comprehension lesson plans, both of which revolved around musical scores. In using scores, Paul was able to adapt traditional text-based strategies (e.g., graphic organizers, exit slips, examining text features, and reflective journals) in nuanced ways to help students understand key score-based structures and vocabulary, thus supporting their decoding, fluency, and interpretation of these musical texts. In his third lesson plan, rather than having students compose, Paul used an authentic example of writing to learn in having students metacognitively analyze and respond to their own performance through the use of a role-audience-format-topic prompt asking students to write a letter to the conductor (Paul) noting the strengths and weaknesses of the performance based on specified evaluation criteria. Consistent with his initial professional identity in relation to literacy, Paul adapted general literacy strategies to a music context, using disciplinary understandings to shape traditional strategies in ways that supported his music students to become stronger not only in musical performance but also in music literacy. This focus on music literacy was clearly central to Paul's professional identity and his commitment to

support his students' overall development. The course supported Paul's professional identity through enabling him to enact his initial commitments and providing resources and models that extended beyond his personal experiences as a student.

Connecting the Dots:

Professional Identity and (Literacy-Based) Teacher Preparation

While all three focal students initially drew from diverse personal experiences to frame their professional identities and perspectives toward literacy instruction in their content areas, the experiences, models, and texts presented in the context of preservice course work prompted negotiation of their professional identities in powerful ways. The impact of a single course on emergent professional identity, as seen through these focal students, holds important implications for the field of teacher education more broadly and calls for further investigation.

Sophia's personal identification with cohesive models of literacy instruction led to a deep conviction about the importance of literacy instruction but also resulted in a struggle with new ideas presented in the class, as indicated by her gravitation toward more traditional literacy-based instruction. Kristina's lack of professional models who effectively integrated literacy and mathematics made her initially skeptical of connecting literacy and mathematics, but her independent association with literacy and emphasis on relevance led her to look for practical applications of literacy that were grounded in supporting authentic content-based understanding. Paul's general difficulty with school-based literacy combined with the impact of one high school teacher who supported his own literacy development led to his desire for future students to have a well-established foundation in music literacy, a belief that helped him establish a lens through which to adapt literacy strategies that he encountered to specific music-based contexts. Each TC drew from his or her personal identity in his or her interaction with materials in the TCs' preservice education to move toward a professional identity that integrated literacy-based strategies with professional practice.

In looking at the three case studies presented here, several key implications for TEs' practice and research emerge. First, this study demonstrates the importance of explicitly integrating assignments that allow for various forms of reflection by TCs. When TCs are encouraged to discuss previous models of teaching that they have encountered as students and interrogate those models in light of new ideas presented in course work, they begin the process of actively negotiating a professional identity. Given that models of teaching are highly influential on professional identity, it is important to understand TCs' prior experiences with their own learning (and the new models presented in various course work) to address and present key ideas to support their development. These opportunities for reflection lead to deeper understandings of the growth and impact of teacher education course work

on individual TCs and can be a powerful tool for TEs in promoting professional dispositions of reflection and growth among candidates.

Additionally, this study demonstrates the importance of providing theoretically contextualized demonstrations of practice to support the development of teaching models central to professional identity. Just as reflecting on previous models of teaching encountered as students is important, for TCs, experiencing alternative (or reinforcing) models in preservice teacher education is equally important in establishing an emergent professional identity. TCs who may not have had strong pedagogical models can benefit from both theoretical background behind various methods and forms of instruction as well as the demonstration of new pedagogical strategies with content-relevant texts and contexts in class. To prompt the negotiation of teacher professional identities, new practices and ideas must be introduced explicitly to TCs.

Finally, more research must be done on the impact of preservice teacher education course work on establishing an emergent teacher professional identity. While this study indicates the potential impact that an identity framework can have in instructional design of a preservice course (i.e., allowing for opportunities for reflection, providing alternative models, assessing impact through praxis-based assignments) and demonstrates the ways in which TCs actively negotiated their professional identities in relation to new and/or additional ideas that contrast with previous personal experiences as students, it leaves questions about the long-term impact on this type of course work on professional identity. To investigate this, longitudinal studies would need to be conducted, following teachers from their preservice course work through student teaching and early teaching practice. Further research also might expand the idea of using professional identity as an instructional and analytical framework beyond the impact of a single course in a single area (literacy) to examine ongoing opportunities for reflection on new models presented throughout a program and the impact on emergent professional identity. This line of research may provide nuanced perspectives on the value of teacher education for new teachers entering the field.

Educator preparation and teacher professional identity are complex fields. However, looking at the concomitant development of professional identity with professional practice allows TEs to think about and intentionally draw from TCs' personal experiences, as well as research and classroom-based practical experiences to make the preservice experience more cohesive and relevant for candidates. In this way, TEs can encourage more "AHA!" moments as TCs explicitly build on the schema acquired through their own student experiences, examining those experiences reflectively with the lens of future educators, and apply their new understandings to their pedagogical practice. Furthermore, TEs can equip TCs, through texts, modeling, and reflection, to reconsider their student experiences as well as addressing gaps in student experiences as TCs establish their emergent professional identities. Using a professional identity framework can thereby be a powerful tool in both practice and

research. as the field explores ways to make preservice teacher education relevant and effective for all preservice candidates.

Note

¹ Praxis refers to the intersection of theory and practice or the use of theory to justify particular practices.

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