

SECONDARY LITERACY TEACHERS' USE OF A TWITTER CHAT COMMUNITY  
FOR VOLUNTARY ONGOING PROFESSIONAL LEARNING

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A Dissertation  
presented to  
the Faculty of the Graduate School  
at the University of Missouri-Columbia

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In Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Education

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by  
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MAY 2017

TWITTER FOR PROFESSIONAL LEARNING

The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

SECONDARY LITERACY TEACHERS' USE OF A TWITTER CHAT COMMUNITY  
FOR VOLUNTARY ONGOING PROFESSIONAL LEARNING

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## TWITTER FOR PROFESSIONAL LEARNING

### DEDICATION

To my husband, Charles: Without your unwavering support and shoulder to cry on, this research would never have been completed. You believed in me even when I didn't. Thanks for cooking dinner, doing laundry, and cleaning up the house, so I could focus on getting this accomplished. I love you with all my heart!

To my children, Carly and Parker: Thank you for your encouragement during this difficult time! You both always had a positive word to say when I was feeling stressed and less than stellar. I appreciate all the chores you helped with around the house, so I could work on this paper. I hope through this process you see that dreaming big takes hard work and perseverance but is well worth it!

To Mom and Dad: God blessed me with the best parents in the world, and I love you both. Mom, I appreciate your listening ear and words of wisdom. You encouraged me when I wanted to quit. And Dad, I miss you terribly everyday, and I know it would make you proud to know that I reached for my dream and followed it through. I wish you could be here to share in the joy. However, I did schedule my defense on your birthday, so you'll be forefront in my mind and heart.

To my colleagues: Thank you for the constant prayers, words of encouragement, and support during this year of sabbatical. I have missed working with you!

To God, my Provider: Your plan is greater than any other. Thank you for reminding me.

“For I know the plans I have for you,” declares the LORD, “plans to prosper you and not to harm you, plans to give you hope and a future.” - Jeremiah 29:11

## ACKNOWLEDGEMENTS

I want to thank my advisor, James Baumann, for staying on as chair of my committee even after officially retiring. I appreciate all the hours of Google Hangouts and phone calls as you helped me work through the specifics of the study. The time you spent pouring over my drafts and brainstorming ideas with me was over and above the call of duty, and I am forever in your debt for helping this study become a reality. I hope that now you'll be able to relax, ride your motorcycle, and babysit your grandkids even more than before.

I also want to also thank my committee members—Matt Burns, Jane Howland, and Laurie Kingsley—for your ongoing support, brainstorming sessions, and asking the hard questions during the proposal process. This study is better because of you.

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**ABSTRACT**

In this holistic, descriptive, single-case study, the interactions of secondary literacy teachers who participated in the weekly #2ndaryELA Twitter chat were examined to explore the nature of online, self-selected, voluntary professional learning. Archived tweets from 17 chats occurring from July through November 2016, Twitter profile information, questionnaire responses, and semi-structured interviews with four participants were collected and analyzed. Wenger's (1998) social learning theory served as the theoretical framework, and the four main constructs—meaning, practice, identity, and community—were used as a lens through which the community interactions were viewed and interpreted. Four broad themes emerged from the data: Sharing, Connecting, Socializing, and Exploring. Participants shared ideas and resources most often. They made connections by interacting with and following others, and they socialized by sharing feelings and identifying with each other, which created a positive social climate. Participants explored new ideas through public reflection and negotiation of meaning very little. Findings revealed that the nature of learning in this environment is personalized and supportive, but there were obstacles to learning, such as the voluntary nature of participation and low levels of perceived efficacy. The Twitter chat structure was found to limit participants' depth of learning. A modified model of social learning theory is offered for use in voluntary, structured environments similar to Twitter chat communities.

## Chapter One: Introduction

In the early 2000s, the U.S. Department of Education (USDE) invited teachers, school administrators, educational leaders, and professional organizations to provide input on a new conception of teaching. This resulted in the publication of *A Blueprint for R.E.S.P.E.C.T.: Recognizing Educational Success, Professional Excellence, and Collaborative Teaching* (USDE, 2013), the stated purpose of which was to propose a new vision of teaching, leading, and learning—a vision unconstrained and unprejudiced by the limits of today’s reality and guided solely by what the U.S. education system must accomplish in order to remain globally competitive, and provide students with the skills and knowledge necessary to succeed in their careers and in their lives. (p. 3).

Among the seven critical components of the *Blueprint* was “continuous growth and professional development,” which asserted that “effective teachers and principals are career-long learners [who] . . . individually and collaboratively continuously reflect on and improve practice” (p. 6).

Not long after the publication of the *Blueprint*, the USDE Office of Educational Technology published *The Future Ready District: Professional Learning Through Online Communities* (2014). A central tenet of this document was “a dynamic model of integration” that involved “a conceptual vision of how different forms of professional learning and collaboration can work together to support continuous improvement” (p. 9). This vision was based on examples of school systems that were successful in integrating “professional learning through online communities of practice and social

networks into districts' formal support for professional learning and collaboration" (p. 9). *The Future Ready District* proposed four paths to integrated learning: "Encourage voluntary individual learning; formally support individual learning; support bounded collaborative learning; [and] cultivate connected collaborative learning" (p. 10).

Although there is a large body of research on the nature and efficacy of *professional learning* (PL) (Garet, Porter, Desimone, Birman, & Yoon, 2001; Wei, Darling-Hammond, Andree, Richardson, & Orphanos, 2009), defined in this study as any activity meant to increase teacher knowledge and improve instruction, there is much less known about PL that occurs in online communities (Appendix A contains definitions of all key terms found in this dissertation). The USDE Connected Educators Project ([www.connectededucators.org](http://www.connectededucators.org)) provides a valuable forum for promoting and supporting online professional learning. An important contribution was *The Connected Community: Exploratory Research on Designing Online Communities* (Cambridge, Booth, Kellogg, & Perez-Lopez, 2014), which examined "how to capitalize on the promise of online communities of practice to support professional learning for educators" (p. 1). Within this report, positive outcomes resulted from participation in online communities, but the authors warned that "generating this value is not a sure thing" (p. 27). Designers of online communities need to carefully attend to the purpose, design, and needs of community members if the group is to create added value to members' professional lives (Wenger, Trayner, & de Laat, 2011).

There have been several outcomes associated with online learning communities. From the Connected Educators Project (Cambridge et al., 2014) and other studies, we know online communities assuage lack-of-time concerns of traditional

professional development (PD) (Ross, 2011), connect teachers to vast resources (Booth, 2012; Chiu, Hsu, & Wang, 2006; Vavasseur & MacGregor, 2008), build professional networks (Carpenter & Krutka, 2014; Trust, Krutka, & Carpenter, 2016; Wesely, 2013), reduce feelings of isolation (Alderton, Brunsell, & Bariexca, 2011; Duncan-Howell, 2010; Gray, 2004), and increase confidence and passion for teaching (Brown & Adler, 2008; Lankshear & Knobel, 2011; Rodesiler, 2015). However, online communities of practice have been criticized for lack of oversight and accountability (Lin, Lin, & Huang, 2008; Wesely, 2013).

### **Statement of the Problem**

Many teachers are beginning to seek online learning opportunities voluntarily to meet personal learning needs which are many times left unmet through traditional PD opportunities. Although the recent interest in and exploration of online learning is important, there are several unanswered questions about the nature of online professional learning communities of teachers. Specifically, there is little known about *how* participation in an online community of practice impacts teachers professionally. For example, how do participants negotiate meaning and potentially change classroom instruction as a result of online interactions within self-selected communities? What specific content do teachers learn in these communities and how do new ideas impact teaching practices? Additionally, questions remain concerning how teachers formulate identities, sustain community engagement, and negotiate new beliefs about teaching as a result of their online participation. Given these gaps in the our knowledge base, this study was designed to investigate the nature of voluntary online learning to discover the potential value of these learning environments.

### **Purpose and Significance of the Study**

The purpose of this study was to explore the nature of the professional learning of secondary literacy teachers who participated voluntarily in an online Twitter chat focused on middle and high school English language arts instruction. Specifically, I was drawn to two topics. First, I was interested in learning about the value of voluntary online professional learning and its potential for addressing the limitations of traditional PD (Apple, 2009; Darling-Hammond, 2012; Opfer & Pedder, 2011). Second, I was intrigued to learn about the motivations and interactions of groups of educators who voluntarily learn online (Wenger, White, & Smith, 2009). This study has the potential to provide data that will inform the educational community about the promise of voluntary online communities to guide teachers' knowledge growth.

### **Rationale and Research Question**

The research on effective professional learning reveals that teachers learn best collectively through active participation in content-specific activities focused on shared goals with time provided for feedback and support (Croft, Coggshall, Dolan, Powers, & Killion, 2010; Garet et al., 2001). We also know there is not a strong connection between school-based professional learning and improvements to classroom practice (Borko, 2004; Guskey, 2007). We know that voluntary participation in online communities mediates connections between educators, reducing isolation and increasing confidence and passion for teaching (Alderton et al., 2011; Carpenter & Krutka, 2015). There is evidence that online communities can address issues associated with traditional PD (time constraints, lack of support, disconnected from teaching context) with ubiquitous, personalized learning (Vavasseur & MacGregor, 2008; Wenger et al., 2009). However,

research exploring interactions in online communities that may support teachers in negotiating meaning, changing classroom practice, forming and transforming identities, and sustaining community engagement is limited.

The existing literature is limited in several ways. First, most online communities have been studied utilizing quantitative methods with limited analysis of specific interactions. Second, there is little research that focuses on how interactions within communities affect teachers' content-specific instructional practices and beliefs about teaching and learning. Many studies address only what happens within the community, not what occurs as a result of participation. Third, studies focusing on identity formation and motivation to sustain participation over time are practically nonexistent, especially related to secondary literacy instruction.

Therefore, my guiding research question for this study was:

*What is the nature of the professional learning of secondary literacy teachers who participate voluntarily in an online Twitter chat focused on middle and high school English language arts instruction?*

### **Theoretical Framework**

The theoretical framework for this study was based on Wenger's (1998) conception of social learning theory, which is undergirded by sociocultural theory and social cognitive theory. Vygotsky's (1978) sociocultural theory focused on learning as a social endeavor, the outcome of associating with others. Vygotsky believed learning was not only a result of mimicking others, as he interpreted Piaget's theory (Vygotsky, 1978), but was constructed in the mind of the individual as the result of interactions with more capable others, which in turn, could be utilized to learn in novel situations.

Similarly, Bandura's social cognitive theory (1986) centered on social learning as a complex interaction of three contributing factors continuously acting on each other to explain the causes and effects of learning. Bandura termed this *triadic reciprocal determinism* and defined it as "behavior, cognitive and other personal factors, and environmental influences all operat[ing] interactively as determinants of each other" (p. 23). Bandura (1989) believed that people were both influenced by and producers of their environments. This synergistic phenomenon heightened my awareness of the complicated nature of social learning and led to my decision to utilize Wenger's social learning theory as the framework for my study.

Wenger's (1998) social learning theory was based on and extends the work of Vygotsky and Bandura. Specifically, Wenger agreed that learning is socially constructed by individuals and that both cognitive and personal factors impact behavior, but he theorized that in communities, identities and meaning were constantly renegotiated as members interacted around a shared practice and that negotiation was ongoing as new members, and thus, new knowledge, were added to the group. Wenger's theory delineated four related constructs—meaning, practice, identity, and community—that were essential to understanding the complex interactions of people involved in social practice.

### **Overview of Methodology**

This study was designed as a holistic, descriptive, single-case study, utilizing Yin's (2014) perspective on case study research. I explored the nature of secondary literacy teachers' voluntary online professional learning through the Twitter-based #2ndaryELA chat. The primary unit of analysis for this study was the #2ndaryELA

community itself, including 226 participants who voluntarily participated in the 30-minute chat on Tuesday evenings from July through November 2016 and used the #2ndaryELA hashtag in their tweets. Data sources included archived tweets from 17 #2ndaryELA chats, Twitter profile information, questionnaire responses, and responses from semi-structured interviews for select participants. Collecting multiple data sources allowed for triangulation, thereby increasing validity and trustworthiness of findings and conclusions. Both descriptive and interpretive data analyses were conducted to uncover codes, categories, and themes that addressed the research question. In chapter 2, I review the literature that informed this study related to social learning theory, teacher professional learning, literacy-focused online professional learning, and using Twitter for professional learning.

## Chapter Two: Review of Related Literature

The purpose of this qualitative case study was to explore the nature of the professional learning of secondary literacy teachers who participate voluntarily in an online Twitter chat focused on middle and high school English language arts instruction. Literature related to several areas was reviewed and synthesized to lay the groundwork for examining this social learning community.

Chapter 2 is organized in four sections: (a) theoretical framework, (b) teacher professional learning, (c) literacy-focused online professional learning, and (d) Twitter use in professional learning. The theoretical framework was rooted in Wenger's social learning theory, which is undergirded by sociocultural theory (Vygotsky, 1978) and social cognitive theory (Bandura, 1986). The other literatures focused on characteristics of effective professional learning (PL), literacy-focused online PL, and Twitter use for PL. The chapter concludes with a summary of the literature.

### **Theoretical Framework**

#### **Sociocultural and Social Cognitive Theory Contributions**

The theoretical framework for this study was based on Wenger's (1998) conception of social learning theory undergirded by sociocultural theory and social cognitive theory. Vygotsky (1978) believed that individual and social processes in learning were interdependent (Palincsar, 1998) and that a person's identity could be traced to interactions with others. He conceived of learning as constructed in the mind of the individual as the result of interactions with more capable others, which in turn, could be utilized in novel situations.

Also important to this framework is social cognitive theory (Bandura, 1986), the central tenet of which is *triadic reciprocal determinism*, which Bandura defined as “behavior, cognitive and other personal factors, and environmental influences all operat[ing] interactively as determinants of each other” (p. 23). Within the prevailing context of behavioral psychology, Bandura sought to understand the complex cognitive functioning present in a person’s reactions based on the environment, one’s background and personality, and the behavior of others. He concluded that “people were both products and producers of their environment. They affect the nature of their experienced environment through selection and creation of situations” (Bandura, 1989, p. 4). From this theory, several concepts are important for discussion: self-efficacy, competency, and vicarious learning.

Self-efficacy influences behavior and can be derived from accomplishments or vicarious experiences (Bandura, 1977). Personal accomplishments “foster active engagement in activities [that] contribute to the growth of competencies” (Bandura, 1986, p. 393), which increases self-efficacy, but vicarious learning can have a positive impact as well as long as one observes behaviors and their consequences. These vicarious experiences can create outcome expectations for learning in similar situations and act as strong determinants of a person’s choice of activities, duration of commitment, and effort given. Vicarious experiences can also serve to socially persuade others “that they possess the capabilities to master difficult situations” (Bandura, 1977, p. 198) and motivate behavioral change.

Vicarious learning and social persuasion are important as a person’s level of perceived efficacy impacts the community’s learning trajectory (Wenger,

1998). Bandura (1986) stated that “inveterate self-doubters are not easily forged into a collectively efficacious force” (p. 449). Communities support learning when members each have a strong sense of self-efficacy, which can translate into collective efficacy, “but those convinced of their collective inefficacy will cease trying, even though changes are attainable through concerted effort” (p. 452).

The concepts from both sociocultural theory and social cognitive theory informed my choice of Wenger’s (1998) social learning theory to frame this study because of my expectation that the teachers’ personal attributes and environments would impact their actions, interactions, and resultant learning within the community. In the following section, I describe Wenger’s conception of social learning theory, highlighting the four main constructs of meaning, practice, identity, and community and how they relate to my study.

### **Social Learning Theory**

This study utilized Wenger’s (1998) conceptualization of *social learning theory* (SLT), which suggests that learning is a social phenomenon, situated within the lived experience of participation in the real world and proposes that social participation “shapes not only what we do, but also who we are and how we interpret what we do” (p. 4). In this view, learning is happening continually, as long as the learner is in the company of others. Wenger argues further that learning occurs even when one is alone because a person carries with herself all essential prior experiences and interactions from which to draw experiential learning.

Wenger delineated four interrelated constructs that are essential to understanding the complex interactions of people involved in social practice (i.e., learning). These

constructs are meaning, practice, identity, and community. Figure 2.1 illustrates the components of social learning theory.



Figure 2.1 Components of Social Theory of Learning (Wenger, 1998, p. 5)

Wenger (1998, p. 5) defined the four main constructs as follows:

- **Meaning:** a way of talking about our (changing) ability—individually and collectively—to experience our lives and the world as meaningful.
- **Practice:** a way of talking about the shared historical and social resources, frameworks, and perspectives that can sustain mutual engagement in action.
- **Identity:** a way of talking about how learning changes who we are and creates personal histories of becoming in the context of our communities.
- **Community:** a way of talking about the social configurations in which our enterprises are defined as worth pursuing and our participation is recognizable as competence. (Wenger, 1998, p. 5)

These four components impact learning within a community (Lave & Wenger, 1991) as participants focus on a shared practice through participation and negotiation of meaning. These experiences aid in developing an individual's identity, which changes over time through community participation. These constructs lay the groundwork for this study by providing a mechanism for understanding the complex interactions of an online community and the teachers who participate. Even though these four constructs are inextricably linked, I will explain each separately and its relation to the others.

**Meaning.** According to social learning theory, *meaning* is negotiated both personally and socially as members interact in a community. Wenger (1998) describes “living [as] a constant negotiation of meaning” (p. 53), so every thought, action, and interaction is an event for participants to negotiate meaning and build knowledge, which is “always an outcome of sociocultural practices . . . and draw[s] on forms of existing understanding and knowledge and belief to undertake tasks and pursue . . . goals” (Lankshear & Knobel, 2011, p. 211).

However, meaning does not reside within life events themselves; it is negotiated through participation and reification (Wenger, 1998). *Participation* refers to “a process of taking part and also to the relations with others that reflect this process” (p. 55), which shapes our experiences and the community itself; “the transformative potential goes both ways” (p. 57). *Reification* is “the process of giving form to our experience by producing objects that congeal this experience into ‘thingness’” (p. 58). These “things” are reflections of human practices, the product of negotiating meaning, which depends on prior knowledge and occurs continuously as one takes in new ideas, compares them to previous knowledge, and makes changes (or not) (Wenger, 1998). One way to socially

negotiate meaning is by reflecting publicly (Lieberman & Mace, 2010), which has been shown to increase the quality of reflection and knowledge of literacy teaching (Lord & Lomicka, 2007; Pedro, Abodeeb-Gentile, & Courtney, 2012). By reflecting publicly, teachers can improve teaching knowledge and potentially strengthen relationships and enhance collaborative problem-solving (Jenkins, Purushotma, Weigel, Clinton, & Robison, 2009; Vacca, Vacca, & Bruneau, 1997).

**Practice.** Closely related to meaning, the second construct of SLT centers on *practice*. Members are drawn to each other in communities because of a shared interest (Lave & Wenger, 1991); for example, playing chess or being a secondary ELA teacher. The word *practice* assumes these individuals are doing something, but this concept within a learning community connotes “doing in a historical and social context that gives structure and meaning to what we do. In this sense, practice is always social practice” (Wenger, 1998, p. 47).

Practice always involves the whole person—thoughts, knowledge, histories, and intentions. Members of communities rely on and support each other, give and receive information, bring their own knowledge and experiences to interactions, and generally create a community that is a positive place to practice whatever it is they practice. Engagement in and learning through practice includes evolving forms of mutual engagement, understanding and fine-tuning the joint enterprise, and developing the repertoire, styles, and discourses (Wenger, 1998). Together, members of a community create what their practice is to be.

**Identity.** The third component of SLT is *identity*, a complex construct formed internally but as a result of social engagement. It runs parallel to practice in that as

members of a community participate together, they begin to develop identities in relation to others. Wenger (1998) explained that “by recognizing the mutuality of our participation, we become part of each other” (p. 56). Because identity formation is relational and contextualized (Lankshear & Knobel, 2011; Lave & Wenger, 1991), participants form identities that are markedly different than those formed in other contexts through interactions with other people.

Wenger (1998) described identity as negotiated experience (i.e., who we are by creating meaning through participation) and as community membership (i.e., who we associate with). He stated that “an identity is a layering of events of participation and reification by which our experience and its social interpretation inform each other” (p. 151), which impacts competence and influences community interactions (Bandura, 1977; Wenger, 1998). Novices or peripheral members can experience incompetence and decide to engage in or detract from the community. Those who choose to participate can experience growth as they negotiate their identities through mutual engagement in practice, which can potentially develop into a new role of mentoring newcomers, extending the community’s life and diffusion of shared practice.

**Community.** The fourth construct of SLT is *community*. Viewing community from the situative perspective (Borko, 2004; Putnam & Borko, 2000), many believe that learning occurs in a certain physical (or virtual) space and cannot be disentangled from the context itself (Greeno, Collins, & Resnick, 1996; Keller, Bonk, & Hew, 2005). Community, however, involves more than simply context; rather, the culture of the community—the relationships, trust, and strength of bonds—is tied to a community’s functionality and its sustainability.

In a participatory culture, there are (a) relatively low barriers to engagement, (b) strong support for creating and sharing, (c) informal mentorship whereby knowledge is passed on to novices, (d) members who believe their contributions matter, and (e) members who feel some degree of social connection with others (Jenkins et al., 2009). Community coherence is developed by *mutual engagement in a joint enterprise* creating a *shared repertoire* (Wenger, 1998). Mutual engagement occurs when people interact around a joint enterprise, a shared endeavor that has socially-negotiated meaning. Through mutual engagement, learning is distributed among all members (Putnam & Borko, 2000) as they participate and create representations, tools, language, and other things of shared practice that reflect who they are as a community, known as a shared repertoire (Curwood, 2014; Wenger, 1998). The shared repertoire strengthens a community's cohesiveness as members identify with each other through shared experiences.

This does not mean that all members of a community think and act alike. Diverse ideas actually encourage growth, as members contemplate new ideas and negotiate meaning in relation to others. Participation in multiple communities extends learning opportunities, blurring the lines of membership by brokering connections, opening members to new possibilities for meaning (Wenger, 1998). However, brokering connections to outsiders can weaken ties between existing members, adversely affecting mutual engagement in practice.

Within this study, social learning theory—particularly the four main constructs of meaning, practice, identity, and community—constituted the lens through which I viewed the interactions within the #2ndaryELA Twitter chat community. Next, I review research

related to teacher professional learning (PL) and formal and informal online literacy-focused professional learning opportunities (PLOs). These literatures lay the foundation for understanding PLOs in different contexts over time.

### **Teacher Professional Learning**

Historically, professional development (PD) for inservice teachers consisted of back-to-school workshops with a few teacher development days sprinkled throughout the year, usually highlighted by an outside expert who shared the “latest” research-based teaching strategies. Few of these “drive-by, spray-and-pray, flavor-of-the-month workshops” (Darling-Hammond, 2012, p. 33) have been found to have a lasting effect on classroom instruction (Borko, 2004; Knapp, 2003; Wei et al., 2009). This is due in part to the formality of PD workshops, which often “fall short, where all responsibility for figuring out how to apply new information to the classroom, all experimentation, critiquing, and revision are left up to the individual, with little to no time for support for implementation” (Guskey, 2007, p. 20). Some have described the ineffectiveness and deficiency of traditional PD offerings as “the most serious unsolved problem for policy and practice in American education” (Sykes, 1996, p. 465).

Learning Forward (2015), formerly the National Staff Development Council, defined *professional development* as “a comprehensive, sustained, and intensive approach to improving teachers’ and principals’ effectiveness in raising student achievement” (n.p.). This sounds promising, but goals are not personalized nor specific. Moreover, the term *development* itself denotes “training teachers to do something....[which] connotes an event teachers attend to obtain a specific skill that they can, in turn, use in scripted ways and in specific settings” (Murray & Zoul, 2015, p. 9).

My view aligns more closely with Murray and Zoul's (2015) term *professional learning* (PL), which focuses on ensuring highly engaging learning for teachers that translates to improved instruction and collaboration. Therefore, throughout this dissertation, I use PL and *professional learning opportunities* (PLOs) to represent any type of teacher learning in any environment focused on any content (Appendix A contains definitions of all key terms found in this dissertation).

### **Goals of Professional Learning**

Effective PL should result in improved instruction and lead to increased student achievement (Wayne, Yoon, Zhu, Cronen, & Garet, 2008; Wei et al., 2009). Little (2012) proposed four goals for PL: (a) working toward a school's central goals; (b) building knowledge to teach to high standards; (c) cultivating a strong professional community; and (d) sustaining teachers' commitment to teaching. Little's first three goals are well-aligned with the characteristics of effective PL found in the literature, but the final goal focusing on a teacher's internal motivation to continue learning is conspicuously absent, presumably because most research is focused on school-sponsored PL, not the voluntary, self-selected professional learning that can be found in online spaces. However, Wenger (1998) posited that a person's beliefs, motivations, and background experiences considerably impacted learning decisions and enacted behaviors (Bandura, 1986; Clarke & Peter, 1993), which is related to personalized learning and important to this study.

### **Characteristics of Effective Professional Learning**

Over the last several decades, a general consensus has emerged as to the characteristics that constitute effective, high-quality professional learning. Five of the

most widely agreed-upon core features have included content focus, active learning, coherence, duration, and collective participation (Croft et al., 2010; Wei et al., 2009). These characteristics have been critical in implementing high-quality PL that increases teacher knowledge in an attempt to improve student achievement (although this association is debated, Guskey & Yoon, 2009). Each of these features are examined more closely in the following sections.

**Content focus.** The first, and some say “most influential feature” (Desimone, 2009, p. 184), of effective PL lies in the subject matter or the *content* of the learning (Garet et al., 2001). Several research syntheses and individual studies have suggested that teachers’ own content knowledge impacts student achievement (Hill, Rowan, & Ball, 2005; Hochberg & Desimone, 2010), and logically, an increase in that knowledge domain should positively influence student outcomes. Shulman (1986) extended this idea and argued that *pedagogical content knowledge*, or “the particular form of content knowledge that embodies the aspects of content most germane to its teachability” (p. 9), is more important than either pedagogy or content alone. The specificity of how to teach particular concepts is unique to each content area and holds significance for PLOs.

**Active learning.** *Active learning* suggests involvement in the learning process as opposed to passively receiving new knowledge. Garet and colleagues (2001) found four dimensions of active learning that impacted teachers’ participation in and outcomes of PL opportunities to be (a) observations with opportunities for reflection and feedback; (b) planning classroom implementation by discussing content, pedagogy, and school-specific requirements; (c) reviewing student work with colleagues; and (d) presenting, leading, and producing written work, showing evidence of deep thinking. Just as students learn

best through interactive, concrete experiences (Dale, 1969), teachers' learning through active knowledge construction and reflection breeds relevance as teachers apply new learning to transform instruction in their specific teaching environments (Duncan-Howell, 2010).

**Coherence.** Traditional PD has been routinely criticized for its disconnect from the activities of the classroom (Cochran-Smith & Lytle, 1999). *Coherence* refers to the extent to which PL relates to curriculum and state standards and helps meet school goals (Desimone, 2009; Garet et al., 2001). PLOs that do not meet these criteria are often labeled as a waste of time. Additionally, coherence has been described as “the extent to which teacher learning is consistent with teachers’ [own] knowledge and beliefs” (Desimone, 2009, p. 184). In other words, if cognitive dissonance results, teachers are less likely to make changes because assimilating new knowledge into existing schema is difficult without adequate ongoing support (Darling-Hammond, 2012).

**Duration.** In direct contrast to the one-shot, disconnected workshop, research shows the *duration* of PL—time spent learning, structure of the allotted time, follow-up, and feedback—is linked to teachers’ depth of change in instruction (Croft et al., 2010; Garet et al., 2001). A review of PL studies revealed between 14-50 contact hours over the course of a school year had the greatest impact on teacher learning and student outcomes (Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). The structure of the designated learning time also affected the extent of teacher learning and change because teachers “need not just more time, but it needs to be well-organized, carefully structured, purposefully directed, and focused on content or pedagogy or both” (Guskey & Yoon,

2009, p. 497). This ongoing support is one solution to the disconnectedness of traditional professional development.

**Collective participation.** The last feature is *collective participation*, which can give teachers needed support to meet goals (DuFour, 2004; Lave & Wenger, 1991). This job-embedded PL (Croft et al., 2010) empowers teachers to support one another; however, community building takes time, effort, and buy-in from members (Lieberman & Miller, 2008), which is sometimes lacking in workplaces (Allington & Cunningham, 2007; USDE, Office of Educational Technology, 2014). Although most professional learning communities have been school-based, many are appearing online (Hollins-Alexander, 2013; Ross, 2011) to address teachers' individual learning needs that are sometimes neglected by local school districts.

### **Literacy-Focused Online Professional Learning**

Building on the research on effective PL, this review now turns to literacy-focused online PLOs to examine whether and how K-12 literacy teachers improve their instruction in this medium. The International Reading Association (IRA) Standards for Reading Professionals (2010) asserted that effective literacy-focused professional learning should be research-based, ongoing, job-embedded, collaborative, content-focused, individualized, diversity-minded, and relationship-centric. The IRA Standards align closely with the core features of PL previously discussed, and they are applicable to PL in an online environment.

Communities of literacy teachers engaged in online PLOs are becoming more prevalent as teachers endeavor to improve instruction through personalized learning experiences (Knobel & Lankshear, 2014; Trust, Krutka, & Carpenter, 2016). These

experiences are increasingly occurring in *digital habitats*, which Wenger and colleagues (2009) described as “technology-based connections and places” where “members experience togetherness” and learn together (p. 38). Gee (2004) characterized technology-based spaces as ideal learning environments due to increased connectivity, new ways to engage, dynamic membership, and supportive interactions. Some have questioned the value of online communities for PL because of the transient nature of membership (Hiebert & Morris, 2012).

Researchers are beginning to evaluate outcomes of online PL. Following a review of such studies, Ross (2011) concluded that online PLOs met more characteristics of effective PL than traditional PD. He reported that online PL resulted in simpler follow-up, flexible access, diminished time constraints, streamlined collaboration, and convenient support. The studies Ross (2011) reviewed, however, all focused on online learning opportunities that were formally developed by school districts or other educational institutions. Missing from the review at that time was research exploring voluntary online professional learning opportunities.

### **Online Formal Literacy-Focused Professional Learning Opportunities**

Online formal PLOs are those created, offered, and overseen by educational institutions for teachers to improve their literacy teaching skills. One type is online workshops, which can be tied directly to instruction through videotaping lessons and reflection (Masters, de Kramer, O’Dwyer, Dash, & Russell, 2010). Digital discussion boards are another example (Smith, 2014; Prestridge, 2010). In her study focusing on how dialogue develops community and impacts learning, Prestridge (2010) found that members injected humor, personal experiences, and positive feedback in the online forum

to develop a positive culture, but “the tension that exists between collegial and critical discussion,” those that include constructive feedback, are often limited because of collegiality.

Blogging within on-campus undergraduate and graduate literacy courses has been studied often as an opportunity for teachers to reflect, interact, and support one another (Colwell, Hutchison, & Reinking, 2012; Knobel & Lankshear, 2014; Lankshear & Knobel, 2006). The findings in these studies revealed a positive impact on knowledge of literacy instruction when blogging was coupled with active learning and a clear connection to teachers’ content and context, highlighting the collective nature of learning online together (Beach, 2012). For example, Colwell and colleagues (2012) reported that undergraduate students benefited from quick, unlimited access to their peers’ blogs which served as “an interconnected database of children’s and young adult literature” (p. 237) and encouraged thinking about choosing literature as a social activity. However, it seems the majority of studies neglected to investigate and report impact on teacher identity, social connections, or beliefs about teaching and learning.

### **Online Informal Literacy-Focused Professional Learning Opportunities**

In contrast to the formal type, participation in online informal PLOs is not a school district mandate nor a university degree program requirement. Teachers choose whether and how they participate. Online informal PLOs provide opportunities for dialogue and connections that are not restricted by time or space (Vavasseur & MacGregor, 2008; Wenger et al., 2009).

Educators choose to participate in these PLOs for several reasons. Some teachers want to personalize learning by discovering new ideas that are relevant and immediately

applicable (Booth, 2012; Gray, 2004; Vavasseur & MacGregor, 2008). Others participate for the convenience of anytime, anywhere learning (Duncan-Howell, 2010; Trust, 2012; Wenger et al., 2009). For example, Trust (2012) found that teachers were motivated to participate in the Edmodo online community because of the mobile-friendly features, such as notifications of new posts and participating from phone, tablet, computer, or email. Teachers also seek online learning opportunities for the support of like-minded colleagues and often find others who “get them” because of similar situations (Carr & Chambers, 2006; Carpenter & Krutka, 2014), reducing feelings of isolation and creating a sense of belonging and camaraderie (Chiu et al., 2006). Respondents in Carpenter and Krutka’s (2014) study described their online PLO as “a space of enthusiasm, invigoration, empowerment and connection” (p. 16).

Several types of informal PLOs can be found online. First, many teachers maintain their own blogs (Luehmann & Tinelli, 2008; Rodesiler & Pace, 2015), which provide a forum for reflecting on teaching while connecting with others who have shared interests (Lankshear & Knobel, 2006). Rodesiler and Pace (2015) reported that blogging helped participants establish networks of support, position themselves as writers, generate new professional opportunities, and “process observations about literacy trends and education in general” (p. 54). Second, educators can also access other educators’ ideas, materials, and reflections to learn through the collective expertise of their professional learning networks (PLN) (Harrison, Dwyer, & Castek, 2014; Moreillon, 2016; Murray & Zoul, 2015). To expand PLNs for librarians, Moreillon (2016) suggested utilizing electronic discussion lists, webinars, and blogs. Third, learning in online communities such as Google Plus (Kuhn, 2015), Flat Connections and Classroom 2.0 (Arnell, 2014),

Facebook (Courduff & Szapkiw, 2015), and Edmodo (Trust, 2012, 2015) have begun to be studied, particularly with a focus on community posts and responses. For example, Trust (2015) reviewed over 600 discussion threads on an Edmodo math community to explore math content of posts and how posts reflected teacher knowledge. However, little is known about the nature of learning in these online informal PLOs or how this learning affects teachers' instructional practices, professional relationships, or identities. One platform that has garnered researchers' attention lately is Twitter, the microblogging platform more and more teachers are adopting for professional learning.

### **Twitter Use in Professional Learning**

#### **Why Participate in Twitter Online Learning**

Teachers choose to participate in Twitter communities for several reasons. First, like other online PLOs, most educators on Twitter cite acquiring new ideas and resources as the primary reason for Twitter participation (Carpenter & Krutka, 2014; Forte, Humphreys, & Park, 2012; Moreillon, 2015). Forte and colleagues (2012) reported that not only did participants learn new ideas, the ones who learned about them on Twitter “become conduits for new practices and ideas to move in and out of their local communities” (p. 112).

In addition to finding supportive, like-minded colleagues, educators who use Twitter also seek connections to innovative educators who challenge their thinking about teaching and learning (Hur & Brush, 2009; Wesely, 2013). Carpenter and Krutka (2014) have described educators who are active Twitter users as “positive change agents in education” (p. 11) who inspire others to improve instruction, stay current, and continue to learn (see also Alderton et al., 2011; Visser, Evering, & Barret, 2014). For example,

Alderton and colleagues reported that connecting to these “go-getters” helped participants actually “transform their vision of who they can be as educators and what education can be” (p. 362). With these connections, educators are expanding their PLNs and strengthening professional commitment (Carpenter & Krutka, 2015).

### **Rise of Educational Twitter Chats**

A Twitter chat is a structured conversation scheduled at a specific time in which educators meet around a shared interest, denoted by using a shared hashtag. The idea of an educational chat on Twitter was originally conceived by Rodd Lucier (@thecleversheep) after learning of journalists who were using Twitter, via the hashtag #journchat, to discuss their work each Monday evening. He surmised educators might also be interested in this idea, so he scheduled the first #educhat for March 9, 2009, and communicated specifics on his blog (Lucier, 2009). Around the same time, Shelly Terrell, Tom Whitby, and Steven Anderson began discussing how to transform education in light of the social media boom and increased use and availability of educational technology in schools. These trailblazers founded #edchat, a weekly forum that welcomed all educators to contribute, regardless of position, length of service, or educational level (Terrell, 2009). In the following eight years, #edchat had grown to average 71,000 monthly participants and 98,000 monthly messages (Participate Learning, 2016b).

### **Research on Twitter Chat Communities**

Recent data suggest there are over 300 scheduled weekly chats focused on various interests in education (Murray & Zoul, 2015), such as #moedchat for Missouri educators, #edtechchat for educators interested in educational technology, and #ptchat for teachers

interested in involving parents in education. In spite of this interest, the research on Twitter chats is limited in general, and there are fewer studies yet on literacy-related chats.

Several Twitter chat studies for teachers have focused on social studies instruction, being a new teacher on Twitter, and general education topics. Langhorst (2015) studied the weekly #sschat for social studies teachers to discover how they use Twitter for PL and how it compared to traditional PD. He discovered that teachers participating in this chat found it more engaging and personalized than traditional professional development and valued the content-specific interactions. Pollard (2015) reported that participants in a Twitter chat for new teachers viewed it as an effective professional community where learning could be personalized and participants felt supported. Davis (2012) discovered that those engaged in #Edchat technology discussions valued the collective inquiry, diverse perspectives, and sense of belonging that this Twitter chat afforded. These studies suggest that Twitter communities can personalize learning, give needed emotional support, and help meet learning goals.

Of the 300 chats Murray and Zoul (2015) identified, 18 were focused on some aspect of literacy (e.g., #aplitchat for advanced placement literature; #shelfietalk for book selection), but again the research into literacy teachers' online learning in Twitter chat communities is limited. I found no published Twitter chat studies focused on secondary literacy educators, but there have been two studies conducted in literacy-related areas: #txlchat for librarians and #langchat for world language educators. Though not directly related to secondary literacy, these studies are the closest in focus to the present study and provide insight into the possibilities of literacy-related Twitter chats.

Moreillon (2015) conducted a netnographic case study (i.e., a digital ethnography centered on online social experience and interaction [Kozinets, 2015]) on #txlchat to explore the shared practice of being a school librarian. The researcher found that members joined the chat to reduce isolation, share knowledge, stay up-to-date on current trends, expand their professional skillsets . . . [and] “find progressive people leading the way in educational practices and teaching and learning philosophies” (p. 134).

Participants had a strong sense of belonging and commitment to the community. Community members also connected and collaborated beyond the chat. Moreillon (2015) described the participants as engaging in “reciprocal mentorship” (p. 132), a way to give-and-take in idea exchange. Labeling this community as an “affinity space” (Gee, 2005), Moreillon (2015) asserted that #txlchat’s safe community culture allowed for questions, discussion, and co-creation of artifacts that “bolster the professional expertise of individuals and the group” (p. 135-6). However, there was little discussion about instructional improvements, impacts on teachers’ identities, or effects on teacher vitality as a result of participation in the Twitter chat. The researcher also did not describe how the structure of the Twitter chat environment affected levels of participation or depth of learning.

In a similar study, Wesely (2013) examined a group of world language educators in the #langchat community. She found that the participants had a shared commitment to improving practice and increasing the competence of others. Relationships with other community members were “meaningful, explicit, and important to them” (p. 312) as they explored new ideas, resulting in a culture where participants felt safe to share and challenge others’ ideas.

Participants often returned to the chat community to follow up and share outcomes of instructional changes. This showed that some felt a strong bond to other participants (Carr & Chambers, 2006; Chiu et al., 2006), challenging the idea that virtual PD is too transitory for members to develop strong relationships (Hiebert & Morris, 2012). However, Wesely (2013) cautioned that not all participants benefited similarly as this community “presented learning opportunities to members only insofar as they chose to participate” (p. 315).

Similar to Moreillon (2015), this study neglected to discuss how the Twitter chat environment affected participants’ levels of participation. How participation affected teachers’ identities was also not discussed in this study. However, these studies begin to lay the foundation for understanding the nature of professional learning for teachers in Twitter chat communities.

The limited literature on Twitter chats in literacy and non-literacy domains suggest that they are engaging, personalized, interest-driven PLOs that can promote a sense of belonging and commitment to a shared practice, can offer opportunities for increasing competence, and can connect participants to innovative people with diverse perspectives. It is evident, however, that there remains much to know about the learning that occurs in online informal PLOs. We still do not know how the structured conversations in the Twitter chat environment affect levels of participation and depth of learning. We also need to learn more about how participation in a Twitter chat community impacts teachers’ identities in practice. Finally, to explore the possibilities of this type of PLO for supporting instructional improvements, we have more to learn about literacy teachers’ instructional decisions based on learning from Twitter chats. It was the

purpose of this study to extend the knowledge base on Twitter PLOs in the realm of English language arts. I now turn to a description of the methodology employed in the study.

### Chapter Three: Methodology

This chapter describes the methodology used for this study. I begin with a description of my perspective and background. I then turn to a discussion of the overall design, including the purpose, research question, and rationale for choosing case study methodology. Next, I describe the setting and participants. Finally, I conclude the chapter by explaining data sources, data gathering procedures, and data analysis.

#### **Researcher Perspective**

I am an instructor in the Department of Education at Southwest Baptist University, teaching future teachers in methods- and technology-focused courses. I have witnessed firsthand the excitement and frustration of students learning in new ways as I have given opportunities for social learning through online spaces with new media in my courses, primarily through Twitter and Google tools. As a result of being a passionate learner myself, I constantly seek new ideas, invite constructive feedback, and change my teaching methods and resources in my classes to best meet students' needs. Because of this, I have found myself learning from teachers all over the world through online connections and real-time interactions on Twitter.

However, I was not always so keen on utilizing social media for professional learning. I first became interested in how teachers learn voluntarily in online learning communities when I was introduced to Twitter at a conference I attended in early 2012. Like many educators, I believed Twitter to be a cultural tool primarily used to socialize, follow celebrities, and contribute to political conversations. Much to my surprise, the online interactions connected to the conference's hashtag served as a gateway to a vibrant professional community of educators that would transform not only

the way I learn, but my whole philosophy regarding teaching and learning. Having access to the collective expertise of my professional learning network (PLN) on Twitter has reignited a passion for relevant, meaningful work that I live out daily.

My exploration of social learning and previous learning experiences have helped me discover that I align mostly closely with the social constructivist perspective (Kim, 2001; Palincsar, 1998). This viewpoint focuses on the co-construction of meaning as the learning process is shared among individuals, each with a unique identity, as each one is engaged in practice together. Constructing knowledge in social practice incorporates background knowledge, which affects learning (Bandura, 1986; Vygotsky, 1978). From this perspective, as reflected in social learning theory (Wenger, 1998), social interactions are the basis for all learning. In my study, this paradigmatic view guided me as I explored the nature of professional learning in the #2ndaryELA chat community.

### **Purpose and Research Question**

The purpose of this study was to explore the nature of the professional learning of secondary literacy teachers who participate voluntarily in an online Twitter chat focused on middle and high school English language arts instruction (ELA). Specifically, I was interested in two areas. First, I was attracted to the value of voluntary online professional learning and its potential for overcoming the challenges of traditional PD (Opfer & Pedder, 2011), which has been associated with meeting teachers' learning needs (Apple, 2009; Darling-Hammond, 2012). Second, I was intrigued by groups of educators who voluntarily learn online, negotiating meaning and identities within a supportive online community (Wenger et al., 2009). Therefore, my guiding research question for this study was: *What is the nature of the professional learning of secondary literacy teachers who*

*participate voluntarily in an online Twitter chat focused on middle and high school English language arts instruction?*

### **Design of the Study**

The study was designed as a holistic, descriptive, single-case study, utilizing Yin's (2014) perspective on case study research. Yin described *holistic* designs as "examin[ing] only the global nature" (p. 55) of a phenomenon. The primary unit of analysis in this study was the #2ndaryELA chat community, including the interactions of those who voluntarily participated in the 30-minute chat on Tuesday evenings and used the #2ndaryELA hashtag in their tweets. The study was a *descriptive* case study because, according to Yin (2014), its "purpose is to describe a phenomenon (the 'case') in its real-world context" (p. 238). The public interactions of the secondary literacy teachers in this digital space allowed me to explore and describe the professional learning that occurred in a holistic way. The study represented a *single-case* design—rather than a multiple-case design (see Yin, 2014, p. 50)—in that I examined just one Twitter chat community, not individuals within the community or multiple communities.

### **Setting**

The study was conducted within the #2ndaryELA Twitter chat community. This community consisted of middle and high school ELA teachers who met Tuesday evenings for 30 minutes around the shared interest of improving secondary literacy instruction. The chat began as a grassroots effort for secondary literacy teachers "to share ideas and best practices . . . collaborate, ask questions, and share encouragement," as noted on one moderator's blog. Since its origin in July 2015, the #2ndaryELA chat

community has averaged 16 weekly participants and ranged from roughly 100 to 350 tweets per chat (Participate Learning, 2016a).

### **Participants**

Participants in this study were individuals who tweeted with the #2ndaryELA hashtag during the 17 regularly-scheduled weekly chats that occurred during the period of July 19 through November 15, 2016, inclusive. Table 3.1 presents the topics, number of participants, and total tweets for each of the 17 chats that served as data for this dissertation. During the data collection period, there were 226 unique Twitter users who participated in at least one of the 17 chats, which averaged 28 participants per chat.

The 226 Twitter chat participants consisted of 84 high school teachers (grades 9-12), 71 middle school teachers (grades 5-8), 34 educators in other roles (special education teachers, preservice teachers, librarians, gifted and talented teachers, administrators, technology specialists, instructional coaches, and higher education faculty), and 37 educators who did not identify a grade level or educational role. The responsibilities of teacher participants included teaching English, audio/visual design, journalism, advanced placement literature, speech, expository reading and writing, reading interventions, remedial reading, debate, and publications.

The duration that participants had been using Twitter varied. Information from their Twitter profiles revealed that Twitter participation ranged from one to 115 months, with a mean of 48 months. There were 80 participants who had been using Twitter for five years or more. One hundred nine of the participants had personal blogs they referenced during the chats or on their Twitter profiles. Given the voluntary nature of

Table 3.1

*Topic, Participants, and Tweets for each Twitter Chat*

Topic	Participants	Total tweets
Back to school - part 1	47	336
Back to school - part 2	40	251
Curriculum and unit planning	24	211
Classroom arrangement	32	235
Learning stations/centers	29	159
YA lit in the classroom	38	245
Classroom management	21	141
Integrating technology in the ELA classroom	30	295
Grading policies	33	208
Reading/writing workshop	25	189
Nonfiction and real world connections	21	207
Engaging students with nontraditional texts	21	137
Close reading and text annotation	25	177
Project-based learning	21	185
Independent reading and engaging readers	31	244
Using social media to connect educators	23	216
Online book clubs	21	192
Total		3628

*Note.* YA Lit = young adult literature; ELA = English language arts

participation in this chat, not all 226 unique Twitter users participated in all chats. In fact, 147 persons participated in just a single chat, and another 31 participated in just two chats. The remaining 48 persons participated in three or more chats, which contributed the bulk of data reported in this dissertation.

### **Data Sources**

Four sources of data were gathered: (a) tweets from 17 chats, (b) Twitter profile information, (c) a questionnaire distributed to all chat participants, and (d) semi-structured interviews with four #2ndaryELA participants.

**Tweets.** Archived tweets from the 17 #2ndaryELA chats occurring from July 19 to November 15, 2016, served as the primary source of data for this study. Tweets were archived by the #2ndaryELA moderators on Storify, a web-based curation tool that collects tweets and other online information based on criteria specified by the user. This tweet information was available on the moderators' public Storify accounts. A total of 3628 tweets from 226 unique Twitter users constituted this data source. The total number of tweets per chat can be found in Column 3 of Table 3.1.

**Twitter profile information.** I collected specific components of the Twitter profile information for each of the #2ndaryELA chat community members who participated in at least one chat during the study's timeframe. A Twitter profile includes a picture, personal description, Twitter *handle* (i.e., @ sign plus Twitter username), location, Twitter-join date, and numbers of tweets, followers, those followed, likes, and Twitter lists created since joining Twitter. For my purposes, I recorded the date each participant joined Twitter and personal blog address, if given.

**Questionnaire.** A questionnaire was created with Google Forms to gather descriptive information about #2ndaryELA chat participants. The questionnaire included an opt-in choice for informed consent and requested information about a participant's current teaching position with grade level and content area, type of school (public or private), years of teaching experience, and rate of participation in the #2ndaryELA chat. Two open-ended questions inquired about the reasons participants chose to join the community. This document is reproduced in Appendix C.

**Interviews.** For an in-depth perspective on professional learning (PL) in the #2ndaryELA chat community, I conducted semi-structured interviews (Galletta, 2013), which provided select participants the opportunity to express perceptions about their professional learning through the Twitter chat community (Dyson & Genishi, 2005). Interview questions focused on purposes, actions, and outcomes of participation in the community. The informed consent and protocol for the interviews are included in Appendices D and E.

There were three criteria for selecting participants to interview: (a) self-identification as a middle school or high school (grades 6-12) teacher who taught literacy-related courses; (b) participation in at least five of the seventeen #2ndaryELA chats during the data collection period; and (c) contribution of at least 50 tweets across the chats. This resulted in identifying a pool of the most active #2ndaryELA participants, who would likely provide the greatest insight into their professional learning. Four #2ndaryELA participants met all criteria and were subsequently interviewed. Table 3.2 provides a description of the four participants with whom interviews were conducted.

Table 3.2

*Interview Participants' Descriptive Information*

Interviewee	Teaching role	Teaching experience (yrs)	Participation Frequency	No. chats
A	MS Literacy coach	6	Every week	17
B	6th ELA	23	2-3 per month	12
C	8th ELA	3	2-3 per month	9
D	HS English	10	2 per month	6

*Note.* ELA = English language arts; MS = middle school; HS = high school

***Interviewee A.*** Interviewee A was one of the #2ndaryELA chat moderators. She had taught ninth grade English for six years and was employed as a literacy coach for sixth through eighth grades in a large city in the northeastern United States during this study. Most of her time was spent observing and supporting teachers. She got involved with Twitter in order to help promote her Teachers Pay Teachers (TpT) store and her blog, which focused on sharing ideas and resources for secondary English teachers. Interviewee A had been participating in the chat weekly since its inception in July 2015 and participated in 17 chats during the data collection period.

***Interviewee B.*** Interviewee B had taught language arts, math, science, and computer skills in the southeastern United States during her 23-year teaching career; however, most years she taught sixth grade language arts, which she was teaching at the time of this study. Interviewee B began using Twitter as a way to promote products on her TpT store as well, but unexpectedly, this enabled connections with others through blogging, which led to her discovery of the #2ndaryELA chat. Since the chat's inception,

she had been participating weekly, unless she had prior family engagements. During the data collection period, she participated in 12 chats.

*Interviewee C.* At the time of this study, Interviewee C had taught middle school language arts at a public school in the central United States for three years. She began using Twitter after author Matt Miller from Ditch That Textbook came to her school to facilitate professional development workshops and advocate for using Twitter for professional development. After following Miller and some from Teachers Pay Teachers, Interviewee C discovered the chat through a post on Instagram by one of the moderators. She decided on “the spur of the moment” to join because it was convenient for her. She began participating in the chat in October 2015 and had participated two to three times a month since then. During the data collection period, Interviewee C engaged in nine chats.

*Interviewee D.* Interviewee D began teaching in a special education classroom, but the majority of her ten-year career had been spent in the English department at a Catholic school in a “well-to-do, established community” in Ontario, Canada. During this study, she was teaching English in grades nine, ten, and eleven, with grade eleven English as a college level course. Interviewee D created a Twitter account after reading the blog of a “very forward-thinking” educator she admired who wrote about becoming a connected educator through Twitter. She decided to create her own account to pursue this opportunity and soon realized the wealth of resources at her fingertips. She described herself as a self-motivated learner who explored Twitter and discovered chats on her own. She began participating in a chat focused on educational technology but soon decided she needed to find one focused on her own content, secondary English. She

“stumbled onto it [the #2ndaryELA chat] one day on accident” by coming across one of the moderators’ promotional tweets for the next chat. She decided right away to participate the next week. She began participating in July 2016 and has engaged in the chat at least once or twice a month since then, participating in six chats during the data collection period.

### **Data Gathering Procedures**

Gathering data for this descriptive case study occurred from October 2016 through December 2016. This section contains specific information regarding the procedures for collecting each type of data utilized in this study.

**Tweets and Twitter profile information.** Even though tweets were public data and therefore did not require Institutional Review Board approval to collect and analyze, I chose to inform the participants in this chat community about my study by sending an image tweet, which is text transformed into an image to bypass the 140-character limit per tweet. The text of the message was as follows:

Hello, #2ndaryELA Chat Members! My name is Jennifer Fox (@JenniferFox13), and I am a doctoral candidate at the University of Missouri. I have utilized Twitter for professional learning for several years, and it has had a positive impact on me professionally. With my background in literacy, I am particularly interested in how secondary literacy teachers voluntarily learn in online communities. For my dissertation study, I will be exploring the nature of professional learning in the #2ndaryELA chat community. To accomplish this, I will be examining your public tweets (accessed through the moderators’ archives) that were posted in chats from July-November 2016. Even though these online

interactions are public and, therefore, do not require permission to analyze, it is still appropriate to inform you of this study, which has potential for informing others about the value of online professional learning opportunities. If you have any questions, please send me a direct message. Be on the lookout for a message coming soon with a link to participate in a short survey about your participation in the #2ndaryELA chat. Thank you!

From the moderators' Storify accounts, I transferred all 3,628 tweets from the 226 participants across all 17 chats to Google Sheets, a spreadsheet application. I collected the text of the tweet and the participant's Twitter handle and noted the number of likes, retweets, and quote tweets for each individual tweet. I also recorded any additional hashtags or mentions within each tweet, each participant's blog link, if available, and the date each joined Twitter. After compiling the tweets from all chats, I determined each person's participation rate and assigned each a pseudonym, using the following convention: @T1, @T2, etc.

**Questionnaire.** The questionnaire link was tweeted out with the chat hashtag three times each Tuesday evening around the regularly-scheduled chat time for four weeks, from October 18 to November 8, 2016, with the following tweet: “#2ndaryELA Ts [teachers], plz fill out short survey to share thoughts of #2ndaryELA chat as PLN <https://goo.gl/AWdXVw> Help w/ research! Share exp!”

By November 9, only 12 individuals had filled out the questionnaire, so to increase participation, I directly invited the remaining 214 participants by posting the same tweet but adding each person's Twitter handle. As a result, 18 more participants

responded, resulting in a 13% response rate. Each of the 30 questionnaire respondents was then assigned a pseudonym: Quest 1, Quest 2, etc.

**Interviews.** The interview selection criteria described previously resulted in 25 potential interviewees. All 25 were contacted at the beginning of November 2016, inviting them to participate in an interview. Six persons indicated a willingness to be interviewed, but one person never provided an available time, and a second cancelled because of a family emergency. The remaining four persons were sent a copy of the informed consent via email, which was returned with an approved statement of agreement before interviews commenced.

Interviews with the four participants took place during November and December 2016 either by phone or Google Hangouts. The interviews were recorded with Screencastify, a tool that records audio and video and saves the data directly to Google Drive. Each interview lasted 30-60 minutes, as per Yin's (2014) suggestion.

The interviews were open-ended and conversational. Each interview was transcribed within 24 hours, and a reflective memo for each was written shortly thereafter to record general impressions. Following transcription, each participant reviewed her transcript for accuracy. Interviewees were designated as Interviewee A, Interviewee B, and so forth.

### **Data Analysis**

**Descriptive data analysis.** Descriptive data from the participants' Twitter profiles, questionnaires, and interviews were categorized and organized. This included information about the participants' teaching position and length of experience, general

Twitter account information, and experience with the #2ndaryELA chat. This information was used to describe the #2ndaryELA community as a whole.

Descriptions of the types of tweets were also generated. Specifically, descriptive statistics were generated for the number of participants; types and frequencies of tweets; number of likes, retweets, quote tweets, mentions, and hashtags; and numbers of shared links.

**Interpretive data analysis.** I analyzed the content from the tweets, questionnaire, and interviews inductively, which took place in four steps. The four steps involved (a) hypothesizing codes; (b) asking questions, constructing codes, and writing memos; (c) finalizing codes and establishing categories; and (d) generating broad themes. To illustrate these steps and describe the analysis process, I utilized data for one broad theme, *Sharing*, which emanated from the interpretive analysis.

**Step 1: Hypothesize codes.** I read through all the data in order to obtain an overall understanding of the content and foci of the data. I kept my research question in mind as I hypothesized codes that might be induced from this initial pass through the data. For example, there was a common trend for participants to communicate ideas and information about ELA instruction with other teachers in the chat. This resulted in the hypothesized code named *communicating ideas and information*. This process of hypothesizing codes was repeated as I read through the full set of data the first time.

**Step 2: Ask questions, construct codes, and write memos.** I revisited the data and asked sensitizing questions, which “tune the researcher in to possible meaning of data” (Corbin & Strauss, 2015, p. 92). Examples of questions I posed are *What are participants doing in this chat?* and *What purpose does it serve in promoting professional*

*learning?* These questions enabled me to characterize what was occurring and to begin to understand if and how participants were engaging in professional learning.

During this step, I began “assigning meaning to raw data in the form of concepts” (Corbin & Strauss, 2015, p. 65), or what I referred to as constructing codes. I also wrote memos to evaluate the codes and to describe the data. For example, the chat transcripts revealed that participants regularly communicated their *own* classroom practices used in literacy instruction. Therefore, I constructed the code *What I Do* to characterize these statements.

Column 1 in Table 3.3 lists this code for the *Sharing* theme. Supporting data for the code are presented in column 2 (e.g., a participant expressing how she used learning stations in her ELA class), with memos included in column 3 (e.g., how a pedagogical structure like learning stations promoted literacy instruction). Other codes, supporting data, and memos for the *Sharing* theme are presented in Table 3.3. This process was repeated in Step 2 for all the data, which resulted in many codes.

Table 3.3

*Codes, Supporting Data, Memos, and Categories for the Sharing Theme*

Code	Supporting Data	Memo	Category
What I Do	“A1: We use them [learning stations] for pre-reading, close readings, character analysis, analyzing lit. devices, even disc ...you name it!”	Specifics on using literacy stations in her own classroom.	Sharing Knowledge
	“@T115 @T70 Lowered some tables, made crate seats, & having bath/yoga mats to start! Starting slow & cheap!”	Flexible seating to increase engagement	
What Others Do	“Colleague @T128 had Ss google chat about #tokillamockingbird with Ss in other states. Awesome!”	Sharing activities of colleagues.	
Follow-up Sugg.	“@T204 It is dry in spots. I use ntbk foldables & my created materials to liven it up/differentiate”	Suggestion in response to a ques. about curriculum.	
Personal Blog	“@T112 - I have some blog posts on growth mindset. [blog post link]”	Shares specific blog post after request for info.	Sharing Resources
Self-created Documents	“A1: I use this doc for the first day [document link] but also like to do a reading, writing, and tech survey”	Shared self-created document for back-to-school info.	
Others’ Resources	“Here's are SO MANY MORE #pbl resources curated by @cybraryman1 about <a href="https://goo.gl/C5N7">https://goo.gl/C5N7</a> ”	Shared valuable resources from a known expert	
Experts	“A5: Look to great ELA colleagues and gurus (Jim Burke, Nancy Dean, Kelly Gallagher, etc) Then, don't be afraid to try/fail/tweak”	Naming experts to point others in direction of resources.	
Tools	“A4 - to keep things engaging, Ss can create videos to share their work, post their work to online discussion boards like @padlet”	Sharing specific tool used in a project.	

*Note.* A1-A5 conventions refer to answers to numbered chat questions.

**Step 3: Finalize codes and establish categories.** I revisited the data to evaluate the codes and make any final adjustments to them. Then I constructed categories. To do so, I first examined codes for similarities and differences, and then began sorting them into like groups. I then analyzed the groupings and generated categories that captured the essence of the code groups. For example, the codes *What I Do*, *What Others Do*, and *Follow-up Suggestions* were reflected by the category named *Sharing Knowledge* (see column 4 in Table 3.3). Table 3.3 also presents a second category named *Sharing Resources*, which subsumed five codes. This process of confirming codes and coalescing them into categories was repeated throughout this step in the data analysis.

**Step 4: Generate themes.** In this final step in the analysis process, I examined categories to generate broad themes for the data. For example, as shown in Table 3.3, the categories *Sharing Knowledge* and *Sharing Resources* were combined to create the theme named *Sharing*. The four-step data analysis process was repeated recursively for the entire data set and ultimately resulted in four broad themes—which are presented in Chapter 4—that captured the essence of the participants’ professional learning through the Twitter community.

**Trustworthiness.** To promote the trustworthiness of this study’s findings, several measures were taken during data collection and analyses. I utilized multiple sources of data—archived tweets, Twitter profile information, a questionnaire, and interviews—to develop converging lines of inquiry (Yin, 2014) that involved “examining evidence from the sources and using it to build a coherent justification for themes” (Creswell, 2009, p. 191). I employed triangulation of multiple data sources to strengthen interpretations (Hancock & Algozzine, 2011; Yin, 2014). I created a case study database

on Google Drive, with all documents labeled and organized by date and participant, and developed detailed step-by-step data collection and analysis procedures. This facilitated a chain of evidence, which allows an “external observer” the ability “to follow the derivation of any evidence from initial research questions to ultimate case study conclusions” (Yin, 2014, p. 127), thus increasing reliability of the study. Finally, I utilized member checking (Merriam, 2009) to ensure all interviews accurately depicted interviewees’ perspectives.

In sum, a descriptive, single-case study was designed to research the nature of professional learning of secondary literacy teachers in the #2ndaryELA Twitter chat community. The participants were those educators who tweeted in at least one of the 17 #2ndaryELA Twitter chats that occurred from July to November 2016. Data sources gathered from October to December 2016 included archived tweets from all chats, Twitter profile information, a questionnaire, and semi-structured interviews. Both descriptive and interpretive analyses were conducted. Descriptive analysis focused on participant and tweet information, and interpretive analysis involved analyzing all data inductively for emerging concepts, which resulted in four broad themes that encompassed all data. I now turn to chapter 4 where I describe the study’s findings and discuss my interpretation of them.

## Chapter Four: Results and Discussion

The purpose of this descriptive case study was to explore the nature of the professional learning of secondary literacy teachers who participated voluntarily in an online Twitter chat focused on middle and high school English language arts (ELA) instruction. The theoretical framework was based on Wenger's (1998) social learning theory, which included the components of meaning, practice, identity, and community. The guiding research question for this study was: *What is the nature of the professional learning of secondary literacy teachers who participate voluntarily in an online Twitter chat focused on middle and high school English language arts instruction?* In this chapter, I present the results of the study and a discussion of them, first focusing on the descriptive findings before moving on to the interpretive results.

### **Descriptive Results and Discussion**

In this section, I describe the types and frequencies of initial tweets and explain how hashtags and mentions were used. Then, I discuss the implications of these descriptive findings.

#### **Types and Frequencies of Initial Tweets**

Twitter exchanges began when participants posted a tweet in response to a moderator's question (See Appendix F for all chat questions). I refer to these as *initial tweets* (IT). (Recall that all key terms are included in a glossary in Appendix A.) There were a total of 1,956 IT across all 17 chats, with an average of 115 IT per chat. Figure 4.1 displays three categories of IT: threads, single tweets, and no acknowledgement IT.

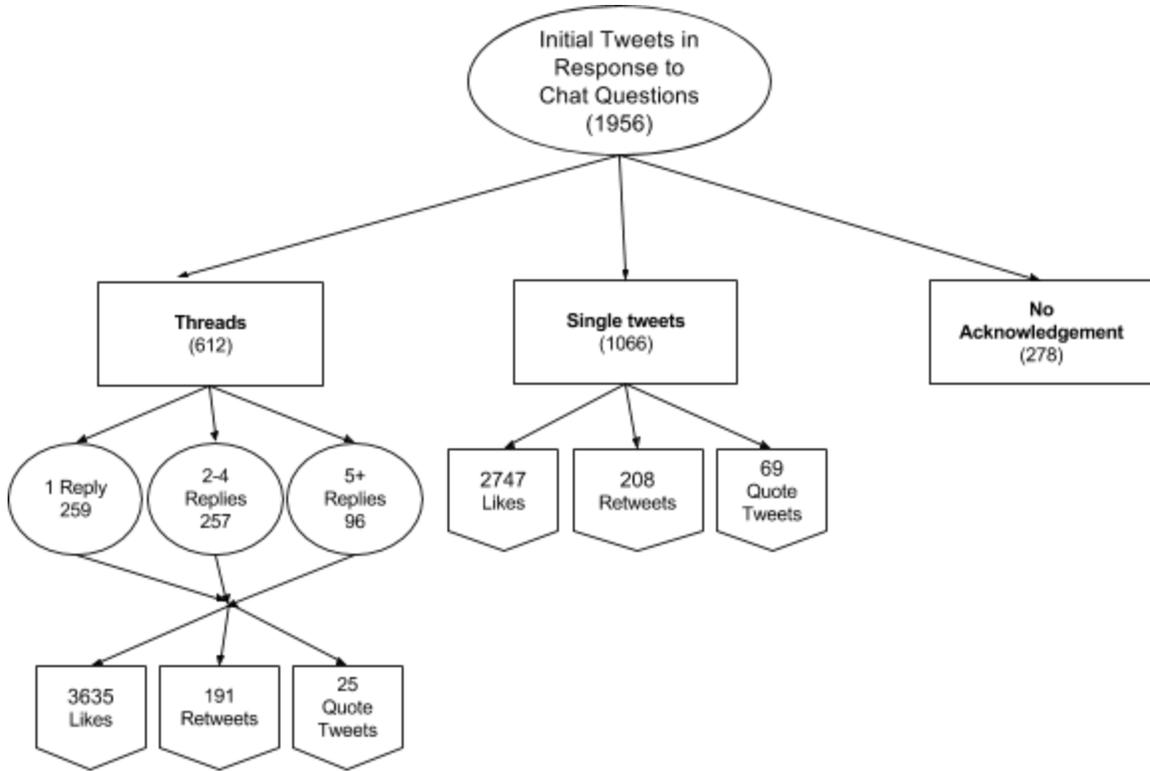


Figure 4.1. Types and Frequencies of Initial Tweets.

A *thread* was created when one or more participants tweeted in response to an IT, or a *reply*. Of the 1,956 IT, 612 (31%) resulted in threads. The total number of replies to initial tweets across all threads ranged from 1 to 26. The ovals below the threads box in Figure 4.1 categorize the 612 total threads into three discrete categories: 1 reply threads (i.e., the IT and just one reply), 2-4 reply threads, and 5+ reply threads, which represented 42%, 42%, and 16% of all threads, respectively.

In addition to replies, chat participants sometimes responded by *liking* a tweet, *retweeting* a tweet, or *quoting* a tweet. I refer to these responses collectively as *interactions*. Liking a tweet sends a notification to the author, acknowledging that the tweet was read, and saves the tweet to one’s Twitter profile to explore later. Retweeting sends a notification to the IT author as well and shares the original tweet with the

retweeter's Twitter followers. Quoting a tweet is similar to retweeting, but includes an option to add commentary about the IT and share it with specific people by mentioning their Twitter handles or groups by using hashtags. There were 3,851 total interactions across the 612 threads, as shown in Figure 4.1. Interactions were dominated by likes (94% of all interactions).

Of the 1,956 IT, 1,066 (54%) did not generate a formal reply (i.e., they did not constitute threads), which I refer to as *single tweets* (STs). Mirroring the thread interactions, 91% of interactions with single tweets were likes. Of the 1,956 IT, 278 (14%) did not generate any responses, that is, there were no replies or interactions with them. I refer to this final category of as *no acknowledgement* IT.

### **Hashtags and Mentions**

In addition to including the Twitter chat hashtag (#2ndaryELA), participants sometimes included other hashtags in tweets. These included ELA teaching ideas (e.g., #GRA16 [Global Read Aloud 2016]), teaching resources (e.g., #tlap [Teach Like a Pirate book]), and other educational communities (e.g., #nerdybookclub, #engchat). Others added hashtags that described themselves (e.g., #teachermom). Overall, 5% of tweets and replies included one or more hashtags beyond #2ndaryELA.

Participants also *mentioned* other Twitter users, either persons within the #2ndaryELA chat or persons outside the community, by using a Twitter handle (e.g., @JenniferFox13) within a tweet. Mentions were generally used to respond directly to a specific person. Members also mentioned others to direct them to resources outside the community. Overall there were one or more mentions in 51% of all chat tweets.

In summary, a total of 226 persons participated in one or more of the 17 #2ndaryELA chat sessions. There was a smaller number of persons (48) who were regular chat participants, providing the bulk of data for analysis. There were nearly 2,000 initial tweets across the sessions, with about one-third of them becoming threads. Overall, there were 3,628 total tweets when including RT and replies. There was also substantial participation through the use of likes, retweets, quote tweets, hashtags, and mention conventions.

### **Discussion of Descriptive Results**

**Variation in thread length.** The majority of threads involved short exchanges. In fact, 84% of all threads had 1-4 replies (see Figure 4.1), with threads of five or more replies occurring less frequently (16%).

In the short exchanges that followed RT, participants tended to encourage each other, endorse ideas, and identify with others through responses like “Me, too!”, “I agree!”, and “I know how you feel.” These conversations aided connections among community members, but reflection and deep learning were not indicated for the most part. The preponderance of short threads may be a function of the Twitter environment, which facilitates simple acknowledgements of others’ tweets (Carpenter & Krutka, 2015; Wesely, 2013). However, some researchers have argued that the immediacy of information (Moreillon, 2015), conciseness of format (Rodesiler, 2015), and quick pace of Twitter chats (Carpenter & Krutka, 2014) promote professional development.

Longer Twitter threads tended to include multiple participants who posted questions, responses, and encouragement. For example, in the chat focused on technology integration in which the RT expressed the difficulty of “creating meaningful

work in 50 minutes,” the twelve replies by five participants communicated agreement, with one participant sharing a personal blog post that focused on the challenges of teaching in 50-minute blocks. This “collaborative problem-solving” (Jenkins et al., 2009, location 27) helped participants develop new knowledge. In short, when an IT reply struck a chord, threads tended to be longer and focused on solving issues.

**Single tweets and no acknowledgements.** The data revealed that over half of IT did not initiate a thread, and 14% of IT received no interactions at all, which was an unanticipated finding. This could have occurred for several reasons. First, Twitter chats can be fast-paced, making it difficult to keep up with incoming tweets and the flow of ideas, which some have viewed as a positive (Carpenter & Krutka, 2014). Interviewee D suggested more conversations would occur if participants used a management system and scheduled responses to questions in advance. She stated, “I don’t feel like some people are skilled enough to use TweetDeck [a Twitter management tool] or have the time to really preplan their tweets. Because if you preplan your tweets, it really does free you up to respond to other people.”

Second, since there was an average of nearly 30 participants per chat, many participants tended to share similar ideas in IT. Repetitive information and common ELA practices did not lend themselves to conversations, especially for those interested in gathering new ideas (Forte et al., 2012; Sauers & Richardson, 2015). For example, to describe literacy station groupings, one participant tweeted, “A mix of ind [independent] and group work. Students can choose to collaborate as needed.” This IT failed to generate a thread or any interactions perhaps because it did not offer new ideas. This could have been a result of the similarities of the participants’ philosophies or teaching

situations, pointing to the homophily principle which can “limit people’s social worlds in a way that has powerful implications for the information they receive, the attitudes they form, and the interactions they experience” (McPherson, Smith-Lovin, & Cook, 2001, p. 415).

Third, Interviewee B gave another possible explanation of the cause of single tweets and no acknowledgements, stating that

I think it’s either something everybody knows and I’m just sort of saying something everybody already thought. Or it could just be that something I said is just not ringing in somebody’s ear. Kind of like thinking, ‘That’s nice, but it doesn’t help *me*.’ And that’s okay. I mean, sometimes it will and sometimes it won’t. It’s hit or miss. It’s okay.

This statement supports the finding that Twitter tends to promote personalization (Alderton et al., 2011; Duncan-Howell, 2010; Rodesiler, 2015).

Fourth, even though an explicit acknowledgement of a tweet might not have transpired, a participant could have attended to the tweet and took note for later exploration. For example, Interviewee B explained that she used a paper notebook during chats to take notes on the tools and resources she wanted to explore without publicly responding, representing participation on the periphery (Lave & Wenger, 1991) as a lurker rather than a full participant at that time. Choosing whether to interact with or ignore tweets also personalizes learning, which has been touted as a benefit of Twitter chat participation (Carpenter & Krutka, 2014, 2015).

Finally, some IT could have remained single tweets because those interested in starting a conversation lacked confidence to respond with a question or comment. Even

though virtual conversations through a Twitter chat can be perceived as somewhat anonymous because most people do not know each other personally, chat participants still take risks by posting questions or comments as those replies represent a person's identity in practice (Wenger, 1998). However, some participants in other studies (Alderton et al., 2011; Carpenter & Krutka, 2015; Rodesiler, 2015) actually felt more emboldened to post questions, have discussions, and “go public” with their work (Lieberman & Mace, 2010) because potentially judgmental school colleagues were absent from the Twittersphere. Additionally, questions could also be perceived as having a lack of knowledge, and some struggle with teaching efficacy (Booth, 2012; Tschannen-Moran, Hoy, & Hoy, 1998). In sum, although a majority of tweets did not result in many formal interactions, it would be inaccurate to conclude that chat participants did not attend to or were not influenced by the tweets.

**Interactions.** Participants interacted with tweets and replies by liking, retweeting, or quoting a tweet. These interactions have the potential to create connections between the first *tweep*—a person who tweets—and those who interacted with the IT. Likes dominated the interactions with both single tweets and threads possibly because of the ease with which likes are performed, especially in light of the quick pace of the chat (Carpenter & Krutka, 2014). Retweeting and quoting a tweet take more effort and send the message that the original IT was worthy of sharing with the participant's own followers (Davis, 2012; Langhorst, 2015; Pollard, 2015). Even though these connections might be somewhat superficial, they hold potential for stronger relationships, although these possible connections have not been researched.

**Hashtags and mentions.** Hashtags were not used regularly in the chats, possibly because the chat itself acted as a filter to connect with a certain group of people through the #2ndaryELA hashtag (Davis, 2012). Interviewee D speculated that this occurred because of a lack of understanding of how hashtags can be used. In the following quote, she first described a Twitter-focused PL session encounter and then connected it to the #2ndaryELA chat members.

I was doing a PD session at school, and I was introducing people to Twitter and they're like, "Can I *not use* this hashtag at any other time?" I was like, "No! You should use hashtags all the time! It's what makes a good tweet. You should add like two to three hashtags to a tweet. You know, make them relevant. Don't just add random hashtags. You know, you can build community that way!" So, I think a lot of people don't know. I don't know how many people use the [#2ndaryELA] hashtag outside of the chat at eight o'clock. I think more people should do that because I think it increases community to know that people are still following the hashtag even if it's not Tuesday at eight o'clock. To make it more of an open community. I don't think that most people know that you can use the hashtag outside of the chat time as well.

Hashtags and mentions have potential for connecting with others who share interests and expanding a person's professional learning network (PLN) (Carpenter & Krutka, 2015; Sauris & Richardson, 2015). Schaefer (2012) described four primary uses for hashtags—discussions, topical groupings, trending topics, or silliness. All four uses were utilized at times within #2ndaryELA chat discussions: (a) #2ndaryELA (discussions), (b) #pbl and #yalit (topical groupings), (c) #presidentialdebate (trending

topics), and (d) #Boom and #stealingthis (silliness). Clicking on a hashtag within a tweet reveals others who are tweeting with it as well, mediating connections (Lee, 2016).

Mentioning specific Twitter handles also has potential to connect participants or bring outsiders into the community (Carpenter & Krutka, 2015). Threads, which were created as participants replied to each other, all included at least one mention, signifying direct conversations, not just random reporting of classroom practices (Forte et al., 2012; Kist, Tollafield, & Dagistan, 2014). By replying to other tweets, participants provided support and strengthened connections. On rare occasions, outsiders (e.g., authors, thought leaders, etc.) joined conversations when mentioned and brought diverse perspectives to the conversation (Schaefer, 2012).

In sum, thread length varied which impacted depth of discussion and collaborative problem-solving. Over half of IT were single tweets or no acknowledgements possibly as a result of the Twitter chat environment, but interactions, hashtags, and mentions were viewed as connections between chat members and a bridge to helpful outsiders. I now move to a presentation and discussion of results from tweet content, the questionnaire, and interviews.

### **Interpretive Results and Discussion**

This section includes an integrated discussion of the qualitative data: tweets from the 17 Twitter chats, responses to the open-ended questionnaire items, and four individual interviews. Across the 17 chats, questionnaire, and interviews, four broad themes were evident in the data: Sharing, Connecting, Socializing, and Exploring. These themes were induced from 22 codes, which were subsumed by eight categories, and ultimately collapsed into four themes. Table 4.1 presents all codes, categories, and themes.

Table 4.1

*Codes that Led to Categories and Themes*

Code	Category	Theme
What I Do	Sharing	Sharing: Sharing knowledge, ideas, suggestions, and resources.
What Others Do	Knowledge	
Follow-up		
Suggestions		
Personal Blog	Sharing	
Self-created	Resources	
Documents		
Others' Resources		
Experts		
Tools		
Introductions and	Connecting	Connecting: Networking with others with similar content and/or position; Expanding professional learning network beyond the chat.
Welcoming	Within the Chat	
Networking		
Insider Language		
Chat Promotion	Connecting	
Hashtags and	Beyond the Chat	
Mentions		
Collaborating		
Showing Emotion /	Disclosing	Socializing: Relating emotionally to others through disclosing personal feelings, personality, or vulnerabilities; Giving or receiving emotional support through identification with others' feelings and being complimentary, appreciative, and encouraging.
Personality		
Being Vulnerable		
Identifying with	Supporting	
Others		
Appreciation,		
Compliments, &		
Encouragement		
Request for Idea /	Questioning	Exploring: Considering new practices in light of others' suggestions; Asking questions to help make instructional decisions.
Resource		
Follow-up Question		
Working Out	Reflecting	
Meaning		
Risk-taking		

## Sharing

Sharing involved educators reporting their own and others' classroom practices, ideas, and resources in tweets, questionnaires, and interviews. Ninety percent of questionnaire respondents indicated that sharing or receiving knowledge was the primary reason for chat participation, and all four interviewees reported new ideas that had impacted their professional work. Categories within this theme included Sharing Knowledge and Sharing Resources. When tweet examples are given, the #2ndaryELA hashtag has been removed to reduce redundancy.

**Sharing knowledge.** By far, Sharing Knowledge was the most common category across all data sources. This category was created from codes What I Do, What Others Do, and Follow-up Suggestions. For example, Quest 9 said he participated in the chat in order “to learn about new and more creative teaching methods, to broaden my teaching tool belt, if you will.” This sentiment was reflected in the interviews as well, as respondents selected this chat because of its ELA focus. Interviewee C shared, “I don't really know what other teachers are doing in my position, so I wanted something where I felt it was more collaborative and I could see what more people were doing and I could get more ideas.”

In the weekly chats, teachers shared classroom practices, for example, how they implemented independent reading, arranged classroom spaces, and organized daily schedules. Some practices, such as having a 15-minute daily independent reading time, remained single tweets, but they produced interactions through liking or retweeting. Some sharing tweets resulted in threads, like the following example, that began as a response to a chat question about how participants define close reading.

@T44: A1: several draft readings with a different purpose each time with chunking in one of the readings.

@T87: @T44 Do you have Ss [students] do something each time? Sticky notes? Journal?

@T44: @T87 If it's the bk--sticky notes. Or, make copies and annotate/code the txt with specific purpose in mind. Always do cold read 1st

In this example, the question from @T87 was to gather more specific information about this literacy practice, and the tweep responded without further discussion.

In many sharing-knowledge threads, participants showed excitement and gave support. The following example thread focused on a get-to-know-you activity shows participants giving compliments and appreciation, offering additional ideas, using punctuation and hashtags, and pledging to use the idea they found valuable.

@T112: A4: my fav activity was writing 3 hashtags to identify ourselves on dry erase and taking a pic to post in the hallway!

@T79: @T112 love this! Could even use their own account to create our class hashtag for the year

@T156: @T112 Too cute! Stealing!

@T53: @T112 Great idea! #StealEDU :)

@T39: @T112 What a great idea! #usingthis

**Sharing resources.** Participants also shared resources regularly by providing the name, Twitter handle, hashtag, or link. This category was created from codes including all types of resources: Personal Blogs, Self-created Documents, Others' Resources, Experts, and Tools.

Participants shared links to 184 self-created resources with others in the chat community. Because they were requested during each chat's introductions, links to personal blogs were shared most often. At other times, participants tweeted a link to a

specific personal blog post to give more information than could be shared in a tweet. For example, in response to a question about finding books for the classroom library, @T5 tweeted, “I just blogged about finding books for your library. Look everywhere and look regularly. [blog post link] #2ndaryELA,” which did not generate a thread.

On occasion, tweets with blog links initiated a thread containing questions and follow-up responses, such as compliments and appreciation for sharing. In the following example, the first tweep shared the link to her blog post explaining how she incorporated student jobs in the classroom, initiating a thread with a question, follow-up response, and appreciation. @T2 appeared reflective as she negotiated potential meaning for her own situation.

@T111: A1 Creating a system of student jobs gives students purpose and takes tasks off your plate. Blog post: [blog link]

@T2: @T111 How do Ss respond? Are they ever indignant or uncooperative? I'd love to implement jobs; I want them to own both room & mess!

@T111: @T2 I let them pick the jobs so they indicate what they want to do. No one has to have a job.

@T2: @T111 Thanks!

In addition to blogs, participants also shared course syllabi, presentations, Google documents, and other self-created resources with others.

Even though self-created resources were shared during some chats, three of the four interviewees expressed hesitation in sharing their own work publicly with others, especially when they were still Twitter chat novices. Interviewee D stated,

I think the more I chat, the better I am at sharing resources because at first you really think, ‘Is my stuff stupid? Or maybe my stuff is not good enough to share. You know everyone on Twitter is so amazing!’ So I think the more I

participate in chats, the more comfortable I am in making recommendations and actually sharing my work.

Insecurities might have impacted sharing during the chat, but sharing also occurred outside the chat through direct messaging and emails. For example, after @T115 shared that she used a “name research/map activity that leads into a quick personal narrative” as her first ELA content-focused lesson of the year, @T216 followed up with a request for specific related resources to which @T115 replied, “@T216 Sure - DM [direct message] me your email and I’ll send you a ppt and word doc that will get you started.”

Participants also shared books, strategies, websites, tools, and experts they had used to support classroom instruction. For example, Article of the Week and Notice and Note were named by several participants for use in teaching nonfiction text comprehension strategies. Others named specific book titles while discussing young adult literature or professional development resources. Links to sites such as We Need Diverse Books and Thriftbooks were also given as resources. There were rarely replies to these posts, but some participants interacted with the tweets, primarily through likes.

Some shared resources by mentioning or hashtagging tools or experts, which directly connected others to these resources by merely clicking on them. Responses often followed these posts. In the following example, a participant excitedly shared her experience and her students’ responses to using a tool, generating replies with questions about and successes with the same tool. In these replies, participants communicated emotion with *emojis*, which are small images within the text of a tweet, words in all caps, and punctuation.

@ T214: A2: I use @GetKahoot for students to study vocab words and they love kahoot!!!!

@T87: @T214 My older Ss even love @GetKahoot ! I use it for reviews or pre-assessments

@T147: @T214 @GetKahoot What do you create for this?

@T214: @T147 Nothing! I use Kahoots That are public and created by other teachers already 😊😊😊

@T63: @T214 @GetKahoot Oh my gosh, my kids get absolutely CUTTHROAT with Kahoot! It's amazing!

All four interviewees shared different resources from the chat that had helped them improve instruction. Interviewees listed new tools, such as Padlet and Google Classroom; new aspects of previously-known tools, such as the text set feature in NewsELA; and collaborative projects, such as the Global Read Aloud. Interviewee C shared the following about her students' participation in the Global Read Aloud Project.

I never would have found that program or that book. I would never have known it existed or just how relevant it would be for my kids and how they would connect to it. I would never have known that unless it was through this group [#2ndaryELA chat community]. I think it's just bringing more materials that are engaging the kids [that] has been really big for me.

### **Connecting**

The theme of Connecting reflected participants' efforts to connect with others within and beyond the chat. Fifty percent of questionnaire respondents listed connecting to others as a reason for chat participation. Additionally, all four interviewees described connections with other chat members that had impacted their literacy instruction.

Categories for the connecting theme included Connecting Within the Chat and Connecting Beyond the Chat.

**Connecting within the chat.** The category of Connecting Within the Chat was created from the codes Introductions and Welcoming, Networking, and Insider Language. Within-chat connections were promoted by a moderator tweeting, “Welcome to tonight’s chat! Please introduce yourself. Tell what & where you teach. Share your blog link if you have one.” At times, these introductions created threads, but more often they were single tweets with few interactions from fellow participants. Interviewee A, a chat moderator, made a point to welcome participants each week, especially first-timers. She said,

And if it’s someone’s first time [to participate in the chat], I always try to help them feel welcome in hopes this is something they’ll come back to. As little as saying, “Hey, welcome! Thanks for joining us!” that kind of thing. I hope this makes a difference in the long run.

Additionally, Quest 20 stated she just “felt like a member of a community,” which echoed the replies of half the questionnaire respondents.

Chat participants also connected to others in the chat by interacting with and replying to others’ tweets and *following* tweeps while the chat was occurring (Recall that definitions for all key terms can be found in Appendix A). Following a tweep represented interest in receiving one’s tweets. Interviewee D actually scheduled her responses to the chat questions through TweetDeck, just so she would be free to “see if other people [had] responded to me, so I [didn’t] miss that thread. I don’t want to miss ... actually conversing with people.”

Additionally, some participants were isolated by being the lone teacher in a grade level or content area or by not sharing colleagues' philosophies on literacy instruction. Quest 19 shared that "it's nice to collaborate with teachers who face the same challenges each and every day." Furthermore, Interviewee D shared, "I really don't have too many people in my department who are open to try new things, so it [participating in the chat] really is to test new ideas and to connect to people who are doing things differently and are open to kind of shaking things up a little bit." Interviewee B shared that she tried new things in her classroom because of the supportive #2ndaryELA community. Finally, Quest 12 responded that "I've followed teacher-bloggers as a result [of the chat], which has further impacted my teaching." Interacting with and following others occurred often as participants found like-minded peers and forward-thinking educators to expand their networks.

Connecting within the community also occurred with the use of insider language, such as acronyms, abbreviations, and ELA-focused terms. For example, @T166 tweeted, "Just got hooked onto AoW [article of the week]. Looking to see how I can incorporate effectively." Another participant tweeted, "My Ss have started to blog about their SSR [sustained silent reading] books! If anyone is interested in having your Ss read or comment let me know! #engchat." This common language helped members communicate within the constraints of Twitter in the community.

**Connecting beyond the chat.** Connecting Beyond the Chat included codes Chat Promotion, Hashtags and Mentions, and Collaborating. Connecting Beyond the Chat was found less often than Connecting Within the Chat. The moderators promoted the chat each week by tweeting chat questions and reminders to all their Twitter followers with

additional hashtags to invite outsiders to chat sessions. For example, the moderator tweeted “Live in 1 hour! MS & HS ELA teachers, come chat. #2ndaryELA #writechat #nerdybookclub.” This tweet not only advertised the chat to community members (#2ndaryELA), but it was viewable by those in the #writechat and #nerdybookclub communities as well.

Other beyond-chat connections occurred by using hashtags and mentions within tweets, which gave members direct access to educators who were posting about projects (e.g., #ReadingWithoutWalls or #GRA16) and sharing activities online. At times, participants mentioned specific people by Twitter handle to direct their attention to the chat. For example, during a discussion about integrating technology, @T63 tweeted, “@[outsiderELA] If you need another example, #2ndaryELA is happening right now, and it's ON POINT!!” This tweet was an overt invitation to pull a specific outsider into the chat because of the discussion content. Mentioning outsiders also led to resource sharing. In the project-based learning chat, to address a fellow chat member’s need, @T75 mentioned an outside expert by tweeting, “@T205, Check out @[outsiderELA] - she has a ton of resources about Genius Hour!,” to which that outsider replied, “@T75 Thanks! @T205, Many #2ndaryela teachers share their #geniushour / #20time stories here: [link to resources] :D.” The use of hashtags and mentions expanded participants’ learning possibilities beyond the chat.

Chat participants also went beyond the chat to collaborate with one another or connect their students. Voxer, a walkie-talkie type app, was mentioned as one useful collaborative platform. In following example, two participants excitedly discussed how

they had used this tool for collaboration during a chat focused on using social media to connect.

@T73: A3 @T197 and I have been collaborating on lessons on Voxer! Love sharing ideas and planning with her!

@T197: @T73 It's like being in the same room!

@T73: @T197 the energy in the room if this ever happened would be insane!

Interviewee D shared how @T197 had also introduced her to Voxer and invited her to join a collaborative group that shares resources, gives feedback, and encourages one another. She explained, “This group is really prolific. They are constantly on there. Like, ‘Hey does anybody have info on essay writing? OR does anybody have any book recommendations?’ Like it’s just constant.” Additionally, three of the four interviewees and two questionnaire respondents reported utilizing the #2ndaryELA Facebook group, a space to connect and collaborate between weekly chats, according to Interviewee A. This group was created by the same #2ndaryELA chat moderators and had grown to over 2,000 members as of December 2016.

Some participants found others interested in connecting classes to collaborate, although this did not occur often in the midst of a chat. For example, @T149 tweeted, “Connected through Twitter with a T [teacher] from here [chat community], we started a blog and linked our classes for a collaborative GSlide [Google Slides] project.” Others mentioned specific organized projects, like Global Read Aloud 2016 (#GRA16), where their students connected to do multiple projects together. Interviewee C shared,

So I found out about that [Global Read Aloud project] through the chat. And then I worked with one other lady who also does the #2ndaryELA chat, her name is Ruby [pseudonym]. So we worked together with the novel [*Orbiting Jupiter*],

and we did different collaborations with Padlet. And then my kids wrote blogs each week, to respond [to] a bigger question that I had asked them from the book. I shared my link to all my kids' blogs with Ruby, and then her kids read through some of them and wrote responses to ours.

Interviewee D also participated in the #GRA16 project and connected her students with other community members' students. They collaborated through Google tools and created presentations, wrote six-word memoirs, and talked to each other via Hangouts to learn about each other's cultures. During chats, not all requests for connections were answered, and it is possible that not all connections were reported publicly during the chat.

Quest 9 summed up collaboration when he articulated that the chat "has helped me connect with several teachers across the country. In a broader context, though, it has taught me that teaching can be collaborative in many ways. And that we are never alone." The connections that began within the #2ndaryELA chat community opened up opportunities for collaboration and extended personal learning networks (PLNs).

### **Socializing**

The Socializing theme was comprised of members disclosing identities and supporting one another emotionally. Interviewee A, a chat moderator, stated that she "look[ed] at it [the chat] like a party, and I'm the host," setting the stage for participants to feel comfortable and get to know one another. Socializing was primarily seen in threads, but participants also revealed identities in single tweets as well. Eight of thirty (27%) questionnaire respondents gave inspiration and emotional support as reasons for participation and shared an increase in confidence and positive attitude as professional

impacts. Also, all four interviewees offered examples to illustrate how socializing within the chat community had affected them. Categories for the Socializing theme included Disclosing and Supporting.

**Disclosing.** The Disclosing category was formed from the codes Showing Emotion/Personality and Being Vulnerable. Participants regularly shared both positive feelings and frustrations about teaching environments, students, activities, and resources. Some replies to initial tweets (ITs) included positive emotions, such as “I [heart emoji] @cultofpedagogy!!! 😊,” shown through punctuation and emojis. Feelings were often reflected in threads as participants chatted with each other and used hashtags to describe themselves, such as #teachermom or #StarbucksMyRoom. Additionally, Quest 19 mentioned that participants’ positivity impacted her professionally. She stated,

It is energizing to see positive teachers and ones who are truly trying to make a difference and inspire. There can be many negative people and negative factors in the teaching world today. This chat is a way to rise above that.

Occasionally, participants shared frustrations about teaching. For example, @T149 shared that she was “not happy with this set up AT ALL” when discussing her district’s regulation of independent reading. Participants also disclosed weaknesses and struggles, such as @T70 tweeting, “I struggle w/this [grading]. As ELA feedback is so crucial. How do we *not* read, mark, conference? Scantron tests just don't cut it!” In some cases, participants shared their lack of knowledge, like this reply about familiarity with Voxer, “@T73, I am not! I don’t know much about it but I’m eager to learn!” showing interest in learning something new. In rare cases, usually involving some of the most active 48 participants, tweeting about a struggle prompted suggestions and support,

exemplified by the following example showing nine responses from three participants who lamented similar frustrations and gave suggestions in support of the first tweet.

@T62: A2: I need to work on dealing w/ absences/owed work. Major area of weakness for me

@T2: @T62 Agree. Ss miss much that isn't just "work"-they want a worksheet but have missed discussion/ instruction, etc. Tough for Eng

@T62: @T2 YES! I feel like that is where my struggle comes from!

@T2: @T62 It's next to impossible to convey that to them--they just want the "work" (to them a worksheet) they missed. Argh.

@T62: @T2 not just to students but to parents and administration too!

@T2: @T62 Yep, often a case of giving student a 1 on 1 lesson-no prob, but... TIME! Makes me want to go flipped, but... TIME!

@T53: @T62 I think Google Classroom helps, esp. if you establish protocol like 'submit private comment when turning in late,' etc.

@T62: @T53 I've been using Classroom for a couple years but it hasn't helped me to control the chaos yet

@T53: @T62 Oh I hear ya, we constantly lament it in our hallway too. Love it but not a perfect fix for sure.

@T132: @T62 A2: This is something I need to work on as well. It would create a lot less stress for myself and my students

Interviewees B and D both shared that they felt “safe in sharing what [they] don’t know.” Interviewee B said her motivation was that she does not want to be “THAT teacher who’s been teaching forever and has no idea what these things [innovative strategies] are.” Additionally, Interviewee D said others’ sharing struggles has taught her the value of honesty with her own students. She has told them, “Guys, this is the first time I’ve done this, so I might make a mistake,” communicating her vulnerability to them as well.

**Supporting.** The Supporting category included codes Identifying with Others and Appreciation, Compliments, and Encouragement. A common response to an IT was a reply that showed identification with the first tweep, which, in essence, said “Me, too!” and was often posted in response to commonly used book titles, technology tools, activities, or even struggles. For example, after @T2 posted that digital organization was a “major area of weakness” for her, @T62 replied, “@T2, Yes! I feel like that is where my struggle comes from!” and @T53 chimed in with “@T62, Oh, I hear ya, we constantly lament it [Google Classroom] in our hallway too.” These replies communicated that the first tweep was not alone in her struggles. Interviewee B identified with others by learning how they handled situations similar to hers, and that “gave her hope ... [to know] it worked for this person and this person ... kind of just confirming for myself” that “I could do it too.”

Giving support through appreciation, compliments, and encouragement was widespread throughout the threads. Appreciation for sharing ideas and for the chat community itself occurred fairly often. For example, @T63 tweeted, “Thanks for all the great ideas! I've got about a dozen tabs open right now! You guys are awesome!” at the conclusion of a chat. Interviewee B shared her perception of liking as compliment because “whenever someone puts something out there that I like, I might not necessarily reply with words. But I will click the heart [icon] to say, ‘Oh, yeah, that’s a great idea!’” Two questionnaire respondents reported they found conversations reassuring and validating. Interviewee C echoed this sentiment in saying that others “encouraged me and reaffirmed that I am doing the right stuff for my kids.”

Even though only 4% of threads included 10 or more replies, almost all of these complex conversations showed participants socializing. The following example began as @T221 reported her new-to-her, first-day lesson and evolved into a back-and-forth exchange reminiscent of a face-to-face conversation.

@T221: A3: Also, I'm trying out an "investigate the teacher" activity for the first day!

@T76: @T221 love this! Would love to integrate this into my stations - would you be willing to share with me? [two praying hands emojis]

@T221: @T76 Yes! What's your email? Also, I'm curious about your stations! What are they like?!

@T76: @T221 yay! My email is [school email address]- and I am using the stations that @T111 has in her TPT [Teachers Pay Teachers] store :)

@T76: @T221 stations include a goal setting activity, syllabus scavenger hunt, Ss think about what makes an ideal learning space & more!

@T221: @T76 Awesome! I'll send it your way when I am at school tomorrow!

@T76: @T221 thank you so much! Side note - I love your transcendentalism work in your TPT store [two heart emojis]

@T221: @T76 Aw, thanks! That makes my day! I see you're from IN, too! I am in the Indy area! Small world :)

@T76: @T221 Yes I am from IN! I work at a super small school in [a specific] county. Where are you at? Hope your first day went well! :)

@T141: @T221 I love this idea!

@T221: @T141 Thanks! I'm trying it tomorrow for the first time. Excited but a bit nervous for their responses! [excited face emoji]

@T141: I'm sure it will go great @T221! It's an excellent idea!

@T221: @T141 Thank you!!! [happy face emoji]

@T175: @T221 are Ss doing this while you are doing??? What?

@T221: @T175 I'll just be walking around the classroom & interacting with them. Hopefully they can make inferences given the way I interact

@T83: @T221 that is amazing!

Five participants in this thread discovered commonalities, gave compliments, recognized participants' work in other online communities, revealed insecurities, encouraged one another, asked follow-up questions, and responded to each other. They also showed excitement through emojis and punctuation. The original tweep took time and answered each reply to the thread she started.

### **Exploring**

The theme of Exploring included participants asking questions and reflecting on practice. Even though found infrequently, some lengthy threads reflected participants' exploration of new ideas with feedback and help from other chat members. Seventeen percent of questionnaire respondents and all four interviewees said they were more reflective teachers as a result of chat participation. Two of the four interviewees reported changes in teaching philosophy, and all four reported more risk-taking with literacy instruction as a result of their involvement in the chat community. Categories for this theme included Questioning and Reflecting.

**Questioning.** The questioning category was generated from the codes Request for Idea/Resource and Follow-up Questions. Requests for ideas or resources occurred as IT, such as @T5 asking, "Students do book talks a few times a year and my goal is to book talk at least once a week this year. Any tips?," and @T186 questioning, "Curious about role of OER [open educational resources] in classroom libraries...what online resources are folks leaning on?" At times questions like "@T123, Can you explain this more?" posted in reply to an IT prompted a response and gained more information. The

following example shows an IT focusing on writing stations followed by a question and short reply, which generated a final response that elaborated on the tweep's situation. The following encounter mirrored most questioning threads.

@T221: A2: We do revision/editing stations. I think stations are one of the most effective ways to facilitate meaningful revision!

@T64: @T221 Many of my students have IEPs that say they need extra time for work. How do you accommodate these slower students?

@T221: @T64 Most of my kiddos get extra time for assessments/major writing assignments only. But if it's an issue I let them finish @ home

@T64: @T221 I tell them doing as much as they can is fine (then moving on) but they don't like leaving stations unfinished #1 station prob

Additionally, Interviewee B expressed confidence in trying new things because "I can ask my crazy questions and they [community members] don't mind," showing how the support of the community impacted the likelihood of improving literacy instruction.

**Reflecting.** The Reflecting category was developed by incorporating the codes Working Out Meaning and Risk-taking. Working Out Meaning was defined as contemplating current classroom practices in light of new ideas to negotiate meaning for one's own classroom. For example, focusing on accountability in independent reading, @T145 shared, "No assignments. If they are reading silently they get 5pts participation. I tried logs, reports, projects; ditched them all," to show how she had resolved this issue in the past and found what worked for her students. One participant shared her reflective process by tweeting, "Wonder if I could connect mass hysteria with *Crucible* later this week. Did you find a good article?" when discussing nonfiction text connections. Similar comments were apparent in many threads, but longer conversations to work out

meaning were limited. Some questionnaire respondents highlighted obtaining feedback and reflecting on best practices as benefits of chat participation. Quest 28 shared, “I’ve gotten lots of ideas that I then try out in my own classroom. Some work, and the ones that don’t still teach me something so then I might tweak them until they work for my students.” Three interviewees recalled specific ideas they had recorded but not implemented yet because they were still “researching how it would work for my students specifically” (Interviewee D). Interviewee C added that being more reflective was just a natural response to hearing everyone’s ideas and think of “how they could work in my own classroom.”

Another aspect of reflecting emerged as risk-taking, or at least a desire or inclination to take more risks in teaching. @T76 tweeted, “I want to do more outside the box type of activities to help better engage the kids - channeling my inner @T220 :)” to show her eagerness to take risks. Some participants shared specific ideas they wanted to investigate, like Genius Hour (passion projects) and BreakoutEDU (escape-the-room problem-solving activities), and received others’ encouragement and support.

Even though risk-taking was infrequent within tweets, two of the four interviewees explicitly stated they had more confidence to take risks and try innovative ideas, despite not having a supportive teaching environment. Interviewee B shared how she had begun using Google Classroom, Google’s learning management system, and Kahoot, a game-based app for informal assessment, “sort of on [her] own,” because “a lot of people [in the chat were] already doing this [using those tools],” but they were still considered new and innovative in her school. Interviewee D also taught in an environment not conducive to risk-taking. However, because she had developed new

confidence and a student-centered teaching philosophy from participating in the chat community, she felt emboldened to implement changes to her curriculum despite opposition from her department head. Discussing a change in text selection, she said, “You know, so I made the executive decision to cut it [The Merchant of Venice], and I took some crap for it... Yes, I had to change the way I teach. Yes, I had to come up with different lessons. But I’m okay with that.” She confirmed that risk-taking in the form of engaging her students with current, high-interest literature and collaborative projects like the Global Read Aloud has positively impacted both her and her students.

A few threads resulted in seemingly off-topic conversations that helped members explore new ideas, negotiate meaning, and incorporate new activities into instruction, or at least plan to do so. The following 18-tweet example involved six participants discussing the idea of a Twitter slow chat as a way to implement online book clubs with students, which was not the result of a specific question posed in a chat. Instead, a participant personalized her learning by tweeting a question that garnered much interest.

@T2: Who's had Ss do Twitter slow chat? What is best forum for online book clubs?

@T87: @T2 I think @T149 or @T197 said they had done the slow chat - Maybe?

@T2: @T87 @T149 @T197 Thanks! I'm distracted (eating), so will sift through comments. Something to think about over break!

@T197: @T87 @T2 @T149 I've never done a slow chat. What does it mean?

@T149: @T197 @T87 @T2 A slowed down version of the Twitter chats Ts engage in. A Q, or series of Qs asked each day or week.

@T197: @T149 @T87 @T2 Sounds like a great idea!! I'm in!!

@T149: @T2 I moderated one for The Global Read Aloud's reading of All American Boys #AABSlowChat. Twitter chats perfect for book clubs:)

@T2: @T149 Perfect. I'm tossing idea around but won't implement until January-want to connect Ss w/ class (es) in another school.

@T149: @T2 We are from Toronto, Ontario.

@T2: @T149 That would be super cool; we're in fairly rural area of Tidewater, VA. Totally different perspectives!

@T149: @T2 Love it!

@T2: @T149 This is going to be exciting! [book emoji] [party emojis]

@T195: @T2 Our classes doing this on Thursday; you are welcome to lurk! #2ndaryela @T120 @T60 @OutsiderELA

@T2: @T195 @T120 @T60 @OutsiderELA Oooo! Thanks, Sally!

@T95: @T2 - I would love to know more about how to set that up.

@T149: @T95 @T2 I just finished one. We can chat about it, if you like.

@T149: @T2 What are you reading and how can I help? :)

@T166: @T2 Never heard of this. Had to go straight to Googling: Twitter slow chat. Thanks!

In this exchange, six different participants posed questions, admitted to limited knowledge, offered expert help, expressed a desire to connect, and showed excitement for this potential project. There was also an offer for others to see an actual model by lurking, observing but not participating, during a slow chat happening in the near future. This thread that began as an off-topic question to meet the first tweep's need became a complex exchange of learning that may not have occurred otherwise.

### **Summary of Interpretive Results**

The nature of professional learning in this community was tied to sharing and acquiring ideas and resources. Sharing self-created resources was limited, suggesting

possible insecurities. Suggested ideas and resources created opportunities for learning, but individual participants decided whether and how this shared repertoire would meet present or future learning purposes.

Learning in this community was mediated through connections by using introductions, developing insider language, and interacting with and following others. Hashtags and mentions acted as bridges to helpful outside resources and communities, expanding learning possibilities. Additionally, learning occurred beyond the chat as some participants bypassed the limitations of Twitter to collaborate on other platforms to meet personal learning needs.

Socializing contributed to learning within this community as members created a positive social climate by disclosing positive feelings and frustrations, revealing personalities, and giving support. Members identified with others, showed appreciation, gave compliments, and provided encouragement. This collegial culture resulted in possibilities for learning, especially for the most active participants.

Exploring through questioning and reflecting aided members in gaining new knowledge vicariously through community interactions. However, questioning and reflecting did not happen publicly often, and members made decisions about whether and how new ideas would affect instruction individually for the most part. These decisions or their outcomes were rarely shared with other community members. Now I turn to a discussion of the interpretive results.

### **Discussion of Interpretive Results**

The following sections contain a discussion for each of the broad themes found in the qualitative data in this study.

**Sharing.** Sharing knowledge and resources was a prominent theme, which is consistent with research exploring educators' use of Twitter for informal, voluntary professional learning (PL) (Carpenter & Krutka, 2014, 2015; Forte et al., 2012; Kist et al., 2014; Rodesiler, 2015; Wesely, 2013). A possible explanation is the structure of the Twitter chat, which was organized around *structured conversations* with guidelines, a bounded time frame, a moderator, and planned questions focused on knowledge sharing (Booth, 2012). However, in studies of individuals' uses of Twitter for professional learning outside a chat environment (Forte et al., 2012; Rodesiler, 2015), sharing knowledge and resources was still identified as what participants did most often.

A member's purpose for participation impacts actions within a community (Trust et al., 2016; Wenger et al., 2009). Some persons frequented the chat "to know what others are doing" and "to get new ideas to stay current," while less indicated a desire for emotional support or feedback on ideas. In this community, educators were taking "professional development into [their] own hands" by seeking out those who were seen as "positive, change agents in education" (Carpenter & Krutka, 2014, p. 214) to have "opportunities for peer-to-peer learning" (Jenkins et al., 2009, location 27). Hearing others' ideas could have acted as vicarious motivators and prompted participants to join the community with similar outcome expectations (Bandura, 1986).

The level of knowledge- and resource-sharing within a group has been associated with participants' levels of efficacy and tie strength to the community (Takahashi, 2011; Tseng & Kuo, 2014). A participant's perceived efficacy "affects the effort [educators] put into teaching, the goals they set, and their level of aspiration" (Tschannen-Moran et al., 1998, p. 222). Low efficacy could have impacted participants' sharing of self-created

resources, which only accounted for 5% of tweets, mirroring similar findings in other voluntary-participation studies (Chiu et al., 2006; Tseng & Kuo, 2014). *Going public* with self-created resources has perceived risks, one of which is opening oneself up to critique (Lieberman & Mace, 2010). However, developing mutual trust can strengthen ties and increase members' knowledge-sharing behaviors (Bray-Clark & Bates, 2003; Granowetter, 1973).

Chat participants who shared self-created resources were some of the most active, those Lave and Wenger (1991) would call "oldtimers," who were possibly more comfortable and confident in a knowledge-sharing role. However, even some oldtimers hesitated to share their own work for fear of judgment. Three interviewees, all oldtimers, communicated their desire to offer self-created resources but felt their contributions were not quite "good enough to share" because of "the amazing resources" they saw others sharing. However, in Twitter-based professional learning studies focusing on secondary ELA educators using Twitter outside of a Twitter chat community (Rodesiler, 2015; Rodesiler, Rami, Anderson, Minnich, Kelley, & Andersen, 2014), researchers discovered that some educators shared a plethora of self-created resources, but most were non-novice Twitter users who had shared, interacted with, and followed others online for many years, suggesting that public knowledge-sharing can increase over time as participants gain confidence in their work (Lieberman & Mace, 2010; Rodesiler, 2015; Rodesiler & Pace, 2015).

An outcome of mutual engagement through sharing is the creation of a shared repertoire, a reified form of the community's collective knowledge (Wenger, 1998). In this community, archived chats, blogs, and other shared documents comprised the

repertoire and “reflect[ed] a history of mutual engagement” (p. 83). The extent of a community’s shared repertoire can be limited as a result of members’ efficacy or purpose for participation (Takahashi, 2011; Tseng & Kuo, 2014; Wenger, 1998). If teachers chose not to share their “wisdom of practice” (Shulman, 1986), both individual and collective learning would be negatively impacted since participants can only realize benefits of community participation “insofar as they choose to participate” (Wesely, 2013, p. 315). Consequently, the shared repertoire has implications for both present and future learning opportunities.

**Connecting.** People seek connections as a way to “find their tribe,” which Godin (2008) described as “a group of people connected to one another... and to an idea” (p. 1), similar to Lave and Wenger’s (1991) conception of communities of practice or Gee’s (2005) affinity spaces. In this community, introductions and insider language acted as social cohesion (Granowetter, 1973) to strengthen ties, helping participants identify with each other and feel a sense of camaraderie (Carr & Chambers, 2006; Jones & Preece, 2006). Connections to other secondary ELA teachers who experienced similar challenges motivated many to participate. However, sometimes connecting to others who are too similar can lead to homophily (Friesen & Lowe, 2012; McPherson et al., 2001), which limits diverse connections and professional growth. Even though all participants self-identified as secondary ELA educators, they were from several different states and Canada and had different teaching styles, as evidenced in their initial tweets (ITs). Despite the importance of finding content-related peers, participants also sought connections with driven, innovative, supportive, and encouraging people, those who were “doing things differently and [were] open to kind of shaking things up a little bit”

(Interviewee D) to combat the apathy in their school districts and reenergize teaching (Hur & Brush, 2009; Wesely, 2013).

Even though only 31% of ITs became threads, participants networked with each other by responding through likes, retweets, quote tweets, replies, or following others (Alderton et al., 2011; Rodesiler, 2015; Veletsianos, 2011). Likes, retweets, and quote tweets were somewhat superficial, but replies prompted direct conversations. “To add that extra connection” (Interviewee C), participants followed others, opening a door to the person’s network of followers. For example, Interviewee B stated that she “followed people based on something they said during the chat. I [would] think, ‘Oh that person thinks like me and I would like to follow them and I’d like to see what else they have and who *they* [emphasis added] follow, that kind-of-a-thing.’” Continuing down that “following” path would lead further from the point of origin (oneself), resulting in finding people with whom to connect who are more dissimilar (Granowetter, 1973). Therefore, the homogeneity of the chat members did not necessarily lead to homophily, if one took the opportunity to explore others’ followers.

These actions—interacting, replying, and following—mediated connections, adding to the participants’ professional learning networks (PLN) (Trust, 2012, 2015), which are defined as “uniquely personalized, complex systems of interactions consisting of people, resources, and digital tools that support ongoing learning and professional growth” (Trust et al., 2016, p. 28). “To broaden my PLN” and “expand my network” were both reasons given for chat participation. Social learning depends on the characteristics of the community’s participants—their stories, experiences, and expertise (Wenger et al., 2009), and important to sustaining any community is a diverse group of

people who build its knowledge base by contributing to its shared repertoire (Wenger, 1998). In this community, people networked and expanded their PLNs through chat experiences.

Usually with a diverse group of individuals, debates arise as people challenge ideas and negotiate meaning together (Wenger, 1998). However, within this study, participants challenged the ideas of others very little, similar to a study of an online discussion forum created to support teachers transforming literacy instruction through technology integration (Prestridge, 2010). Prestridge (2010) found that collegial dialogue is necessary and helps create a strongly-bound community, but “tension arises as collegiality is opposed to critique but without critique, there is no need for collegiality” (p. 257). Therefore, a possible explanation for lack of debate could be weak member ties resulting from not having time to cultivate relationships because of the dynamic membership in this relatively new community. In other studies, productive debates occurred in more well-established, diverse Twitter communities (Langhorst, 2015; Ritchie, 2014; Wesely, 2013). In this study, when participants did constructively debate ideas, it was usually initiated by the most active participants in reflective threads useful for negotiating meaning and improving practice.

Opportunities for connections beyond community borders were created by using prudent hashtags in weekly chat reminders, potentially doubling the reach of the tweet (Lee, 2016). Additionally, hashtags and mentions used to share outside groups and projects crossed over other communities’ boundaries, blurring the lines of membership and increasing the likelihood that a diverse group of participants would join the chat (Wenger, 1998; Wenger et al., 2009). This likely expanded the community’s knowledge

base, but potentially weakened social ties within (Chiu et al., 2006; Granowetter, 1973). Community members invited outsiders, who were a part of their broader PLN, to chat sessions to meet their needs when chat topics were advantageous. They also shared outside projects (e.g., #GRA16) with insiders, enlarging their learning opportunities with tried-and-true resources (Booth, 2012). In this way, the chat community acted as a bridge between members and other communities as they connected beyond the chat to share their learning (Forte et al., 2012).

At times, chat participants collaborated with each other on other social media platforms, using Twitter as a jumping off point, a mediator of extended connections (Alderton et al., 2011; Rodesiler, 2015). At times, affordances of the Twitter platform limited exchanges (Alderton et al., 2011; Wesely, 2013), so other tools met participants' collaboration needs. Participants used Voxer to increase social presence through voice message exchanges (Smith & Sivo, 2012; Tu & McIsaac, 2002). Additionally, several used the #2ndaryELA Facebook group, which facilitated longer interactions not constrained by the structured conversations of Twitter chats (Booth, 2012; Courduff & Szapkiw, 2015). Using other tools allowed members to personalize learning when the Twitter environment did not meet their needs.

Some beyond-chat connections resulted in connecting classes to collaborate (Alderton et al., 2011; Visser et al., 2014), motivated vicariously by others' ideas (Bandura, 1986). These collaborations allowed members to gain experience with new tools, begin blogging, energize teaching, and increase student engagement in reading, which perhaps could not have been accomplished on one's own (Lave & Wenger, 1991; Vygotsky, 1978).

Connecting students to collaborate was not reported often, which could have been because of the time and effort it takes to design these experiences (Cochran-Smith & Lytle, 1999). Even though several participants reported connecting with others as a purpose for chat participation, they still had mandates from their school districts which did not often allow for deviation from a required curriculum (Murray & Zoul, 2015).

**Socializing.** Socializing within this community strengthened community ties and laid the foundation for deeper learning. Wenger (2009) stated that “learning together depends on the quality of relationships of trust and mutual engagement that members develop with each other” (p. 8). Relationships were cultivated through introducing oneself, sharing feelings, and projecting identities in practice through tweets, contributing to a sense of belonging (Chiu et al., 2006; Trust et al., 2016). Who we are affects how we participate, and identities were revealed through using emojis, punctuation, and all caps and by the very nature of what one chooses to share in a tweet. These helped establish a participant’s social presence, which has been linked to increased trust in online communities (Tu & McIsaac, 2002). For example, one participant used emojis in almost every tweet, and another used exclamation marks extensively. These representations revealed aspects of their teaching identities by projecting excitement and positivity related to teaching (Wenger, 1998). Additionally, when @T76 shared that she used stations focused on “a goal setting activity and syllabus scavenger hunt,” we can infer that she is a teacher who values student-centered, active learning. Getting to know others in this manner potentially strengthened community ties.

As a way to establish a positive, welcoming culture, participants also used supportive comments to identify with, show appreciation for, and encourage others,

potentially increasing efficacy to implement innovative strategies and improve practice (Lieberman & Mace, 2010; Moreillon, 2015). As a result, socially active members participated more often in longer, reflective conversations and worked with others in mentoring relationships to negotiate improved practices (Carpenter & Krutka, 2014; Tseng & Kuo, 2014; Veletsianos, 2011).

In online communities, establishing trust through mutual engagement in a safe, positive culture increases members' knowledge-sharing behaviors as a result of prosocial commitment to others in the community, exemplifying a "pay-it-forward" mentality (Booth, 2012; Tseng & Kuo, 2014; Rodesiler et al., 2014). A safe culture is essential for admitting a lack of knowledge, which "is largely construed as a personal deficit" (Wenger, 1998, p. 152), and for asking for assistance in solving problems (Tseng & Kuo, 2014; Wenger, 2009). However, the safety of the #2ndaryELA chat environment was somewhat limited because of the transient nature of the community (Trust, 2015). Newcomers unfamiliar with the "subtleties of the enterprise as the community defined it" (Wenger, 1998, p. 153) formed weak bonds to others from their positions on the periphery (Chiu et al., 2006; Granowetter, 1973), but those bonds can be strengthened if the community meets members' needs and they choose to actively participate. The development of individual member's bonds over time could not be determined from the data gathered in this study. Nevertheless, for those who joined and chose to actively engage, this community served as a supportive environment where opportunities for deep, reflective learning could occur through connections to helpful colleagues who "really felt like a community" (Interviewee D).

**Exploring.** In addition to sharing, connecting, and socializing, community members explored new ideas through asking questions and reflecting on practices. Only 6% of total tweets were questions, and most of those were requests for more information after an IT, several of which went unanswered. Unanswered questions could have resulted from a gap in the community's knowledge base or a lack of participants' attention, which is controlled by purpose and interest (Bandura, 1986; Wenger et al., 2009). Some questions were simply tweeted out with the community hashtag, not directed at a specific person. Those questions that included a mention, signaling a directed query, were almost always answered by the initial tweep (Kist et al., 2014; Rodesiler, 2015).

A member's low perception of competence, stemming from being a newcomer to the community or to teaching, could explain the dearth of questions because participants guard themselves as they develop relationships and trust (Tschannen-Moran et al., 1998; Wenger, 1998). Only when one changes from a fixed mindset of not knowing as incompetence, to a growth mindset of seeing inadequacy as a learning opportunity, can those negative feelings be replaced with a positive anticipation of new learning (Dweck, 2006). A supportive environment can improve confidence as members work together to answer questions (Bandura, 1986; Jenkins et al., 2009). However, when members refrain from asking questions, whether because of the community culture or its members' self-perceptions, the learning trajectory of the community is impacted negatively (Wenger, 1998). Unasked questions equate to unrealized opportunities for growth.

Studies have shown that teachers who collectively negotiate the meaning of their work in shared practice are more likely to hold strong efficacy beliefs and feel a

responsibility to improve their practice (Takahashi, 2011; Tschannen-Moran et al., 1998). Rodesiler (2015) found that Twitter chats “fostered multivoiced interactions as participants engaged others in exploratory exchanges around topics relevant to their classroom practices” (p. 38), but others have suggested that the affordances of Twitter compromise the complexity of ideas discussed (Carpenter & Krutka, 2014; Kelly & Antonio, 2016). In this study, reflecting on practices and collectively negotiating meaning was found least often in the data sources, possibly because of the public nature of Twitter and the intensely personal process of reflection (Clampa & Gallagher, 2015; Lieberman & Mace, 2010). However, since conversations alone do not necessarily translate into instructional improvements (Hargreaves, 1999; Zhang, 2009), even non-publicized, individual reflective processes could have affected a teacher’s practice without public notice.

When reflecting did transpire, the most active, highly efficacious participants who had established connections and trust almost always initiated the exchanges (Booth, 2012; Tschannen-Moran et al., 1998). In these reflective conversations, many times seemingly off-topic, participants asked and answered questions, suggested resources, and challenged each other’s ideas. These educators were engaged, even as the chat session continued on without them, because “teachers with a strong sense of efficacy are open to new ideas and more willing to experiment with new methods to better meet the needs of their students” (Tschannen-Moran et al., 1998, p. 223), even when teaching in an unsupportive environment.

However, even if participants tried innovative strategies or made instructional changes based on ideas from the chat, they rarely shared those outcomes or successes

with others in the community. Interviewee D reported how she thought sharing successes would be misconstrued as bragging, and Interviewee B relayed that “there was just not enough time to share those” because of the structure and pace of a Twitter chat. Still, communities who have strong ties and a commitment to improving their practice share and celebrate successes (Hur & Brush, 2009; Wesely, 2013), enabling others to learn vicariously (Bandura, 1986). Even though specifics were not necessarily shared, several participants credited the supportive community with helping them modify classroom instruction and transform teaching philosophies through interactions that encouraged reflection on best practices.

In this chapter, I discussed the results from the descriptive and interpretive data analyses from which four broad themes emerged: sharing, connecting, socializing, and exploring. Sharing knowledge and resources in the #2ndaryELA was impacted by a member’s purpose for chat participation and strength of community bonds. Connections to other community members helped combat isolation, but the transient nature of the community weakened commitment to others, which limited reflection and exploration of new ideas. Connecting beyond the chat by inviting outsiders exposed members to diverse perspectives and facilitated the expansion of their professional learning networks. Community members built social relationships and began to establish trust by showing emotion, revealing identities in practice, and lending emotional support. However, building trust was hampered by the large group of peripheral members who were either newcomers or chose not to cultivate relationships through mutual engagement, which limited individual and collective learning. Finally, exploring and reflecting on new ideas

rarely occurred publicly as a function of the cultural climate and the structure of the Twitter chat environment.

## Chapter Five: Summary, Limitations, and Conclusions

In this final chapter, I provide a summary of the study, followed by a discussion of study limitations. Then, I present general conclusions from the study and address the adequacy of social learning theory for understanding professional learning in an online community. I conclude with implications for practice and recommendations for future research.

### Summary

The purpose of this study was to address the research question *What is the nature of the professional learning of secondary literacy teachers who participate voluntarily in an online Twitter chat focused on middle and high school English language arts instruction?* The research on effective professional learning reveals that teachers learn best with others actively engaged in content-specific activities with time for feedback and support (Croft et al., 2010; Garet et al., 2001). School-based professional learning and improvements to classroom practice are not strongly associated (Borko, 2004; Guskey, 2007). However, online communities are beginning to address traditional professional development issues (Ross, 2011; Vavasseur & MacGregor, 2008). Teachers voluntarily participate in online learning communities to reduce isolation, find supportive colleagues, and personalize learning (Booth, 2012; Duncan-Howell, 2010), but research exploring identity- and meaning-negotiation within online communities to support instructional improvements and sustain mutual engagement is limited.

This descriptive case study (Yin, 2014) explored the nature of secondary literacy teachers' voluntary online professional learning through the Twitter-based #2ndaryELA chat. Participants were the 226 educators who voluntarily participated at least once in the

weekly chat from July to November 2016 and used the #2ndaryELA hashtag in tweets. Data sources were archived tweets from 17 #2ndaryELA chats and Twitter profile information, questionnaire responses, and information from semi-structured interviews. Collecting multiple data sources allowed for triangulation, thereby increasing validity and trustworthiness of findings and conclusions. Both descriptive and interpretive data analyses were conducted to uncover codes, categories, and themes that addressed the research question.

Four broad themes emerged from data analysis that characterized learning in this Twitter chat community. Participants shared knowledge and resources with each other, creating the community's shared repertoire, but sharing self-created resources was limited by insecurities. Oldtimers who had established relationships and strong community bonds shared more often than those on the periphery. Second, connecting within the chat mediated learning by discovering commonalities and interacting with and following each other. Hashtags, mentions, and additional platforms, such as Facebook and Voxer, enabled learning beyond the chat to meet personalized learning needs. Third, members created a positive community culture by socializing through disclosing positive feelings and frustrations, revealing personalities, and giving emotional support. This collegial climate facilitated some participants' learning. Fourth, members explored new ideas and reflected on classroom practices collectively through community interactions but decided the impact on classroom instruction individually. However, this last theme was indicated least often in the data perhaps as a function of the transient nature of participants, leading to weak community ties.

### **Limitations**

There are limitations of every study, no matter how well-designed. One limitation is inherent in the case study methodology itself. A qualitative case study is intended to examine closely a phenomenon in its real-world context to generate rich, thick descriptions (Merriam & Tisdell, 2016; Yin, 2014) of the situation under study. Therefore, a case study cannot be used to generalize findings to other contexts, so it remains unknown whether the findings of this inquiry represent how other online communities function.

A second limitation involved the amount and depth of non-tweet data available for analysis. Only 13% of 226 study participants completed the survey, so it is unknown whether data from this sample describes the rest of the Twitter community. Although there is no agreed-upon optimal number of interviews for qualitative studies (Baker & Edwards, 2012), it is not known whether the perspectives from only four interviewees represented the multiple perspectives of Twitter chat community participants. Because I collected data over a six-month period, the findings represent a limited period of the interactions of the participants in this community.

In spite of these limitations, the 17 Twitter chats produced over 3,600 tweets, which, supplemented by the questionnaire and interview data, provided a significant data set to address the research question. Thus, the findings provide an in-depth analysis of the studied Twitter community and provide a detailed description of the nature of participants' professional learning over the period of half a year. This description can begin to shed light on the value of social learning in other online communities.

### Conclusions

This study's findings have shown that the nature of secondary literacy teachers' professional learning in the #2ndaryELA chat community can be characterized according to the following five conclusions.

1. **Personalized experiences.** Participants personalized their experiences by voluntarily participating in the #2ndaryELA community and then choosing their intra-chat actions, such as following others, liking tweets, and asking questions. These interactions were driven by their purposes for participation, which varied, but commonly included finding new ideas for literacy instruction and finding emotional support.
2. **Obstacles to learning.** Obstacles to participants' learning were a function of several factors. The voluntary nature of participation in a Twitter chat was appealing and motivating for chat members, but it was also sometimes an obstacle. Chat membership varied weekly, and chat idea-related instructional changes were rarely shared. Finally, some participants' low perceived efficacy was an obstacle as they withheld participation because of feelings of inadequacy.
3. **Supportive interactions.** Chat participants supported and encouraged one another. Twitter community interactions were friendly, with participants often injecting humor into their tweets. They complimented each other's ideas, showed appreciation for sharing, and advocated for one another by providing concrete suggestions for promoting one another's teaching and their students' learning. This created a positive social climate for learning.

4. **Limited depth.** Chat interactions sometimes lacked the depth of reflective thinking needed for publicly negotiating meaning and improving instruction. This intermittent superficiality may have been due to Twitter character limits or the rapid pace of chats. However, some participants bypassed this issue by collaborating on other platforms that allowed for more in-depth discussions.
5. **Chat structure.** Professional learning was limited sometimes by the structure of the Twitter chat environment. With predetermined chat questions and only five minutes dedicated to each, discussions were somewhat constrained, especially if participants were unaware of or did not utilize side conversations and off-topic exchanges.

Although this study revealed benefits for supporting professional learning through a Twitter chat community (along with distinct limits of this medium), it is important to note that there still remains a place for face-to-face professional learning. This is especially so when in-person, real-time professional development aligns with school goals and teachers' individual aspirations. The learning in Twitter chat communities cannot meet all the professional learning needs of secondary literacy teachers. Thus, voluntary online informal PLOs, specifically Twitter chat communities, may be viewed as an important *part* of a secondary literacy teacher's overall professional learning network (PLN) and a complement to more traditional (but effective) PD.

### **Adequacy of Social Learning Theory**

The theoretical framework for this study was Wenger's (1998) social learning theory. In the #2ndaryELA chat community, members freely brought their "experience of practice into the learning space and gave each other access to that experience"

(Wenger, 2009, p. 4) as they focused on the shared practice of improving secondary literacy instruction. However, most, but not all, dimensions of SLT were helpful in explaining the findings of this study. Specifically, Wenger's three interrelated constructs of identity, meaning, and practice were evident in the data; however, his community construct was not so manifest in the findings.

Learning within a community is influenced by the identities, negotiated meanings, and practices of those who choose to participate. Members' identities in practice, who they are as secondary literacy teachers, were revealed through reifying instructional practices, discussing classroom environments, and interacting with others. These identities were constantly negotiated as members interacted—sharing ideas, supporting each other, and working out meaning for themselves. Some participants' sharing reflected identities across multiple communities, revealing how multimembership impacted negotiation of meaning for individuals and the collective learning of the community. Meaning can only be produced through participation, and some used this negotiated meaning to modify their practice (i.e., their conception of secondary literacy instruction) and improve instruction. Even though social learning occurs in the company of others, "it is realized in the experience of individuals" (Wenger et al., 2009, p. 89) as each person negotiates meaning for himself and enacts that meaning in his own classroom. The constructs of identity, meaning, and practice were apparent throughout participants' interactions and help explain this study's findings.

The community construct of SLT, however, was not clearly evident in the data. Specifically, the community dimension broke down somewhat around Wenger's (1998) subconcept of mutual engagement. The highly transient nature of membership

and the scant time spent weekly engaged in conversations limited the participants' abilities to form strong community bonds that could have led to deeper learning. Furthermore, even though the social climate of the chat was cordial, some participants did not appear to be sufficiently motivated to share or engage in more reflective discussions. These inadequacies could be due in part to the voluntary nature of participation, purpose for participation, and limitations of the Twitter chat environment.

Given the ways in which Wenger's (1998) SLT aligned and failed to align with my findings, I propose a somewhat modified version of the model to better explain the nature of professional learning in the Twitter community I studied. This modification is displayed in Figure 5.1, and I elucidate the changes by describing a scenario in which a teacher joins and interacts within the #2ndaryELA chat.

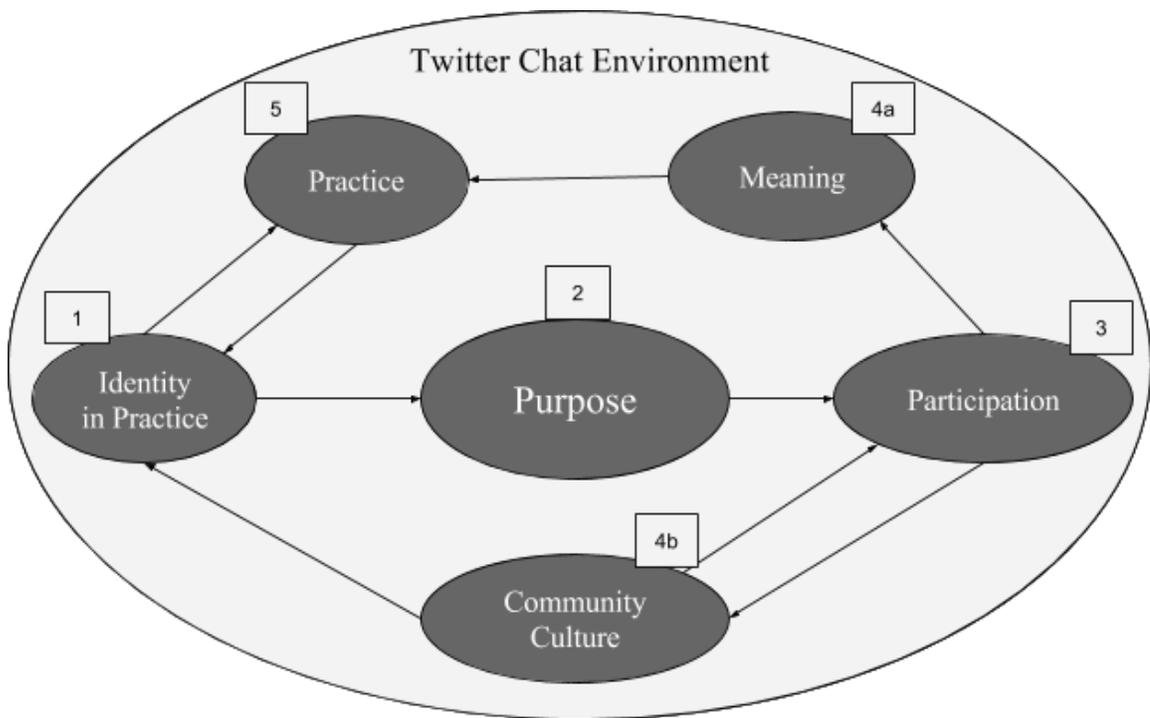


Figure 5.1 Modified Model of Social Theory of Learning

This hypothetical teacher, Mrs. Jones, is motivated to effect change in her classroom practices, and after learning about the #2ndaryELA chat, she chooses to join. Mrs. Jones would like to integrate more digital tools and processes into her English instruction since each student in her high school recently received a Chromebook as a part of the school's one-to-one initiative, so she decides to participate when the chat topic is Integrating Technology in the ELA Classroom. Her decision to participate reflects her acknowledgement of a knowledge deficit in technology-focused tools and processes, which is reflected by the "Identity in Practice" component (1) of the revised model (numbers in parenthesis refer to numbered items in Figure 5.1). This leads to her "Purpose" (2) which influences her "Participation" (3) through intra-chat actions. With this purpose, she might participate through liking tweets that include digital tools and activities to explore later, which is a low-risk way to interact. She also might pose questions to participants posting about these ideas to tap participants' experiential knowledge. She could also participate by following those members who shared ideas related to her purpose to extend learning beyond the chat.

In this scenario, though, Mrs. Jones decides she needs to ask experts about using Google Docs for digital writing feedback. These acts of "Participation" (3) impact two processes: negotiating "Meaning" (4a) and building a "Community Culture" (4b). Mrs. Jones's meaning-negotiation process is influenced by her own background knowledge and experiences in the classroom. She has been very apprehensive about integrating technology at all in her instruction because she felt unprepared, but she is interested in using the comments feature in Google Docs for feedback on students' writing. However, the intra-chat actions she takes impact how she decides to modify her "Practice" (5).

Because she can ask specific questions to those experts already giving students feedback through Google Docs, she can gain knowledge through their experiences and feel more confident with her ability to do the same. The meaning she produces (e.g., how to create comments, how often to give feedback, expectations for student revisions after feedback) impacts her conceptualization of writing instruction, part of her “Practice” (5). Her learning can then be enacted through practice by modifying her mode of writing assessment to implement digital feedback. This, in turn, impacts her “Identity in Practice” (1) as she now views herself as a writing teacher who values ongoing feedback that is more relevant and student-centered than her former practice of assessing a piece of writing only after completion.

In addition to meaning negotiation, “Participation” (3) also influences the “Community Culture” (4b) as members begin to establish trust through cultivating relationships. Since there is a positive and supportive culture, Mrs. Jones feels safe to ask questions to those posting about digital tools. When members answer questions and offer encouragement, that inspires more participation in an iterative process. The social climate of the community also impacts Mrs. Jones’s “Identity in Practice” (1) as she feels more confident to try out her new idea of digital feedback, increasing self-efficacy. This can influence her desire to return to the community and keep learning with other purposes in mind.

This scenario represents just one purpose for participation in a Twitter chat community and how that purpose influences learning. Other purposes for participation would result in different actions and different outcomes. The modified model of social learning theory within the structured environment of a Twitter chat with voluntary

participation is valuable for understanding a participant's processes of participation and modification of instructional practices.

### **Implications for Practice**

The findings in this case study have implications for literacy teachers and administrators. First, for literacy teachers who are dissatisfied with their current professional learning opportunities, Twitter-based chat communities can be helpful resources to find supportive colleagues and expand one's professional learning network. Even for those who have been reluctant Twitter users, this study's findings offer promise that literacy teachers can acquire new ideas and form professional relationships through participation in a Twitter chat community. Preconditions for successful professional learning in a Twitter chat community are knowing that: (a) the purpose of participation matters, (b) active participation is imperative to learning; and (c) one Twitter chat community should not be the extent of your PLN.

For administrators who would like to move into new forms of professional learning, Twitter-based chat communities can be a viable option—but with a few modifications. First, administrators might implement a version of a Twitter chat community with their teachers with lengthened time for interactions (i.e., more than five minutes to answer questions), so teachers have time to ask and answer questions, reflect publicly, and engage with each other. Second, administrators should make sure that new Twitter users are mentored on conventions and processes of chats before being expected to engage in this type of learning environment. Finally, administrators could recognize the value of this type of voluntary learning by awarding digital badges or other forms of acknowledgement of teacher learning.

### **Recommendations for Future Research**

Even though this study sheds light on the nature of the professional learning of secondary literacy teachers in a Twitter chat environment, much remains to be studied regarding voluntary online professional learning. Since this study's findings suggested that Twitter chat communities should not be an educator's sole form of learning, research may be conducted to explore the extent of literacy educators' PLNs. Multiple-case study research should be pursued that focuses on several literacy teachers' experiences learning in voluntary online PLOs and the outcomes of that learning. This could include any resources, tools, people, or platforms teachers view as parts of their PLNs. This research would give insight into how literacy educators choose ways to learn and people to learn from as they improve instructional practices over time as a result of interactions with their PLN. In such studies, researchers could collect online posts, participants' journals, interviews, and classroom observations and conduct the study over a more extensive period of time.

Since this study's findings advocate for modifications to Twitter chats for use in schools, future research that focuses on the value of modified Twitter chat communities for school-based professional learning should be conducted. The modifications for administrators suggested previously would be useful to customize the learning for a specific school district. This study would be structured as a formative experiment within one district to determine its viability and success.

Finally, future multiple-case study research should be conducted to look at the most active contributors in this study to examine how their participation in the chat community impacts their teaching identities, meaning negotiation, and classroom

practices over an extended period of time. Focus should be placed on classroom observations, extended interviews, lesson plan examinations, and student work.

In conclusion, the results of this qualitative case study have revealed the intricacies of online professional learning within a Twitter chat community. Findings reveal many benefits to teachers who use this medium to participate voluntarily by connecting with, supporting, and learning from and along with online colleagues. There are indeed limits to this form of professional development that are a function of Twitter constraints and the degree to which participants commit to the community and their own learning. Much is yet to be learned, however, about this twenty-first century form of interaction and development among professional educators. Perhaps with the uncovering and application of this new knowledge, the promise and potential of online professional learning communities may be realized.

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## Appendix A

### Definitions of Terms

**Direct message (DM)** - A personal message sent privately and directly to another tweep on Twitter. To send a direct message, you must follow each other.

**Emoji** - Small images that can be used within the text of a tweet or other social media post, such as 😊, to represent emotions.

**Follower** - A person who follows you. Followers can choose to follow those with a public Twitter profile without asking permission.

**Following** - The section of a profile that houses the people or organizations that you follow. Tweets from these accounts will show up in your Twitter stream.

**Handle** - A username on Twitter designated by the @ symbol, such as @JenniferFox13.

**Hashtag** - A word on social media preceded by the pound sign (#) which can be used to tag, search, or label something.

**Initial tweet (IT)** - A tweet in response to a chat question posed by the moderator.

**Interactions** - A collective term used to represent likes, retweets, and quote tweets.

**Like** - To click the heart icon on a tweet, which saves the original tweet to the person's Twitter profile.

**Mention** - The use of a person's Twitter handle within a tweet, which sends a notification to the person mentioned.

**No acknowledgement IT** - Initial tweets that did not receive any replies or interactions.

**Notification** - Within Twitter, if a tweep mentions a person or replies, retweets, or likes one's tweets, that person receives a notification in her account.

**Professional learning (PL) / Professional learning opportunity (PLO)** - Any type of learning activity meant to encourage reflection, increase teacher knowledge, and improve instruction.

**Professional learning network (PLN)** - A “uniquely personalized, complex systems of interactions consisting of people, resources, and digital tools that support ongoing learning and professional growth” (Trust et al., 2016, p. 28).

**Quote tweet** - A retweet with a message added by the retweeter.

**Reply** - A direct response to person's tweet, which mentions the first tweep's handle and creates a thread.

**Retweet** - An action that results in an original tweet being tweeted again by a new person.

**Retweeter** - A person who retweets a tweet or posts a quote tweet.

**Single tweet (ST)** - Initial tweet that did not generate a reply (i.e., did not become a thread).

**Storify** - Online tool used to collect tweets and other online material based on user-specified criteria.

**Thread** - A conversation beginning with an initial tweet followed by one or more replies.

**Tweep** - A person who tweets.

**Tweet** - The 140-character message a person posts on Twitter.

**TweetDeck** - An online management tool used to participate in Twitter chats and schedule tweets.

**Twitter chat** - A group of Twitter users meeting at a certain time focused on a specific topic using a specific hashtag, such as #2ndaryELA. The chat is structured around planned questions, and real-time discussions occur as questions are posted.

**Twitter profile** - The home page of a Twitter account that includes a person's handle, personal description, location, Twitter join date, and number of tweets, following, followers, and likes.

**Twitter search** - A search on Twitter, usually conducted using a hashtag, which returns all results of those tweeting with that hashtag.

## **Appendix B**

### **Twitter Chat Participation Overview**

Knowledge of the process of participating in a Twitter chat is important in understanding the context of this study, so here I briefly explain how a #2ndaryELA chat unfolds. Interested participants meet on Twitter at 7pm on Tuesday nights. Participants prepare for the chat by first searching by the #2ndaryELA hashtag either on Twitter itself or on a management platform like TweetDeck. This ensures that all participants' tweets containing the #2ndaryELA hashtag can be viewed. When the chat begins, participants introduce themselves, tweeting where they are from, teaching position, grade level, and blog link. After five minutes of introductions, the moderator begins posting the night's questions at five-minute intervals, noting the question number by coding each with Q1 for question one, Q2 for question two, and so on to question five (See Appendix F for all chat questions). As participants begin to answer questions, in their responses, they add A1 to denote the answer to question one and A2 for the answer to question two, and so on. This keeps the chat organized and helps participants know which questions participants are answering. Participants add the #2ndaryELA hashtag to each tweet to ensure it is visible in the participants' Twitter streams. As planned questions are posted and answered, participants can also follow each other and respond by replying, liking, retweeting, or quoting tweets. This process is continuous throughout the 30-minute chat.

## Appendix C

### Informed Consent and Body of Questionnaire

**INVESTIGATOR'S NAME:** JENNIFER FOX

**STUDY TITLE:** Secondary Literacy Teachers' Professional Learning as a Result of Their Voluntary Participation in a Twitter Chat Community

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Hello, #2ndaryELA Community Members!

My name is Jennifer Fox (also known as @JenniferFox13), and I am a doctoral candidate at the University of Missouri. I have utilized Twitter for professional learning for several years, and it has positively impacted me professionally. With my background in literacy, I am particularly interested in how secondary literacy teachers voluntarily learn in online communities.

The purpose of my dissertation study is to examine the nature of professional learning in the #2ndaryELA community—how you interact, what you learn, what you share, how you support each other, and particularly how it impacts you professionally. I would like to invite you to participate in this research by filling out this short questionnaire. In order to describe the #2ndaryELA chat community, I am gathering background information about who participates in the #2ndaryELA chat and how participation has impacted you professionally. This research will potentially benefit other teachers and administrators who are searching for alternative forms of professional learning.

You do not have to be a regular participant in the #2ndaryELA chat to fill out the questionnaire. I am inviting everyone who has participated in a #2ndaryELA chat to answer the questions, even if you rarely or only sometimes participate. I will keep your information confidential on a password protected computer, and I will assign a pseudonym to each participant, which will be used in the research report when referencing any specific data.

There are no risks or costs associated with participating in this research study, and there will be no compensation for participation. Participation in this study is voluntary, and the decision to not participate will not affect you negatively. This short questionnaire will take approximately 10 minutes or less to complete.

If you have any questions about this questionnaire or the research study in general, please contact Jennifer Fox at 417-328-1581 or [jfox@sbuniv.edu](mailto:jfox@sbuniv.edu) or my advisor Dr. James Baumann at [horsepower49@gmail.com](mailto:horsepower49@gmail.com). If you have any questions regarding your rights as a participant in this research and/or concerns about the study, or if you feel under any pressure to enroll or to continue to participate in this study, you may contact the University of Missouri Campus Institutional Review Board (which is a group of people

who review the research studies to protect participants' rights) at (573) 882-9585 or umcresearchcirb@missouri.edu.

Please click on the appropriate button below to express your ability to participate in this study. By clicking the "I agree" statement below, you consent to the confidential use of the information you provide in my research study. Thank you for your input!

- I agree to participate in the research study by filling out this online questionnaire.  
 I do not agree to participate in this research study.
- 

### **Twitter Handle**

Since this is personally identifying information, this is NOT required. Your provision of your Twitter handle, as with any personally identifying information, will be kept confidential.

### **Current Grade Level**

Choose as many as apply.

- 6th  
 7th  
 8th  
 9th  
 10th  
 11th  
 12th  
 College  
 Other \_\_\_\_\_

### **Current Teaching Position(s)**

Choose as many as apply.

- English  
 Gifted and Talented English Language Arts  
 Writing  
 Composition (Honors and Regular)  
 Writing Through Literature  
 Creative Writing  
 Reading  
 Remedial Reading / Reading Interventions  
 Reading Enrichment  
 Literature (American, World, AP, Honors, Film as Literature)  
 Special Education  
 ESL / ELL  
 Oral Communication  
 Speech  
 Debate

- AVID (audio / video)
  - Journalism / Newspaper
  - Yearbook
  - ELA Instructional / Literacy Coach / Reading Specialist
  - ELA Curriculum Director
  - Higher Education
  - Other \_\_\_\_\_
- 

**Please indicate the length of time in years you have been a secondary literacy teacher.**

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**Do you currently teach at a public or private school?**

- Public
- Private

**Location**

Please provide the location where you teach by including the state (US residents) or country.

---

**How often do you participate in the #2ndaryELA chat?**

- Every week (4 times a month)
  - 2-3 times a month
  - 1 time a month
  - Less than 1 time a month
  - Never
  - Other \_\_\_\_\_
- 

**For what specific reasons do you participate in the #2ndaryELA chat?** Please share as many as you wish.

**How has participation in the #2ndaryELA chat community impacted you professionally?**

## **Appendix D**

### **Interview Informed Consent**

Researcher's Name(s): Jennifer Fox

Project Title: Secondary Literacy Teachers' Professional Learning as a Result of Their Voluntary Participation in a Twitter Chat Community

#### **INTRODUCTION**

This consent may contain words that you do not understand. Please ask the investigator to explain any words or information that you do not clearly understand.

You are being asked to participate in a research study. This research is being conducted to explore the professional learning of secondary literacy teachers in the #2ndaryELA community on Twitter. When you are invited to participate in research, you have the right to be informed about the study procedures so that you can decide whether you want to consent to participation. This form may contain words that you do not know. Please ask the researcher to explain any words or information that you do not understand.

You have the right to know what you will be asked to do so that you can decide whether or not to be in the study. Your participation is voluntary. You do not have to be in the study if you do not want to. You may refuse to be in the study and nothing will happen. If you do not want to continue to be in the study, you may stop at any time without penalty or loss of benefits to which you are otherwise entitled.

#### **WHY IS THIS STUDY BEING DONE?**

The purpose of this study is to explore the nature of the professional learning of secondary literacy teachers who participate voluntarily in the #2ndaryELA Twitter chat focused on middle and high school English language arts instruction.

#### **HOW MANY PEOPLE WILL BE IN THE STUDY?**

There will be four participants in the #2ndaryELA chat community interviewed for this study.

#### **WHAT AM I BEING ASKED TO DO?**

You are being asked to be interviewed about your participation in the #2ndaryELA chat community on Twitter and its perceived benefits. This interview will last approximately one hour and will be recorded and transcribed for analysis. You will be asked to be interviewed one time.

**HOW LONG WILL I BE IN THE STUDY?**

Interviews for this study will be conducted between November 2016 and January 2017. If you consent, you will only be interviewed one time for approximately one hour. You can stop participating at any time without penalty.

**WHAT ARE THE BENEFITS OF BEING IN THE STUDY?**

Your participation will potentially benefit other secondary literacy teachers as they seek out opportunities to learn online through Twitter chat communities. It could also benefit administrators and other school leaders as they design and organize professional learning for teachers by acknowledging the potential value of voluntary online professional learning as evidence of continuous education.

**WHAT ARE THE RISKS OF BEING IN THE STUDY?**

Being in this study involves little risk. There is a potential discomfort that could be encountered by the need to schedule and participate in an interview. Being in this study does not pose a risk to your personal safety.

**WHAT ARE THE COSTS OF BEING IN THE STUDY?**

There is no cost to you.

**WHAT OTHER OPTIONS ARE THERE?**

You have the option of not participating in this study, and you will not be penalized for your decision.

**CONFIDENTIALITY**

To keep your information safe, I will store all interviews for this study on my password-protected computer. The interviews will be transcribed by me, and the transcription will be placed in a Google Drive file not shared with others. As soon as the transcription process is complete, all interview videos will be deleted. To protect your confidentiality, you will be assigned a pseudonym (e.g., Interviewee A, Interviewee B) which will be used in the written report of our discussions. The code key connecting your name to specific information about you will be kept in a separate, secure location. Information contained in your records may not be given to anyone unaffiliated with the study in a form that could identify you without your written consent, except as required by law.

**WILL I BE COMPENSATED FOR PARTICIPATING IN THE STUDY?**

You will receive no payment or other compensation for taking part in this study.

**WHAT ARE MY RIGHTS AS A PARTICIPANT?**

Participation in this study is voluntary. You do not have to participate in this study.

You will also be informed of any new information discovered during the course of this study that might influence your health, welfare, or willingness to be in this study.

**WHO DO I CONTACT IF I HAVE QUESTIONS, CONCERNS, OR COMPLAINTS?**

You may ask questions about the study at any time. For questions about the study, email Jennifer Fox at [jfox@sbuniv.edu](mailto:jfox@sbuniv.edu), call her at 417-328-1581, or send a direct Twitter message to @JenniferFox13. Additionally, you may ask questions, voice concerns or complaints to my advisor Dr. James Baumann at [horsepower49@gmail.com](mailto:horsepower49@gmail.com).

**WHO DO I CALL IF I HAVE QUESTIONS OR PROBLEMS?**

If you have any questions regarding your rights as a participant in this research and/or concerns about the study, or if you feel under any pressure to enroll or to continue to participate in this study, you may contact the University of Missouri Campus Institutional Review Board (which is a group of people who review the research studies to protect participants' rights) at (573) 882-9585 or [umcresearchcirb@missouri.edu](mailto:umcresearchcirb@missouri.edu).

A copy of this Informed Consent form will be given to you before you participate in the research.

**HOW DO I RESPOND?**

If you agree to be interviewed, please send an email to Jennifer Fox at [jfox@sbuniv.edu](mailto:jfox@sbuniv.edu) stating the following:

I have read the informed consent form and any questions have been answered. I know that I can remove myself from the study at any time without any problems. I agree to be interviewed by Jennifer Fox for her research study.

Thank you for your consideration.

## **Appendix E**

### **Interview Protocol**

#### **Segment One: Opening narrative**

Script: Hello! I'm Jennifer Fox, and my study focuses on how secondary literacy teachers further their knowledge through online professional learning opportunities, particularly the #2ndaryELA Twitter chat community. Thank you for taking your time to be interviewed. I really appreciate it. Since you have signed the informed consent, do you understand your rights in this study? Do you have any questions? If at any time, you do not want to answer a question, just let me know, and we will move on or end the interview, if you wish. I would like to record this interview, so I can transcribe and analyze it later. Is that okay with you? Ok, let's begin with some general questions about you and how you got started participating in the chat and then we will move to more specific questions.

#### **Segment Two: General questions**

The following questions guided the interview:

1. Please tell me about yourself, where and how long you've been teaching, and about how you got started using Twitter in general.
2. Tell me a little about how you learned about the #2ndaryELA chat on Twitter. Follow up: What made you want to begin participating in the chat?
3. How long have you been participating in #2ndaryELA chat? How often do you participate?

**Segment Three: Specific questions about #2ndaryELA chat**

4. Why do you participate in #2ndaryELA chat?
5. What kinds of activities do you do during the #2ndaryELA chat?
6. What are some examples of ideas, activities, or resources you have learned as a result of participation in the #2ndaryELA chat on Twitter?
7. Have you changed your literacy instruction based on what you have learned on #2ndaryELA chat? Follow-up: If so, what did you change? How did it go?
8. Have students been impacted as a result of your participation in #2ndaryELA chats? If so, how?
9. How have you been impacted professionally as a result of your interactions on the #2ndaryELA chat?
10. Do you have anything else you would like to share about your interactions on the #2ndaryELA chat community?

**Appendix F**

**Topics and Questions for All 17 Twitter Chats**

Chat Topic	Chat Session Questions				
	Question 1	Question 2	Question 3	Question 4	Question 5
Back to School - Part 1	Q1 What prep for next school year are you doing over the summer?	Q2 What are you most looking forward to about this school year?	Q3 Describe the first day of school in your classroom.	Q4 What is your favorite getting to know you activity?	Q5 What will be your first content-based lesson of the year?
Back to School - Part 2	Q1 What student info do you collect at the start of the year? How does it inform instruction?	Q2 What info do you include in your syllabus? Share an ex. if you'd like.	Q3 What are your must-teach routines/procedures the first day/week?	Q4 How do you begin building relationships with your students?	Q5 How do you begin establishing partnerships with parents?
Curriculum & Unit Planning	Q1 Do you design your curri or are you given a prescribed curri (PC) to follow? Explain.	Q2 What are challenges of designing your own curriculum or having to follow a PC?	Q3 What are the rewards?	Q4 Describe your approach to planning a unit within your curriculum.	Q5 What advice would you give to teachers struggling to plan a unit or entire curri?
Classroom Arrangement	Q1 How do you arrange the seating in your classroom? Is it flexible or permanent?	Q2 Does your classroom decor have a theme or is it all about functionality?	Q3 Explain how you keep classroom supplies and materials organized.	Q4 What is your favorite way to display student work and evidence of learning?	Q5 Share a picture of your classroom or one that inspires you.
Learning Stations/ Centers	Q1 How do you use learning stations (LS) in connection with reading?	Q2 How do you use LS in connection with writing?	Q3 Are the activities in your LS usually independent or collaborative?	Q4 Is there always a product in your LS? How do you hold Ss accountable?	Q5 How do you manage student behavior during LS?
YA Lit in the Classroom	Q1 Do you include YA lit in your curr.or classroom library? Explain.	Q2 What are your students' favorite young adult titles?	Q3 What titles would you recommend to help diversity a classroom library?	Q4 Where/how do you find new books for your class library or to use in teaching?	Q5 Do you or your students do book talks? How else do you share what you are rdng?

Classroom Management	Q1 Which routines are most important for keeping class running smoothly?	Q2 What routines do you need to change for this school year?	Q3 Share any ideas or photos of spaces in the room that help with routines..	Q4 What routines do you use to manage your work/life balance?	Q5 Share a classroom management resource that you find invaluable.
Integrating Technology in the ELA Classroom	Q1 Given the amount of digital reading students do, how do we get them reading actively online? Tips, stratg, tools?	Q2 Which online tools are you using to support language development? How are you using them in class/at home?	Q3 How can we use digital tools to focus more on the process of writing instead of product?	Q4 What are the biggest challenges you face using tech to support rdng & wrtng? Possible creative solutions?	Q5 Have you explored blended lrng models like Flipped Clsrm or Station Rotation? Challenges, successes?
Grading Policies	Q1 What student work is graded in your classroom? What isn't?	Q2 How do you hold students accountable for implementing feedback? Do students revise/reflect after grading?	Q3 Some schools are moving toward standard based grading. Thoughts? Experiences?	Q4 Some schools are moving toward students grading themselves. Thoughts, Exp?	Q5 What tips and tricks have you learned to manage the marking load?
Reading/ Writing Workshop	Q1 Have you used guided reading before at the 2ndary level? Describe your exp.	Q2 What are your favorite books to read aloud to students?	Q3 How often do your students get time to read independently in your class?	Q4 What types of writing about reading do you ask students to do?	Q5 When & how do students interact with each other during rdg in your class?
Nonfiction & Real World Connections	Q1 How do you use nonfiction texts and media in your classroom?	Q2 What is your favorite resource for finding nonfiction texts that are timely and apply to teens?	Q3 What short/long term benefits do you find from using NF materials related to current events & real issues?	Q4 How do you handle sensitive topics in the nonfiction materials you use in the classroom?	Q5 Describe your favorite lesson that uses NF material related to a real life issue.
Engaging Students with Nontraditional Texts	Q1 Where/ how do you find contemporary fiction (short stories, novels) to engage your students?	Q2 Where/ how do you find NF texts related to current issues or on topics of interest to your students?	Q3 Have you used graphic/verse novels with your students? Recommends? Exp?	Q4 Where/ how do you find appropriate media & info-graphics for students to "read?"	Q5 What strategies do you use to help students read & understand non-traditional texts?

Close Reading & Text Annotation	Q1 What does “close reading” mean in your classroom?	Q2 What types of texts do you ask students to do a close reading of? For what purpose?	Q3 How do you teach text annotation to your students?	Q4 Do you have a standard way to annotate or let students develop their own?	Q5 For what assignments do you require text annotation? How do you grade them?
Project Based Learning	Q1 Do you do project-based learning (PBL), genius hour, or 20% time? What purpose does it serve?	Q2 How did you get started with this type of learning and how did you introduce it to students?	Q3 What PBL units have you done or are you interested in doing?	Q4 How do you plan final products that are standards-based & rigorous & still engaging?	Q5 What have been the biggest obstacles? Biggest successes?
Independent Reading & Engaging Readers	Q1 What type of independent reading (IR) occurs in your classroom? Teacher or student-selected?	Q2 How do you hold students accountable for their IR?	Q3 How do you motivate your students to complete IR in a timely manner?	Q4 What are some of the best IR projects or assignments you use?	Q5 Share some strategies or ideas to help other teachers with IR in their classrooms.
Using Social Media to Connect Educators	Q1 What forms of social media (SM) do you use to connect with other educators? A “teacher” account or just personal?	Q2 Do different forms of SM serve different purposes for you? Explain.	Q3 Have you used SM to do any collab with other educators? Describe your experiences.	Q4 Have you used SM to connect your students with other classes? Describe your experiences.	Q5 Would you like to collab or connect classrooms? Share what you are looking for to find an interested chat participant.
Online Book Clubs	Q1 Share books you’ve found that work well for discussions in Book Clubs.	Q2 What are benefits of students connecting with readers outside the classroom?	Q3 How can Book Clubs help you encourage readers to diversify their reading diet?	Q4 Share mini-lessons you have used to teach students how to have online conversations.	Q5 Discuss how you balance a student’s rdg diet between core texts, book clubs, & IR.

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*Note.* Q1 refers to question 1, Q2 to question 2, and so on in the chat. Each question was tweeted with the #2ndaryELA hashtag, which has been omitted to reduce redundancy.

### VITA

Jennifer Fox completed most of her education in various towns in Oklahoma, culminating in graduation from Cushing High School in Cushing, OK, in 1993. She received her bachelor's degree in elementary education from Southwest Baptist University in Bolivar, MO, and her master's degree in literacy education from Dominican University in River Forest, IL. She taught first grade at Stockton Elementary School and high school child development and emergent literacy classes at Ozarks Technical Community College. For the last five years, she has taught undergraduate preservice teachers in technology- and methods-related courses in the Department of Education at Southwest Baptist University with the best colleagues on the planet. Jennifer has been married to Charles for 17 years and has two children: Carly, 16, and Parker, 14. She loves to read, run, sing, and chauffeur her children around to early morning volleyball and scholar bowl practices, volleyball tournaments, and track meets. She lives on a farm in rural Missouri with six goats, a donkey, and a Multi-poo named Spoofer.