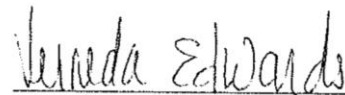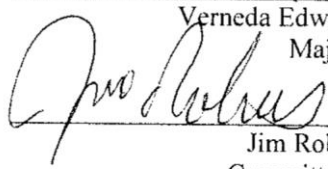**Educators' Perceptions of the Use of Twitter as a Professional Learning Network**

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Submitted to the Graduate Department and Faculty of the School of Education of
Baker University in partial fulfillment of the requirements for the degree of
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Abstract

      This qualitative study was conducted to examine educators' perceptions of the use of Twitter as a professional learning network. Specifically, the purpose of this research was to study educators' experiences with the use of Twitter as a professional learning network as a means for professional development. This study was also conducted to determine what educators perceived to be the benefits and drawbacks of using Twitter as a professional learning network. The results of this study can be used by educational leaders to understand the value of using Twitter as a professional development tool. For the five participants in this study, the benefits of using Twitter as a professional learning network outweighed the drawbacks of using Twitter. The findings of the study showed Twitter allows participants to make global connections, ability to learn, curate ideas, and share resources. The significance of this study could add to the understanding of educators' perceptions of the use of Twitter as a professional learning network. The findings from this study provided evidence regarding the value of utilizing Twitter as a professional learning network. The results of the study demonstrated that the cross-section of educators used across five regions of the United States thought using Twitter as a professional learning network was invaluable to their professional growth, their ability to curate ideas, and feeling less isolated. The results of this research lead to a recommendation that school administrators and professional development coordinators investigate the potential of training their teachers to utilize Twitter for a professional learning network.

Dedication

In Luke 9:23 Jesus says, "If any man will come after me, let him deny himself, and take up his cross daily, and follow me." All glory goes to God on the completion of this dissertation. I am truly blessed. To my amazing and beautiful wife Josie, I could not have done this without you and your support of me chasing my dreams. Thank you, my love. I love and adore you. To all of my kids, Parker, Kennedy, Charlie, Oliver, and Sullivan, I am so incredibly proud to be your dad and grateful that each of you is in my life. I love you all unconditionally. To my parents Mark and JoAnne, and my brother Shane and sister Jill, I hope I make you proud. Thank you for always supporting me.

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I want to sincerely thank my advisor, Dr. Edwards. I am forever grateful for your leadership, guidance, and advice throughout the dissertation process. I remember thinking how excited I was to have you as my advisor and you did not disappoint. You single-handedly made my experience at Baker University better! Thank you for your timely feedback and help. To my fabulous research analyst, Peg Waterman, you are the best! I always appreciated the quality of your feedback and encouragement in the process. I think the world of both of you and cannot thank you each enough for your assistance in guiding me through my dissertation.

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Chapter 1

Introduction

The explosion of technology and social media since 2004 moved into every facet of the classroom as students and teachers prepared for a 21st-century digital world (King, 2011). There has been a need for all teachers to develop skills required to be effective educators integrating digital tools into teaching and learning. The melding of social media and professional development expanded the way information could be obtained from "one-size-fits-all, sit-and-get professional development" (Killion, 2011, p. 4) to learning at any time. Educators must be able to navigate the digital world to prepare students appropriately for an ever-changing global world (Ross, Maninger, LaPrairie, & Sullivan, 2015). Professional development has played a significant role in the importance of continued growth for both novice and seasoned educators. Professional development opportunities have allowed educators to exchange ideas, acquire new knowledge, and receive feedback almost since the beginning of education itself (Kabilan, Adlina, & Embi, 2011; Killion, 2011; Ross et al., 2015).

For educators, social media appears to be more supportive of teachers' roles as professionals and intellectuals (Carpenter & Krutka, 2014). For example, Twitter can provide educators professional development opportunities that could improve teaching and learning by having access via mobile devices for learning as needed. Connecting with social media provides educators classroom connections across the world happening at the same time. Twitter is a social networking site that offers micro-blogging services to interact via Twitter posts, also called tweets, on any devices with Internet access (Bista, 2015). Micro-blogging is a combination of blogging and instant messaging that

allows users to create short messages to be posted and shared with an online audience. The easy to use micro-blog, Twitter, has educational conversations happening throughout each day.

Launched in October 2006, Twitter has become an information networking tool that allows users to post a topic or a discussion no longer than 280 characters (Newton, 2017). In 2017, Twitter had 328 million active monthly users, making Twitter the ninth largest social network in the world (Sparks, 2017). With the emergence of social media tools like Twitter, professional development for educators is merely a matter of logging in and using the site. There are conversations for educational content or subject area, grade level, and leadership roles available for educators to utilize to build connections and to implement best practices (Langhorst, 2015).

Background

Schools and districts have always attempted to provide quality professional development but have struggled to meet the needs of the educators (Powers, 2017; Smith, 2016). Public school teachers often lack quality opportunities for collaboration while participating in professional development (Davis, 2012; Wei, Darling-Hammond, & Adamson, 2010). Research has shown that educators who used Twitter as a professional development tool were able to connect with other professionals around the world, finding support, understanding, encouragement, and an environment to share resources (Gustafson, 2014; LaLonde, 2011; Langhorst, 2015; Powers, 2017). Researchers also found that educators believed using Twitter helped them improve as educators and leaders of schools (Pollard, 2015; Tucker, 2016; Zellmer, 2014). According to Powers

(2017), educators cited lack of time and knowledge on how to use Twitter as factors on why some of them had not tried using the tool for professional development.

Traditional, top-down professional development that emphasized implementation without active participation in knowledge construction has been roundly criticized by teachers (Carpenter & Krutka, 2014). According to Wenger, White, & Smith (2009), educators using social media for professional development was beneficial because they are not defined by place or personal characteristics, but by people's potential to learn together. Levenberg and Caspi (2010) found that participants were as comfortable with online learning as they were face-to-face learning. The rise of Web 2.0 and social media sites over the last decade has inspired optimism among educators regarding their opportunity to enhance various facets of teaching and the learning inside the walls of their classrooms and schools (Carpenter & Krutka, 2014).

Professional learning networks offer something different to educators than professional development because professional learning networks are uniquely personalized networks that support participatory and continuous professional development (Krutka, Carpenter, & Trust, 2016). Professional learning networks have helped educators connect on curricular projects across continents, seamlessly collaborate across state lines, and form professional networks of educators with the skills and knowledge needed to support their professional growth (Sheninger & Murray, 2017). To complement traditional means of professional development, Sheninger & Murray, (2017) argued having a professional learning network is essential for educators to create because it "provides a 24-7 pathway to ideas, strategies, feedback, resources, and support that every educator has the opportunity to leverage" (p. 99).

Statement of the Problem

Educators are utilizing social media to further their professional learning and collaborate with other educators across the world to improve teaching and learning, but little research has been conducted on the impact of the use of these tools for professional learning networks (Langhorst, 2015). Educators who use social media tools like Twitter for professional development are creating professional learning networks that have immense value to engage in sharing best practices, relevant content, and ideas on a global scale (Klingen-Smith, 2009). According to Langhorst (2015), although teachers craved professional development time with peers, budget constraints and ineffective offerings were inhibiting this from taking place. Additionally, the amount of time provided to teachers for professional development is decreasing at a particularly alarming rate when one compares teachers in the United States with their counterparts in nations that consistently have higher scores on standardized testing (Langhorst, 2015).

Meell (2012) and Langhorst (2015) state that research has shown benefits for teachers who use social media to collaborate and improve their craft. Twitter allowed educators to connect in ways that create real and meaningful growth which cannot be replicated offline. Fucoloro (2012) explored educators' perceptions and usage behaviors associated with participation in informal, online professional development networks like Twitter and found that an overwhelming number (90%) of the participants use Twitter as a professional development tool. However, there are currently few studies that have investigated educators use of Twitter as a professional learning network as a means for professional development (Gao, Lou, & Zhang, 2012). Further research is needed to

understand educators' perceptions of the use of Twitter as a professional learning network.

Purpose of the Study

The purpose of this research was to study educators' experiences with the use of Twitter as a professional learning network as a means of professional development. This study was also conducted to determine what educators perceive to be the benefits and drawbacks of using Twitter as a professional learning network.

Significance of the Study

The significance of this study is that it could add to the understanding of educators' perceptions of the use of Twitter as a professional learning network. This research could also contribute evidence to educational leaders about the use of Twitter as a professional development tool. Exploring the perceptions of educators who utilize Twitter as a professional learning network may inform persons in the field of the potential benefits and drawbacks, of using social media, specifically Twitter (Langhorst, 2015). The results of this study could assist teachers, administration, and stakeholders in understanding how Twitter, as a professional learning network, may support professional development. According to Pollard (2015), conducting research regarding educators' perceptions on the use of Twitter-based professional development could provide K-12 educational organizations with a framework to engage teachers in a different venue for effective professional development to enhance their instructional practice.

Delimitations

Lunenburg and Irby (2008) asserted that "delimitations are self-imposed boundaries set by the researcher on the purpose and scope of the study" (p. 134). Accordingly, the study was delimited in three important ways:

1. Participants were all currently certified PreK-12 teachers or administrators working in any type of PreK-12 school (Charter, Private, Public).

2. Participants all used Twitter as a professional learning network and had a minimum of 1000 followers.

3. Data was collected through interviews recorded via the phone.

Assumptions

Lunenburg and Irby (2008) noted that "assumptions are postulates, premises, and propositions that are accepted as operational for purposes of the research" (p. 135). Accordingly, this study was conducted under four assumptions:

1. Participants had a high level of comfort using technology and, specifically Twitter.

2. The participants understood the interview questions being asked.

3. The interviewer was unbiased and did not influence the participants.

4. The educators answered all questions honestly.

Research Questions

Two research questions were developed to guide the study:

RQ1. Why do educators use Twitter as a professional learning network?

RQ2. What do educators perceive to be the benefits and drawbacks of using Twitter as a professional learning network?

Definition of Terms

The following terms are used in the research study:

Chat. A Twitter chat is a public Twitter conversation around one unique hashtag, for example, #moedchat = Missouri Education Chat. This hashtag allows educators to follow the discussion and participate in it. Twitter chats are usually recurring and on specific topics to regularly connect people with these interests (Larson, 2016; Powers, 2017).

Digital Immigrant. Digital immigrant is a term used for teachers or adults born before the age of digital technology and are uncomfortable using technology (Prensky, 2001).

Digital Native. Digital native is a term used for students or kids born during the age digital technology and therefore familiar with computers and the Internet from an early age (Prensky, 2001).

Followers. Twitter followers are the people who follow or subscribe to another person's tweets. On Twitter, "following" someone means another educator can see the tweets (Twitter updates) in the user's timeline (Larson, 2016).

Generation Z. Generation Z is the generation after Millenials which is defined as people born from the mid 1990's to the early 2000s (Theile & Mai, 2014).

Hashtag. Using the # symbol, otherwise known as a hashtag on Twitter, allows users to categorize tweets by keyword. When users tweet with the # followed by a word or acronym it places the tweet in a searchable space on Twitter that all users can see. Examples of hashtags used in educational conversations are #edchat (Education Chat), #ISTE (International Society of Technology in Education), or #edtech (Education

Technology). Using a hashtag allows Twitter users to follow a conversation on specific

topics (Tucker, 2016).

Professional Learning Network. According to Trust (2012), a professional

learning network is an active, ever-changing group of connections to which teachers go to

both share and learn. A professional learning network is a tool that uses social media and

technology to collect, communicate, collaborate, and create with connected colleagues

anywhere at any time (Trust, 2012).

Tweet. According to Powers (2017), a tweet is a short, 280-character message

composed and published on Twitter.

Twitter. According to Larson (2016), Twitter is a free social media site that

provides a microblogging service that allows users to broadcast short (280 characters or

less, previously 140 characters in 2016) posts called tweets and interact with other users.

Micro-blogging is a web service that enables the subscriber to broadcast short messages

to other subscribers of the service.

Organization of the Study

Chapter 1 introduced the researchers' topic to find out why educators used Twitter

as a professional learning network and explained the purpose of the study. Chapter 2

provides an overview of the elements of social media, its emergence of it in education,

and the importance of technology in education. The review of literature includes research

about how professional development is evolving in the 21st Century to professional

learning networks using social media tools like Twitter and begins with the qualities of

effective professional development. The review of literature also focused on the

importance of technology in education and the emergence of social media in education.

Chapter 2 concluded with a review of professional learning network. Chapter 3 presents

the research design as well as how the participants were selected. Other areas of focus in

Chapter 3 were how data was collected, analyzed, and reported. The researcher's role

and limitations were outlined as well. Chapter 4 presents the findings of the

phenomenological qualitative study. Chapter 5 provides a summary of the problem,

purpose statement, research questions, methodology, major findings, and their

implications for educational leaders. The chapter ends with recommendations for future

research and concluding remarks.

Chapter 2

Review of the Literature

This literature review discusses the theories of adult learning and examines the qualities of professional development comparing the impact of professional development with the impact of professional learning networks. Furthermore, the review of literature reviews the emergence of social media and technology in education, and specifically, the impact Twitter has on educators developing a professional learning network.

Theories of Adult Learning

Adult learning theory initially identified by Houle (1961) and Tough (1971) is self-directed learning or self-direction in learning. Self-directed learning as a theory of adult education was outlined by Merizow (1981) when he stated:

> It is almost universally recognized, at least in theory, that central to the adult
> educator's function is a goal and method of self-directed learning. Enhancing the
> learner's ability for self-direction in learning as a foundation for a distinctive
> philosophy of adult education has breadth and power. It represents the mode of
> learning characteristics of adulthood. (p. 21)

Cyril Houle (1961) was the first to write about self-direction in learning and explored issues of motivation, which is a key learner attribute of self-directed learning. Houle began his study of adult learning in the 1950's through in-depth interviews with a small sample of adults who were identified as continuing learners. Houle's study of twenty-two participants aimed to determine why adults engage in continuing education, but the study also shared some insights on how adults learn. Houle's research on learner motivation led him to conclude that adult learners in formal education possessed one of

many orientations (goal, activity, learning) which resulted in participation. Tough (1971) studied adult learning in the non-formal setting. Tough's identification of adult learning projects self-designed and created by the learner, broadened the regularly held perceptions of how much learning occurs in adulthood. Tough (1971) described self-direction as mostly context-specific and believed learner motivation to learn was tied to a particular problem or event.

Pedagogy encompasses the practice of teaching together with the theories, beliefs, and policies that inform and shape it (Hall, Murphy, & Soler, 2008). According to Knowles (1973), andragogy is the method and practice of teaching adult learners; adult education. In 1973, Malcolm Knowles published *The Adult Learner: A Neglected Species* and forever changed the landscape of adult learning theory. Knowles (1973) identified six assumptions about andragogy:

> (a) changes in self-concept, (b) the role of experience, (c) readiness to learn, (d) orientation to learn, and later added two more assumptions (e) adult learners benefit when they find an internal motivation to learn, and (f) that adults should, if possible, enter into learning on a voluntary basis because of a critical need to know. (p. 45)

Knowles' career in adult education served as action research for him to draw upon to further develop his theory of andragogy. Knowles used the term andragogy to distinguish his theory from pedagogy (Knowles, 1970). Knowles presented practical solutions to approaching adult learning and believed there was a need for a separate way to view adult learners (Knowles, 1970).

In light of his work on self-directed learning Jack Mezirow has led another adult learning theory and writing about transformative learning. Mezirow explained:

Transformative learning is the process of effecting change in a *frame of reference*. Adults have acquired a coherent body of experiences – associations, concepts, values, feelings, conditioned responses – frames of reference that define their life world. Frames of reference are the structures of assumptions through which we understand our experiences. (p. 5)

Mezirow's Transformation Theory is based upon "transforming frames of reference through critical reflection of assumptions and validating contested beliefs through discourse," (Mezirow, 1997, p.11) which provides a strong framework for adult learners. According to Mezirow (1997), frames of reference consist of two dimensions, habits of mind and points of view. Habits of mind are broader, well established, habitual, and influenced by assumptions and points of view (Mezirow, 1997). Mezirow believed that points of view are easier to change and that adult learners need to function as autonomous thinkers. Furthermore, adult educators must be aware that for adult learners to become autonomous thinkers they need to extend beyond the learning foundations of child learners (Mezirow, 1997).

When discussing effective professional development, it is essential to understand the theories of adult learning. Research about the ways adults learn provides needed elements of effective professional development. Fitzgibbon (2002) conducted a study by leading a professional development workshop for faculty that presented an overview of a theory about how adults learn and teaching style preference with an emphasis on how that theory impacts teaching style preference. Fitzgibbon (2002) found that the different

techniques used for adult learning influenced their ability to learn and the quality of what was learned. A variety of strategies and a learner-centered approach was most effective, and Fitzgibbon (2002) recognized that adult learning has four main areas of research: self-directed learning, experiential learning, learning to learn, and critical reflection. Each area has a unique set of ideas, strategies, and techniques appropriate for facilitating adult learning in various situations (Fitzgibbon, 2002). Understanding how adults learn could improve them as teachers (Fitzgibbon, 2002).

Adult learners have a wide range of contextual skills and preferences, and school districts must do their best to offer professional development that acknowledges how adults learn and their unique differences (Quattlebaum, 2015). In their book, *What Connected Educators Do Differently*, Whitaker, Zoul, & Casas (2015) articulated that using Twitter could impact adult learning by customizing what teachers learn, when they learn it, and how they learn it. Furthermore, attending professional development workshops for an hour or more at the end of a busy school day is not always the best time to learn (Whitaker et al., 2015). According to Whitaker et al. (2015), teachers using Twitter found time in the evening hours and weekends to connect with other teachers in Twitter chats to learn. Whitaker et al. (2015) argued that when teachers invest time using Twitter for professional development that many teachers "find that learning outside the scope of the school day provides them not only the flexibility they desire but also a more comfortable, relaxed environment for learning" (p. 18).

According to Holland (2005), professional learning is vital for improving classroom instruction and increasing student achievement. Professional learning should be designed for educators to gain knowledge and expertise to transfer into daily practice

to increase student achievement (Holland, 2005). Research on professional learning suggests that for teachers to successfully change their practices in ways that lead to meaningful change in student achievement, teachers need time, opportunities to practice, feedback, and institutional support. The role professional learning has for teachers acquiring knowledge and new instructional skills is critical (Holland, 2005).

Traditional Professional Development

Traditional professional development usually involves educators acquiring skills and knowledge attained for both personal growth and career advancement and is typically required by the district (Ross et al., 2015). Ross et al. (2015) contend that traditional models of professional development often include courses offered by school districts, universities, technical assistance agencies, professional associations, nonprofit organizations, and for-profit vendors. Research by Ross et al. (2015) and Kabilan et al. (2011) found that the traditional professional development being offered to educators lacks pedagogical content and only reiterates what educators studied in their teacher education preparation programs in college. Furthermore, traditional models of professional development do not meet the needs of educators and lack the meaningful experiences required to enhance educators' professional knowledge (Kabilan et al., 2011; Ross et al., 2015;). Quattlebaum (2015) found the elements that teachers wanted for effective professional development involved including them in planning, to be more collaborative, and customizing it to their needs.

In a study conducted by Jenkins (2012) the researcher explored how a structured and organized professional development program could improve teacher performance. The researcher used qualitative methodology and asked participants what characteristics

make-up effective professional development. Teachers from three of eleven southeastern

Virginia high schools within one district were studied to determine effective professional

development in their respective school. The researcher found that time, relevancy, and

scheduling flexibility were all characteristics of effective professional development. The

participants cited time as the most difficult hurdle to combat in professional development

because of fatigue and the many other responsibilities teachers have to plan and meet

with parents. Finally, the researcher noted that all participants agreed that

communication between teachers and administrators must remain open for professional

development to be effective in helping the teachers improve performance. According to

the Organisation of Economic Cooperation and Development (2009) on average, teachers

in the United States spend about 80% of their working time in direct classroom

instruction with minimal time for professional development. Teachers in most European

and Asian countries spend 60% of their working time in direct instruction and are

provided more opportunities for professional development with peers (Organisation for

Economic Co-operation and Development, 2009).

The importance of professional development being relevant. Guskey (2000)

defined professional development as processes and activities designed to enhance the

professional knowledge, skills, and attitudes of educators to improve student learning.

Furthermore, Guskey (2000) asserted that professional development should be

intentional, ongoing, and systemic. The need for current, connected, relevant, and

personalized professional development opportunities and collaboration with other

educators is critical (Sinanis, 2015). Quality professional development encourages

reflection and provides teachers with opportunities to absorb new knowledge and skills while making connections to the teachers' current instructional practices (Pollard, 2015).

Professional development should focus on the individual needs of a teacher and relevance to the content being taught (Duncan-Howell, 2010). While educators desired professional development that related to their personal needs relevancy often lacked. Unfortunately, often the individuals overseeing the content and format of professional development opportunities are not the teachers that the activities are aimed at reaching, making it difficult for the presenter and teacher to understand each other (Jones & Dexter, 2014). Educators are often disappointed in the amount and substance of the professional development they are offered by their building or their school district (Larson, 2016). The relevance of professional development to teacher needs was equally as important for professional development to be effective. According to Deyamport (2013), for learning to be effective among adult learners, it needs to be relevant and applicable to teachers.

James (2007) examined teachers' and staff developers' perceptions on the components of adult learning theory on professional development. In this study, the sample consisted of 185 participants: 85 staff development directors in South Carolina, and 100 elementary, middle and high school teachers from twenty schools in three different districts. Surveys were utilized to collect data. The majority of participants (91.3%) felt the professional development should be relevant to their needs. The findings indicated how the participants viewed the relevance of adult learning theory in professional development significantly higher than they viewed the relevance and implementation of andragogy (James, 2007).

In a study conducted by Baker (2014) on the relevancy of professional development for elementary teachers in a Catholic diocese in the Midwest, the researcher used a qualitative methodology to determine the perceptions of eight classroom teachers. The researcher explored what professional development experiences the participants felt were most relevant and meaningful. Through an analysis of narratives, focus group sessions, and interviews the researcher found two dominant themes emerged. The researcher found that professional development experiences on the local level were most relevant particularly if the relationship between the teacher and administrator was positive. The participants cited relevancy for professional development was defined as leaders responding to the needs and wants of teachers in ways that pay attention to a teacher's context. The participants felt like the leaders were doing a better job listening to and meeting the professional development needs of the teachers.

Trachtman (2007) determined that authentic learning originates from spontaneous teacher-initiated action. Furthermore, Trachtman (2007) added administrators might squelch learning by assigning collaborative opportunities to a specific time, place, or subject. According to Morewood, Ankrum, and Parsons (2016), when looking at factors of effective professional development that enhance learning for teachers, it was related to content, pedagogy, and curriculum. Morewood et al. (2016) examined key aspects of relevant literature on effective and relevant professional development. Offering a wide variety of professional development activities increased the teachers' ability to choose areas of interest that lead to life-long learning opportunities and impact teaching practice (Morewood et al., 2016). Furthermore, the instrumental factors of effective professional development included identifying teachers' needs and goals, but also remaining

supportive, engaging, and encouraging ownership (Morewood et al., 2016). Administrators should vary professional development activities to meet teacher learning preferences and instill a culture of life-long learning (Morewood et al., 2016).

  The importance of professional development being collaborative. In a study conducted by Garbutt (2012), 18 classroom teachers from 6 elementary schools were interviewed to determine the collaborative activities offered for professional development among the schools. Data were analyzed for themes and findings suggested that collaboration was evident in professional development, but time and money were cited as barriers to collaborative professional development. Also, there were inconsistencies among the schools that offered collaborative activities. Findings showed four of the six schools involved teachers collaborating for professional development, but two schools were in need of change to provide more collaborative time during professional development (Garbutt, 2012).

  Effective professional development is defined as being sustained and intense collaboration; possessing substantial contact hours, combined efforts to examine personal practices and student performance while engaged in active learning and transformation on the teacher's part (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009). Professional development should focus on social and collaborative activities, aiming to develop teachers that are adaptive learners who can attain the needed information as it arises rather than everyone learning the same thing (Marx, Blumenfeld, Krajik, & Soloway, 1998). In a study conducted by Birman, Desimone, Porter, and Garet (2000) to identify effective staff development, the researchers had a sample of more than 1,000 teachers who participated in professional development that focused on developing the

knowledge and skills of classroom teachers needed in math and science. According to Birman et al. (2000), professional development activities that allowed for collective participation, working with other individuals who teach in the same department, content area, or grade resulted in teachers reporting an increase in knowledge or skills after their participation. A professional development activity was more likely to be effective in improving teacher knowledge and skills if the activity fits into a wider set of learning opportunities, it is continuous or related to future learning opportunities (Birman et al., 2000). Birman et al. (2000) found that providing effective professional development was challenging for districts because it required substantial amounts of time, planning, and could also be expensive. Only 35% of the teachers in this one-time study were in sustainable professional development activities that were building on earlier professional development activities, and relatively few (between 5 and 16%) reported opportunities for specific collaborative and sustainable activities (Birman et al., 2000).

According to Stephens (2012), a Professional Learning Community (PLC) is professional development in a group setting and is effective for teacher professional growth. DuFour and Marzano (2011) stated the most effective strategy for improving schools is around building the capacity of the teachers through the PLC philosophy and define it as "a concept based on the premise that if students are to learn at higher levels, processes must be in place to ensure the ongoing, job-embedded learning of the adults" as well (p. 20). An effective PLC focuses on learning that is results-based and collaborative and consistently articulates the vision which guides decisions (DuFour & Marzano, 2011).

PLCs are being implemented in educational settings across the country and are based on teacher collaboration. A PLC is defined in various ways, but each definition is in keeping with the definitions of professional development (Tackett, 2014). In a quantitative study conducted by Tackett (2014) regarding Missouri teachers' perceptions of effective professional development practices for a 1:1 technology initiative, the researcher found that teachers needed time to collaborate. The teachers in the study were asked to compare specific methods of professional development and determine the one they believed was most effective. Tackett (2014) found collaboration among staff, such as PLCs made professional development effective for teachers and helped sustain district initiatives in this case with the 1:1 technology initiative (Tackett, 2014). Teachers ranked the most effective professional development area as instructional strategies and technology tools second most important (Tackett, 2014). Tackett (2014) reported statistical significance was found with older teachers versus younger teachers regarding the need for professional development on hardware devices of 1:1 technology initiatives. Also, Tackett (2014) found that older teachers preferred ongoing workshops held inside the district more than younger teachers.

The importance of professional development being sustained and continuous. Effective professional development should be designed to bring positive change, and its goals for improvement need to be well defined, clearly stated, worthwhile, and able to be assessed (Guskey, 2000). Moreover, effective professional development is ongoing in that educators at all levels strive for continuous learning throughout their career, adjusting their practice, and reflecting on their effectiveness continually (Pollard, 2015). Finally, effective professional development is a systematic process where there are

considerations for changes over extended time frames and accounts for all the other levels of the organization (Guskey, 2000; Pollard, 2015).

Wei et al. (2010) conducted a three-part study of K-12 public school teachers from 2000-2010 that examined state and district policies related to professional development and determined that high-quality professional development included the following:

> (a) a focus on effective pedagogy and curriculum, (b) meaningful learning activities that integrate knowledge into practice, (c) an assessment linking professional development to curriculum standards, (d) activities are offered throughout the school district as part of systematic reform, and (e) activities provide opportunities for peer learning and feedback. (p. 2)

In phase two of the study, Wei et al. (2010) utilized the latest restricted-use dataset from the Schools and Staffing Teacher Survey designed by the National Center for Education Statistics with a comparison to findings from earlier administrations of the survey in phase one. The researcher found on most topics that teachers' participation in professional development varied across states and only a few states stood out for offering teachers significantly more intensive professional development opportunities. Wei et al. (2010) asserted that for professional development to have a significant impact on teaching practice and student learning it needs to be sustained over time and relevant to teachers' work day-to-day.

Wallinger (2016) stated that professional development has the power to impact student achievement as well as teaching and learning. Further, the reason for professional development is that students benefit from improved professional practice

and support of educators who know how to create, collaborate, think critically, and reflect on experiences. Powers (2017) stated that he believes that effective professional development could take on many different formats and be accomplished in a variety of ways but is needed to gain the skills essential to becoming effective educators. For professional development to be effective, it requires leaders thoughtful planning followed by a careful implementation with built-in feedback to ensure the learning needs of educators was met (Powers, 2017). Powers (2017) stated, "effective professional development engages educators in learning opportunities that are supportive, job-embedded, instructionally-focused, collaborative, and ongoing" (p. 22).

Importance of Technology in Education

When a British computer scientist, Sir Tim Berners-Lee, invented what would become the World Wide Web in 1989, he changed the landscape of what was possible in classrooms in the future (World Wide Web Foundation, 2017). Shortly after that, the Internet was born in 1994 and soon to follow, Google search was launched four years later in 1998 (Google, 2017). Access to information with the click of a mouse forced schools to evaluate how they could embrace this new tool. Web page development took off in the late 1990s and 2000s as educators and entrepreneurs sought to stake claim on the fastest growing information resource available to them (Google, 2017).

Digital immigrants and digital natives were terms used for most teachers and students respectively. Teachers were often known as "digital immigrants" because they were born before the digital age and students born during the digital age were comfortable with technology and were often referred to as "digital natives" (Prensky, 2001). Digital media exists because of the advancements in technology. Serpagli (2017)

asserted that technology is anything that enhanced, facilitated, or improved a process. Improvements in technology like smartphones, wireless Internet, and social media make communication and interactions for educators and students more accessible. Educators and students can connect with each other to share information. As a result, access to learning and information has improved as well as benefitted teaching and learning (Serpagli, 2017).

Classrooms of the 20th-Century utilized textbooks, writing utensils, whiteboards, and overhead projectors to facilitate teaching and learning (Cherry, 2014). Since the 1990s, many new digital technologies exploded on the scene of classrooms, and the education field is struggling to keep up (Cherry, 2014). In a mixed methods study conducted by Okoye (2011) regarding technology implementation in the classroom the researcher evaluated the importance of having a coach within the implementation. Okoye (2011) identified low and high implementers of technology after collecting data from surveys with teachers that were exposed to having a technology coach for three years. Okoye (2011) found that 62% of the participants interviewed attributed the change of technology implementation in their classroom to having a coach assisting them.

The emergence of Web 2.0 tools and mobile technology in the 2000s allowed educators to connect the lives of students with the learning happening in school (Cochrane, 2010). Web 2.0 tools are web-based technologies that increase a user's connectedness using the tool or site (Cochrane, 2010). Teachers began utilizing Web 2.0 tools to engage students as active participants in the classroom with creation tools like blogging, avatar creations, voice threads, and Google documents (Gustafson, 2014). As more and more devices were purchased by districts, teachers began to embrace

technology integration and Web 2.0 tools that coincided with their curriculum. This brought forth an interesting challenge amongst teachers and students adopting these early technologies available to classrooms (Gustafson, 2014).

Theile and Mai (2014) conducted a study with teachers and students on integrating technology into the 21st-Century classroom to engage students with Web 2.0 tools. Six full-time faculty members implemented five Web 2.0 technologies into their classroom instruction for a one-semester long course. The researchers utilized an educational technology survey with the student participants to find out if the technologies implemented were perceived as effective by the students. Response summaries of each question were analyzed. Within the survey, three main themes were examined. The first theme "Active use of the Web" noted the majority of students (97%) had never created a blog, wiki, or podcast (Theile & Mai, 2014). The second theme "Effects of Educational Technology" had results that were overwhelmingly positive (88%) that using educational technology tools made it easier to collaborate with other students and get prompt feedback from the teacher. The third theme "Digital distraction" noted students (78%) believed they were distracted when using non-class related technology (Theile & Mai, 2014). Theile and Mai (2014) discovered that students of Generation Z were accustomed to receiving information at the click of a mouse. However, the research also found that not all students have access to or know how to use all of the newest technology available to them. Even digital natives valued traditional teaching methods balanced with the integration of educational technology. When technology was implemented with meaning and purpose in the learning environment, students responded

well and felt that the educational technologies used made it easier to work with other

students (Theile & Mai, 2014)

Many educators consider themselves "digital immigrants" and lack confidence

utilizing digital tools. Cherry (2014) conducted a study with 187 certified teachers

regarding adoption of technology in teaching and learning. The population for the study

included secondary school teachers that taught English language arts, math, science, and

social studies. Cherry (2014) found teachers suffered from technology anxiety and felt

inadequate in implementing the technology into their pedagogy. Business teachers

(98.2%) were most likely, as compared to math teachers (73.3%) were least likely to have

had access to sufficient student computers with Internet access (Cherry, 2014). Teachers'

level of technology adoption differed by subject area, and other barriers included having

enough access to technology in their school as well as professional development

opportunities. In closing, the study found that a negative relationship between

technology integration barriers and technology adoption existed, but as barriers

decreased, technology adoption increased (Cherry, 2014).

According to Lei (2009), the majority of educators may not comprehend the value

of technology across all content areas and what meaningful integration looked like in

their classroom. Gustafson (2014) argued the recent introduction of technology in

schools with mobile devices, apps, and websites being utilized by institutions required a

significant adjustment to schools, professional development, and how teaching and

learning happens. As stated by Zamzow (2016), the impact of technology and mobile

devices in schools can vary just as diversely as the goals of implementing the technology.

School districts reporting successful use of technology and mobile devices in schools

claim to have increased motivation and engagement, increased technology skills, and the development of 21st-Century learning skill (Zamzow, 2016).

The International Society for Technology in Education (ISTE, 2017) established standards for technology integration in schools for students, educators, administrators, coaches, and computer science educators. In a world where rapid changes in technology are having a profound impact on the way we work, communicate, and live, the ISTE standards helped transform teaching and learning while empowering connected learners in a connected world (ISTE, 2017). The ISTE standards support educators, students, and leaders with a framework for rethinking education, adapting to a constantly changing technology landscape in the classroom, and to help prepare students for their future in a global economy (ISTE, 2017).

School systems throughout the United States and the world are guided by the ISTE standards and other national goals and mission statements that aspire to 21st-century teaching and learning and encourages teachers' and students' use of tools and technologies that are available. The goal is to prepare students with the knowledge, skills, and dispositions to be successful in a globally competitive economy and to have teachers who promote these competencies (Blanchard, LePrevost, Tolin, & Gutierrez, 2016; ISTE, 2017). The U.S. Department of Educational Technology (OET) develops national educational technology policy and establishes the vision for how technology can be used to transform teaching and learning. OET (2018) carries out its mission by:

> (a) Promoting equity of access to transformational learning experiences enabled by technology, (b) Supporting personalized professional learning for state, district and school leaders and educators, (c) Ensuring all learners are connected to

broadband Internet in their classrooms and have access to high-quality, affordable digital learning resources at school and at home, (d) Fostering a robust ecosystem of entrepreneurs and innovators, and, (e) Leading cutting-edge research to provide new types of evidence and to customize and improve learning. (para. 5)

One of OET's initiatives is the #GoOpen Campaign which believes that educational opportunities should be available to all learners. The #GoOpen campaign encouraged states, school districts, and educators to use openly licensed educational materials to transform teaching and learning (OET, 2018). OET is responsible for writing the National Education Technology Plan as well which is the flagship educational technology policy document for the United States.

The integration of technology and use of devices in education has been promoted and supported around the world (Cope & Ward, 2002). Couros (2016) stated that technology in education is important, the argument is that "technologies should not define the classroom of the future, but student agency and ownership of learning must define it" (para. 1). Couros (2016) argued that there has been a shift in education because of technology, "but as we see websites, apps, and other technologies start to be more commonplace and make their way into the classrooms, the structure of the school, and what the 'why' of school is, has to be continuously evaluated" (para. 2).

Sheninger and Murray (2017) believed technology could accelerate great teaching practices and therefore support equity and create greater opportunities for all students. Sheninger and Murray (2017) stated,

"technology by itself does not, and will not, transform teaching and learning. In fact, like any tool, when used poorly, it can have negative consequences and by

simply adding the latest technology to traditional learning environments can have

a negative effect on teaching and learning". (p. 64)

In his book, *The Innovator's Mindset*, Couros (2015) stated implementing and

utilizing technology in a classroom could be transformational for teaching and learning

because of the opportunities afforded to us with the technology, but without changing our

mindsets, it could be purely cosmetic and not relevant. Couros (2015) proclaimed

technology gave educators the power to accelerate, amplify, and recreate learning.

Technology could allow educators to personalize learning experiences for students.

Educators need to immerse themselves in the learning process to provide us a better

understanding of the opportunities that technology could bring to the classroom and

students (Couros, 2015).

The Emergence of Social Media in Education

Couros (2011) wrote a blogpost titled *Why Social Media Can and Is Changing*

Education. In this blogpost, Couros discussed how social media has become so prevalent

in our culture and was being used by successful, large companies as well as local

churches. Couros (2011) articulated five reasons why he believed social media was

rapidly emerging in education:

(a) it is free, (b) it cuts down on isolation, (c) it builds tolerance and

understanding of cultural diversity, (d) it can amplify passion, and (e) the world of

education is (and needs to be) more open. (para. 6)

Couros (2011) went further to state that he believed "that education is based on

relationships" (para. 8) and that social media helped amplify the voice of schools and its

connection to stakeholders and community.

The way information and content are housed and disseminated today has little resemblance to a few short decades ago (Whitby, 2013). Whitby argued it was important for educators to be "digitally literate" because "using technology is less generational and more about learning" (para. 5). Social media and its acceptance in our culture have been the catalyst for educators connecting themselves to each other all over the world. Whitby (2013) stated:

> "Social media applications like Twitter and Facebook could offer an easy means to exchange Internet addresses of websites, blogs, videos, podcasts, books, articles, webinars, panel discussions, Skype interviews, and Google Hangouts". (para. 4)

Furthermore, educators who use social media could connect themselves to thought leaders of their content area and impact their practice in meaningful ways.

Educators in the 21st-Century utilize social media platforms to form professional learning networks which are uniquely personalized networks that support participatory and continuous learning (Krutka, Carpenter, & Trust, 2016). Social media services can mediate professional engagements with a wide variety of people, spaces, and tools that might not otherwise be available (Krutka et al., 2016). The rise of social media in education has created new spaces for educators to learn and collaborate with each other. Furthermore, within social media spaces, administrators and classroom teachers can address vital educational questions together (Krutka et al., 2016). According to Krutka et al. (2016), teachers who once might have had access to only a handful of colleagues can now employ Facebook, Twitter, and other mediums to learn from peers across the globe.

In his experiences as a high school principal, Eric Sheninger quickly understood the value of using social media to tell his school's story and enhance his professional development. Sheninger (2014) described how social media was the foundation of what he identified as the Seven Pillars of Digital Leadership for school improvement in the 21st-Century: communication, public relations, branding, professional growth and development, student engagement and learning, opportunity, and learning environment. Sheninger (2014) discussed how fear and lack of knowledge often prevented schools from transforming into "vibrant learning communities that are connected and allow access to numerous social media tools that can unleash the creativity of our learners to increase engagement and, ultimately, achievement" (p. 5).

Sheninger (2014) also asserted that through his experiences he discovered how social media changed his philosophy of how he did business as an administrator in his building. Sheninger (2014) articulated how using social media allowed him to create a brand for his building and efficiently communicate with stakeholders by establishing a consistent public relations platform that utilized social media and met stakeholders where they were online. Moreover, Sheninger (2014) described how educators who use social media could authentically engage their students in ways they never could before and how it changed the learning environment. Finally, Sheninger (2014) contended that school districts should provide meaningful professional development across multiple social media platforms.

The emergence of technology, and specifically social media, over the last decade has paved the way for online professional development to take place. Virtual worlds, such as social networking sites like Twitter, bring people together regardless of age,

gender, location, and class. Social media platforms like Twitter have become extremely popular forms of this new type of blogging (Nations, 2017). Social media provides the potential for classrooms to become dynamic learning environments (Ondrejka, 2008; Sinanis, 2015). Smith (2016) asserted "the use of technology for online professional development can create a learning environment for teachers that have never been possible before" (p. 37). In fact, Smith (2016) argued that with no additional expenses for accommodations or transportation, online professional development could be more cost effective and allow more teachers to participate. Further, teachers can connect with experts in their respective fields who would not otherwise be available and in a timely fashion, rather than when a meeting, conference or workshop can be scheduled (Smith, 2016). Social media sites, like Twitter, provides asynchronous, anytime professional development to support locating resources for a specific content area, securing lesson plan ideas from master teachers, learning about appropriate usage of technology for student learning, and collaborating in real-time (Klingen-Smith, 2009).

Teachers enjoy the flexibility and personalization that professional development on Twitter provides because educators can decide which hashtags or conversations to follow and participate in on Twitter. That allows educators to have a high level of personalization for professional development experiences (Carpenter & Krutka, 2014; Langhorst, 2016). Educators who choose to collaborate on Twitter can form deep personal connections with their peers. Professional development that occurs on Twitter has been described as a participatory culture which is supportive of members and fosters meaningful interpersonal relationships (Langhorst, 2016; Visser, Evering, & Barrett, 2014). The conversations that educators participate in on Twitter have been shown to

contain enhanced communication, collaboration, and engagement. Furthermore, educators reported that participating on Twitter for professional development with fellow educators has helped them feel less isolated (Langhorst, 2016; Visser et al., 2014; Lu, 2011).

In a qualitative case study conducted by Langhorst (2015) social studies teachers using Twitter and weekly chats that utilized the hashtag #edchat for collaboration were studied. Transcripts of 10 #edchat sessions in 2013 were coded and triangulated with interviews from seven of the most consistent contributors from the #edchats. Interaction among educators during the Twitter #edchats were conversations with replies. Of the 2,821 tweets analyzed for this study, an average of 54.6% contained a reply (Langhorst, 2015). Four out of seven interviews conducted by Langhorst (2015) specifically mentioned feeling as though the Twitter #edchat for professional development was more interactive and conversational than traditional professional development.

In a qualitative study of six Missouri principals conducted by Powers (2017), the researcher investigated perceptions of the barriers and best practices of Twitter professional development. Powers emailed a questionnaire to all current public-school principals serving in Pre-K-12th-grade buildings (2,220 emailed, 539 individuals responded). The researcher interviewed three non-Twitter users and three Twitter users of the 539 responders to delve into best practices and barriers of Twitter use. Powers (2017) found that time was listed as the top overall barrier to principals not using online tools like Twitter for professional development, followed by the overwhelming feeling of having to learn new tools that seemed to change too often for most users of online tools.

On the best practices side of the using Twitter for professional development, the participants stated the ability to acquire and share resources was most valuable.

A study conducted by Sauers & Richardson (2015), analyzed K-12 school leaders who actively used Twitter, had a network with more than 2,000 followers and listed leadership titles in their profiles (superintendent or principal). The researchers compiled over 180,000 tweets from 115 active school leaders. The median number of tweets posted per week by the participants was 48. The researchers coded the samples into educational, personal tweets, and unknown. Sauers & Richardson (2015) discovered two themes in their results: (a) these leaders were using Twitter to create a professional learning network and (b) these leaders were overwhelmingly using Twitter for educational purposes.

Social media networks give educators the ability to enhance their professional careers, change how teaching, learning, and communication happens in school communities, and make meaningful professional relationships with colleagues around the world that enhances their professional development (Sheninger, 2014). Whitby (2013) addressed social media adoption in his blog by saying "technology and social media specifically have provided tools that enable educators to connect, communicate, collaborate, and create. That ability makes a difference in individuals…[and] creates two groups of educators, the connected and the unconnected" (n.p.).

As social media technology has evolved, many social networking sites have been created. Popular social media sites include Twitter, Facebook, Instagram, Voxer, and Snapchat. Each of these sites is unique and offers different features and functionalities that educators are utilizing to interact with their professional learning network and

communicate with other educators around the world. According to Nguyen (2014), the features on these sites have made information sharing not only simple but also have "enabled scalable communication techniques" (p.4). This technology is incorporated into smartphone and tablet functionality, "expanding the reach and immediacy of access to these sites to huge numbers of people" (p.4).

Facebook has become a social media icon and phenomenon. Facebook was founded in 2004 and was initially designed as a social networking tool for college students at Harvard (Facebook, 2018). In 2009, Facebook had 250 million users and by 2010 reached over 500 million users (Facebook, 2018). Facebook allows for multiple communication options: uploading photos, sharing links and videos, providing status updates, and a live video feed. Facebook boasts 1.57 billion monthly mobile active users and 1.03 million mobile daily active users (Facebook, 2018).

Instagram is a widely used social media application because users can post images, videos, and stories that last up to 24 hours before disappearing. Instagram (2016) has now also added the use of live video as part of its use. According to Serpagli (2017), as new Instagram features are introduced, digital natives are quick to access the ideas and integrate the techniques, tricks, and elements into their daily social media routines. Using the features of Instagram in the classroom could be fitting and seamless and a way for teachers to share test reminders, homework, hints that disappear after 24 hours around an assignment or test, or students following an upcoming deadline (Serpagli, 2017).

Snapchat is a social networking application that exclusively works on smartphones. Snapchat was developed by Stanford student Evan Speigel as part of one of his design courses (Snapchat, 2016). Speigel (as cited in Junco, 2014) created the

application to help bring fun back into online communications because people had been

hyper-focused on presenting spotless online identities. In 2011, this application exploded

onto the social media landscape enabling users to send ephemeral pictures and videos

(snaps) to friends lasting up to ten seconds. Once ten seconds expires, the picture or

video disappears and permanently deletes from the receiver's phone (Snapchat, 2016).

Snapchat is different than Facebook and Twitter in that it allows users to send snaps to a

select group of friends but then deletes what was sent once the content is viewed.

Snapchat surpassed Twitter as the third most popular social networking site with over

150 million daily active users (Dupre, 2016). Devries (2017) contended that Snapchat's

success could also be attributed to the introduction of stories or pieced together narratives

in the form of videos that can be shared privately instead of a public forum.

Twitter launched in 2006 and had emerged as a communication tool for millions

of people around the world. Twitter is a free social media site that provides a

microblogging service that allows users to broadcast short (280-characters or less) posts

called tweets and interact with other users (Larson, 2016). Twitter originally had a 140-

character limit, but in 2017 launched the new 280-character limit per tweet to help with

languages that were struggling with cramming words into a single tweet (Molina, 2017).

Twitter has 330 million active monthly users and has 500 million tweets every day

(Aslam, 2018). According to Aslam (2018), 80% of Twitter users are on mobile devices,

and over 67 million users are from the United States.

Junco (2014) conducted a study with 125 college students that examined whether

using Twitter with students in educationally appropriate ways could influence academic

performance. Seventy students were put into one experimental group, and the remaining

55 students were put in a controlled group. The results of the study showed that the experimental group had a significantly greater increase in engagement than the controlled group. The researchers found that using Twitter in educationally relevant ways could improve student academic performance. The researcher suggested that students were comfortable using Twitter to engage in class discussions, tweet with faculty members, and participate in study groups (Junco, 2014). Junco (2014) argued that it was critical for educators to engage with students on social media. Encouraging students to use social media places the responsibility on students for their learning, which could encourage them to become lifelong learners.

In light of the emergence of social media, schools and district leadership have often struggled with how to create and enforce policies surrounding its use in educational settings. Carver, Dyer, & Miller (2016), conducted a detailed analysis of state policies regarding social media use in education and they found only 19 states had evidence of relevant and applicable social media policies at the state level. According to Carver et al. (2016) most states do not provide guidance to districts in developing social media policy and "the analysis revealed most states are underprepared or unprepared for the fast-paced and constantly changing social media forum in the educational environment leaving them vulnerable to litigation resulting from social media misuse in schools" (p. 111).

In many cases, because of this lack of support from the state level, school districts are looking to the courts for human resource policy guidance. Bon, Bathon, & Balzano (2013) asserted school districts are facing an unprecedented time of alarming unprofessional conduct and social media misuse by public school teachers, therefore, challenged human resource departments to act swiftly regarding their policies within their

respective districts. In response to these concerns about misconduct and inappropriate online behavior, Bon et al. (2013) contended "school leaders in general, and human resource officers in particular, must be proactive in understanding and providing definition to the largely uncharted landscape of social media use by teachers" (p. 195).

Developing a Professional Learning Network

Flanigan (2011) described a professional learning network as a "teacher-driven, global support network that decreases isolation and promotes independence" (p. 11). Trust (2012) defined a professional learning network as a "system of interpersonal connections and resources that support informal learning" (p. 133). Trust (2012) found that educators used their professional learning network to connect with individuals interested in collaboration. Additionally, educators engaged in a professional learning network to grow professionally, learn from others, help others, and contribute to a community. While professional development experiences in schools have often been hierarchical affairs planned by administrators and dictated to teachers, engagement around professional learning networks offer opportunities for more organic and collaborative interactions (Krutka et al., 2016).

In their book, *What Connected Educators Do Differently*, Whitaker et al. (2015) insisted that time invested by educators in creating, fostering, and maintaining a professional learning network is time well spent. To grow a professional learning network through Twitter, Whitaker et al. (2015) found it was essential to understand the purpose of your profile, what you share, what you participate in, and how interactive and consistently you are tweeting. Whitaker et al. (2015) professed that educators who utilize a professional learning network with Twitter strived for more engaging activities for their

students and felt obligated to expand their professional learning network in order to "become better at what they do and, ultimately, better meet the needs of the students and colleagues they serve" (p. 7).

Researchers are beginning to investigate the emergence of professional learning networks and how educators are utilizing them. Trust, Krutka, & Carpenter (2016) conducted a qualitative study on the nature and impact of professional learning networks with 732 P-12 educators and found that availability of expansive professional learning networks, and their capacity to respond to educators' diverse interests and needs, appear to offer possibilities for supporting the professional growth of educators. During a seventy-five-day period, an online survey was specifically targeted at educators who likely were familiar with the idea of a professional learning network. The researchers declared that the responsive nature of a professional learning network provided educators access to resources and interactions that would help them grow professionally (Trust et al., 2016).

Within the context of professional learning networks, the use of Twitter as a powerful and relevant online tool for collaboration and cooperation exists (Powers, 2017). Experts (Cook, 2014; Whitby & Anderson, 2014) claimed that using Twitter could be efficient for allowing connections with individuals and organizations to share information and learn. This connection and the implications of educators having a professional learning network described in other studies showed it was critically important for transforming professional development by personalizing it for each who decided to establish a professional learning network (Elias, 2012; Gustafson, 2014; Sinanis, 2015).

LaLonde (2011) conducted a study that involved in-depth interviews with seven

educators in K-12 and higher education that examined the role Twitter played in the

development of professional learning networks among educators. LaLonde (2011) found

four major themes regarding Twitter use amongst educators as a professional learning

network:

> (1) Twitter allowed participants to engage in sustained and consistent dialogue
>
> with their professional learning network, (2) Twitter provided a way for
>
> participants to access the collective knowledge of their professional learning
>
> network, (3) Twitter provided participants the ability to amplify and promote
>
> deeper thoughts and ideas to a large audience, and (4) Twitter has specific
>
> features that helped to expand a professional learning network. (p. 57)

Davis (2012) investigated how teachers who participated in weekly Twitter chats

perceived the use of the social media tool for professional development. The study

included seventeen K-12 public school teachers that participated in two weekly Twitter

chats over three consecutive months. Davis (2012) found that educators who utilize a

professional learning network with tools, such as Twitter, shared knowledge and

resources easily, had a sense of belonging to an online community of practice, and were

involved in meaningful professional learning.

Larson (2016) conducted a study that utilized a survey and interview questions

with seventy-two K-12 educators that examined how Twitter was being utilized as

professional development. There were 17 participants out of the 72 who completed the

survey and participated in an interview. Larson (2016) investigated the factors that

affected educators' participation in professional development activities through the use of

Twitter. The researcher found that 85% of the participants stated that Twitter provided

them with opportunities to collaborate with others and 86% indicated that Twitter

allowed them to collaborate with educators who had similar goals. As mentioned by one

participant in the Larson (2016) study "what motivates me to use Twitter is the

interaction and learning that takes place in chats and with my professional learning

network" (p. 73). Larson (2016) also found that 76% of the participants cited the use of

Twitter as a professional learning network inspired them or changed the way they taught

because they could see all the fantastic things happening across the world in their

professional learning network that encouraged them to be better educators for their

students.

Padlet is an Internet collaboration tool where a teacher invites students or peers to

the site to garner feedback. While training and working with graduate students on

building a professional learning network, Jennifer Krzystowczyk (2017) solicited

students to respond to an online padlet about how they would leverage the use of social

media as a professional learning network and use Twitter with their students. Many of the

educators (92%) replied that they would continue to use Twitter to enhance their

professional learning network and would continue to connect with their professional

learning network to gain ideas that could be used in their classrooms. One participant

responded

> "I use social media all the time, but this is the first time I have used it
>
> professionally, and I have found it so helpful. I plan on using Twitter for my
>
> professional learning network a lot more this year because honestly the amount of
>
> information on Twitter is incredible". (Krzystowczyk, 2017, p. 1)

In a study conducted on the use of Twitter creating professional learning opportunities for educators, Ross et al. (2015) found that professional learning networks offered "collaboration and sharing of resources and information that lead directly to professional development" (p. 64). Ross et al. (2015) also found that the overwhelming majority of the educators who used Twitter said they used it to maintain and establish a professional learning network, collaborate and network professionally with other educators, and to engage in professional development. In a similar study conducted by Wallinger (2016), the researcher sought to explore how educators used Twitter for professional development. The study consisted of 14 K-8 teachers from various school districts participating in a Twitter users group created by the researcher to facilitate professional development and garner feedback. Wallinger (2016) found that educators who created a professional learning network using Twitter enjoyed real-time learning that impacted their classroom immediately.

Summary

Chapter 2 presented a broad overview of literature relevant to the study. A thorough investigation into qualities of effective and traditional professional development in education was outlined at the beginning of the chapter. The researcher then investigated the importance of technology in education as well as the emergence of social media in education. Further literature was shared regarding online learning, and the chapter concluded with an in-depth outline of professional learning networks.

Chapter 3

Methods

The purpose of this study was to investigate educators' perceptions of the use of Twitter as a professional learning network as a means of professional development. This study was also conducted to determine what educators perceive to be the benefits and drawbacks of using Twitter as a professional learning network. The interviews conducted during the study allowed the researcher to have open and honest conversations that afforded genuine perspectives on why the participants in the study used Twitter as a professional learning network. This chapter includes explanations of the research design used in the present study along with explanations for how participants were selected, data collection methods, and data analysis. The chapter includes the researcher's role, research questions, as well as limitations.

Setting

The researcher's approach used in the study, the study's design, and a description of the study's population are outlined in this chapter. Information needed to conduct the study and the questions used are explained. Since in-depth interviews were conducted as a means of data collection for the study, the procedures and methods used, including the software used to organize and analyze the data are also detailed. Finally, the limitations of the study are summarized.

Research Design

A qualitative research design was used for this study. A phenomenological interviewing methodology was utilized because the study focused on the experiences of individuals, which is characteristic of qualitative research (Creswell, 2009).

Phenomenological research involves studying a small number of subjects through

thorough and extensive engagement (Creswell, 2009). Qualitative research encourages

the researcher to adapt to new information and change directions if necessary to get

greater depth on unanticipated insights (Rubin & Rubin, 2012). According to Bloomberg

and Volpe (2012), qualitative researchers have methods of defining a research topic,

designing the study, and collection of data. This study involved asking educators to

describe perceptions regarding use of Twitter as a professional learning network, and

qualitative methods were required to describe their experiences and tell the story (Patton,

2015).

Researcher's Role

The researcher is currently a K-12 Development Executive on the Education

Team for Apple. The researcher's educational career spans over 20 years. For several

years he served as a Director of Technology and an instructional technology coach. The

researcher also served as a principal and teacher in both private and public schools. The

goals for conducting this phenomenological qualitative study were both personal and

professional. The researcher wanted to better understand why educators use Twitter as a

professional learning network and the benefits and drawbacks of using Twitter for

professional development. The researcher personally uses Twitter frequently as a

professional learning network tool and has indeed benefited professionally from using

Twitter in this manner. The researcher surrounds himself with educators from all over

the world and personally wanted to know if his thoughts regarding educators benefitting

from the use of Twitter as a professional learning network tool were validated,

particularly for school district superintendents. The researcher's history and attitudes could affect his ability to be objective and potentially influence the results.

When finding participants for this study, the researcher utilized his former position as a Director of Technology for a PreK-12 school district and use of Twitter. The researcher is an active Twitter user who typically benefits from his time spent interacting and reading content being shared daily. The researcher attempted to maintain an objective and professional manner throughout the interviews while considering his bias and tried to make sure all judgments or actions were as objective as possible.

Selection of Participants

Purposive sampling was used in the selection of participants for this study. The researcher utilized his own professional learning network on Twitter to locate one educator from each of the five geographic regions of the United States to participate in the study. The first criterion for being a participant was all teachers or administrators currently certified in PreK-12 school working in any type of PreK-12 school (Charter, Private, Public). Also, each participant actively used Twitter as a professional learning network, regularly tweeted, and had at least 1000 followers on Twitter. Selecting one participant from each region (Figure 1) allowed the researcher to gain a geographic representation of educators' perceptions from across the United States.
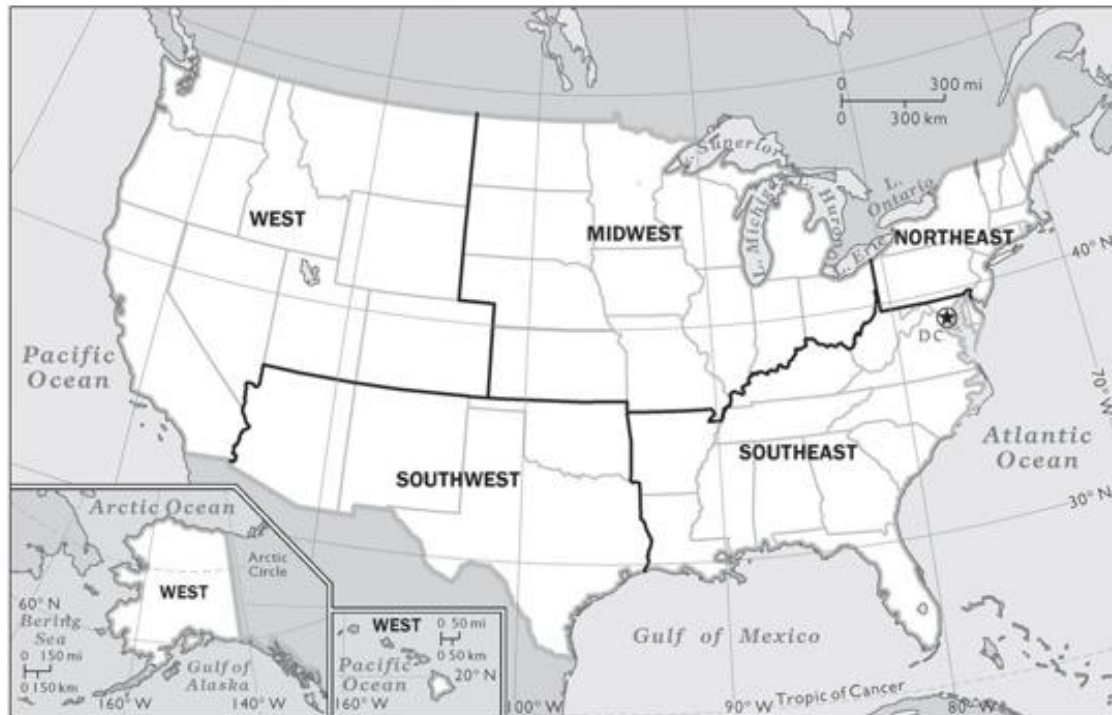
Figure 1. *Note*. Adapted from "United States Regions", by S. O'Connor, 2012. Retrieved from https://www.nationalgeographic.org/maps/united-states-regions/

The participants selected for this study represented each of the geographic areas shown

above in Figure 1 and provided a wide range of educators from different content areas

across the country.

Measurement

When describing effective methods for conducting in-depth qualitative research

and interviews, Rubin and Rubin (2012) discussed how the interview should be

structured around three types of linked questions: main questions, probes, and follow-up

questions. Importantly, Rubin and Rubin (2012) explained qualitative interviews should

be conversational where the researcher guides an extended discussion with the

interviewee. The interview script used in this study (see Appendix A) was designed by

reviewing questions from other research conducted regarding the use of Twitter for

professional development by educators (Davis, 2012; Deyamport, 2013; Larson, 2016;

Powers, 2017). After reviewing the other studies an interview script was drafted by the

researcher. Based on information from the previous studies the researcher selected

questions that best addressed the research questions for this study. The draft of questions

was shared with other experts about the order and structure. A panel was convened for

the experts to review the draft of questions script for completeness, understandability, and

effectiveness. The following questions and follow-up questions were posed to each of

the participants:

- IQ1. Tell me about how you started using Twitter.

  - FUQ1. Why did you begin using Twitter and if possible, give

    specific reasons?

- IQ2. Explain why you use Twitter.

  - FUQ1. For what purposes do you tweet?

  - FUQ2. Can you give me 2 examples of tweets you have sent in the

    past few days?

- IQ3. Please explain what aspects of Twitter you find most valuable for

  professional development and why?

- IQ4. How has Twitter played a role in your professional development?

  - FUQ1. Please describe a specific learning experience.

- IQ5. Why are you active and continuing to use Twitter as a professional

  learning network?

  - FUQ1. What are some of the benefits of you using Twitter as a

    professional learning network?

- o FUQ2. What are some of the drawbacks of you using Twitter as a professional learning network?

- IQ6. Why do you think it was important to start a professional learning network?

  - o FUQ1. What or who encouraged you to get started with a professional learning network?

- IQ7. What is the role of the professional learning network in your professional life?

  - o FUQ1. How has it made you a better professional if at all?

  - o FUQ2. How has using Twitter affected your students?

- IQ8. How has your participation on Twitter affected your professional life and development?

  - o FUQ1. Please give two examples.

- IQ9. Please add anything else you would like to share about your experiences with Twitter, or experiences with your professional learning network.

The nine interview questions and follow-up probes used in this study were structured in a way that used questions 1, 3, 6, & 8 to investigate how Twitter has impacted the participants professionally. Questions 2, 4, & 7 inquired about why the interviewee uses Twitter and if Twitter had played a role as professional development in their professional life. Questions 1, 2, 3, 4, 6, 7, & 8 and the follow-up questions are targeted at RQ1 of this study. Question 5 and the follow-up questions put particular focus on RQ2 for this study.

The nine questions used in the interviews were directly related to the two main research questions that guided this study. The questions were designed to allow the interviewee the ability to be honest and conversational in their answers. The questions were developed so the study participants would be encouraged to share their experiences and provide additional details as needed.

Data Collection Procedures

A request to begin collecting data for this study was made of the Baker University Institutional Review Board (IRB) (see Appendix B) on December 6, 2017. The IRB committee granted approval on December 14, 2017, for the study (see Appendix C). Data collection commenced after the IRB committee granted approval. Each participant was sent a Participant Consent form (see Appendix D) to acknowledge the participant was volunteering to be a part of the study. Each participant was notified they could withdraw from the study at any time.

According to Tong, Sainsbury, & Craig (2007), being straightforward and transparent about all the measures the researcher took to collect data helps to validate the study for readers and makes the interpretation of the phenomenon more trustworthy in qualitative research. Each participant was aware that the interviews were recorded and transcribed. The answers were then grouped into categories that made the most sense in terms of analyzing the phenomenon under investigation (Bloomberg & Volpe, 2012). Participants were interviewed in one of two ways: by phone or video calls. Due to the diversity of the geographical locations of the participants the interviews were conducted by calling the participants on the researcher's iPhone. Each interview was recorded using the TapeACall application on the researcher's iPhone. The participants were encouraged

to select spaces where they thought they would be comfortable during the interviews. There were 5 participants, one from each region displayed in Figure 1. The length of interviews ranged between 45 minutes and 1 hour.

Educators who were identified as active users with more than 1000 followers within the researcher's professional learning network were approached in a direct message on Twitter to participate in the study (see Appendix E). Once the invitation was accepted each participant was sent a Participant Consent form to acknowledge the participant was volunteering to be a part of the study (see Appendix D). The consent form outlined the time commitment and purpose of the study. Furthermore, details were described about how the collection of data would be recorded and stored on a secure digital file and retained for a period of 3 years after the dissertation was defended. Participants were told they could withdraw at any point during the interview and refuse to answer any question. The participants acknowledged their understanding of the participant and researcher's role in the interview which indicated they understood all of the procedures and consented to participate. Each individual participant was assured that their participation was voluntarily and they would remain anonymous.

All five participants were interviewed using questions listed above (see Appendix A). The script protocol was prepared in a manner that allowed participants to expand on their answers and provide robust explanations. During each interview, all questions and follow-up questions were asked of each participant. One of the central premises of phenomenological research is to gain an understanding of experiences through the participant's rich and complex descriptions (Finlay, 2009). The recording of each interview was utilized to ensure everything the participant shared was captured verbatim.

The interviews were then transcribed using the Trint online transcribing program. Trint is an end-to-end platform for finding, creating and sharing content. Trint takes the audio recordings and runs software that creates computer-generated transcripts that are perfectly synchronized.

Reliability and Trustworthiness

In addition to utilizing Trint for transcribing the researcher utilized Dedoose software. Dedoose is a web-based application that allows you to organize and analyze research data, no matter what form those data take. The interview recordings were transcribed into text and then uploaded to the Dedoose Research Analysis software online for a thorough content analysis of each interview. The Dedoose software provided the researcher the ability to separate and organize the content of the interviews into different categories and themes.

The trustworthiness of results is the bedrock of qualitative research. Member checking, also known as participant or respondent validation, is a technique of exploring the credibility of the results. During member checking, transcriptions are returned to participants to check for accuracy and resonance with their experiences. After each interview, the recording was transcribed and a copy of the transcript was emailed to the participant to review from the researcher's email account brent.catlett1@gmail.com. Each participant was given the opportunity to edit and make corrections to the transcript. All participants returned the member check with no corrections needed.

Analysis and Synthesis of Data

This phenomenological qualitative study consisted of two research questions to guide the research. The first research question focused on why educators use Twitter as a

professional learning network. The second research question focused on what educators perceived to be the benefits and drawbacks of using Twitter as a professional learning network. After each transcript was updated based on the results of the member check, it was then uploaded to the online software of Dedoose. The Dedoose software was used to help separate and organize the contents of interviews into different categories and themes. Those themes and concepts were then summarized by the researcher.

The researcher utilized a content analysis approach to identify the concepts and themes that arose during the interviews with the participants. Through personal reading and the work of the DeDoose software, the researcher reviewed the responses for concepts, themes, and examples. A content analysis approach helped the researcher notice concepts being shared and collect examples of these concepts. The researcher analyzed these concepts in order to find the commonalities. By looking closely at the themes and concepts, the participants shared the researcher could combine them into categories which helped achieve some conclusions (Rubin & Rubin, 2012).

Limitations

There were several limitations that affected the results of this study that were beyond the control of the researcher. First, a small sample size can make the findings difficult to generalize, but since this was a qualitative study, the researcher was able to focus on a smaller sample size. Second, the results of this study are limited to the people who volunteered to participate and were from the researcher's professional learning network. Some of the participants may have remembered incorrectly some of their past involvement with using Twitter as a professional learning network. Also, the participants

may not have answered all questions honestly. Finally, there could be factors that influence the interpretations of the findings.

Summary

Chapter 3 detailed the research approach used in this study, the setting, the design of the research and the researcher's role. The selection of participants was outlined as well as, the interview process, how data was collected and analyzed, and the limitations. The questions used to conduct the study were explained. Details were profiled on software that would be utilized to help analyze the data and literature was shared regarding coding necessary to synthesize the data for presentation. Finally, limitations were outlined.

Chapter 4

Results

The results of the current study are presented in this chapter. The purpose of this research was to study educators' experiences with the use of Twitter as a professional learning network as a means of professional development. This study was also conducted to determine what educators perceive to be the benefits and drawbacks of using Twitter as a professional learning network. This chapter presents the key findings related to the two research questions. The findings in this study are organized to accurately communicate their significance and connections to the research questions.

The participants were selected for this study because they met certain criteria and resided in one of the five geographical regions outlined in chapter 3: Northeast, Southeast, Midwest, Southwest, and West. All participants were interviewed via telephone between January 14, 2018, and February 2, 2018, at a time that worked best for the participant. Findings 1 and 2 directly addressed RQ1 and finding 3 addressed RQ2.

Finding 1: Twitter allows participants to make global connections

All participants reported that Twitter played a significant role in their professional learning network, and that engaging in hashtags and Twitter chats provide professional learning and growth. Participants placed a tremendous value on making connections with people in their professional learning network and the positive impact Twitter has had on them professionally and personally. Also, each participant mentioned how the evolution of their use of Twitter has changed over time and their participation and interaction with

others evolved over the course of time once they gained confidence in using Twitter for a

professional learning network. Participants 1, 2, 3, and 5 mentioned feelings of isolation

until they discovered Twitter and creation of a professional learning network.

Furthermore, all participants discussed how using Twitter as a professional learning

network created new opportunities for their students. Finding 1 was in direct correlation

to interview questions 1, 2, 3, 4, 6, 7, & 8 and the follow-up questions which were

targeted at RQ1 of this study.

Participant 1 has been a high-school teacher for eighteen years and currently lives

in the Northwest region. She began using Twitter in 2014 and was recently named a lead

teacher at her district. To address RQ1, "Why do educators use Twitter as a professional

learning network?", the participants were asked IQ2, "Explain why you use Twitter."

Participant 1's reflections encapsulated the views held by other participants in this study

in that, of all the affordances offered by Twitter, the ability to make connections with

other educators across the world in a professional learning network is perhaps the most

important. In this passage, participant 1 described how making connections has helped

her feel more connected.

> As I joined on Twitter I just really started lurking for a while, and I started
>
> looking at all of these things that were getting shared out. I was inspired by
>
> things that were posted, and I was amazed at the firehose of amazing ideas all of
>
> the time and I mean there were people that I really respected in education that
>
> were sharing out these resources. I noticed that people were having Twitter
>
> conversations during chats throughout the week and I was inspired. I thought,
>
> wow, this is amazing! Here I am in this little town of Medford, Oregon in my

culinary arts silo without any other teachers really that taught what I taught

nearby, and I felt really fairly isolated. Then I realized that this world of Twitter

opened me up to these amazing educators from around the world. I was just taken

aback because I realized that being able to share ideas and perspectives in

education was just powerful and it just opened up a whole new world to me.

As participant 1 stated, being an educator from a smaller community or particular content

area can make one feel isolated and lack professional connections that inspire growth.

The feelings of isolation before joining Twitter were not uncommon to other participants

as well. Participants shared insight into the value of creating a professional learning

network using Twitter. Participant 2 has been a teacher for seventeen years and currently

lives in the Southwest region. He has taught a variety of grade levels over the course of

his career in education and started using Twitter in 2009. In his reflection when asked

FUQ1 to IQ1, "Why did you begin using Twitter and if possible, give specific reasons?",

participant 2 shared similar thoughts before discovering Twitter.

I began using Twitter because I needed to reach out to other people and at that

time I was feeling a little bit isolated in what I was doing, and I wanted to be

better. I knew that there were other people that were all around me that were

doing things that were absolutely amazing because I was following them on

Twitter. Using Twitter created connections to other educators from all over the

world.

When specifically looking at how using Twitter created connections for the participants

all of them expressed how vitally important making connections was to their professional

and personal growth. Participant 3 has been a teacher for ten years and currently lives in

the Southeast region. She has worked with two districts and started using Twitter in 2012. When asked IQ2, "Explain why you use Twitter", participant 3 echoed the feeling of isolation and describe the journey of using Twitter as a professional learning network in this passage.

> As a teacher, I quickly figured out that I was isolated and needed something, that I needed support, and for me that was Twitter. And so, when I followed some blogs of some other people Twitter allowed me to make that connection. Twitter lets me connect with others who are in similar situations. I find the personal aspect of Twitter to be the most valuable, and I mean I definitely find links and resources that I can share out, but for me the most value is in the connections that I make and the educators that I connect with all year long on Twitter, and then when I go to a conference like FETC I'm able to kind of deepen those relationships and make more connections with people in person. I'm able to connect with people who have been following me and get to know them and get to learn from them and connect with them face-to-face from the relationships that were developed initially from Twitter conversations. So, it's the way I stay connected to my professional learning network, and it makes the opportunities that I have to meet face-to-face with other educators even more valuable.

In this previous passage, participant 3 described how having a professional learning network enhanced conference experiences and how being face-to-face with her professional learning network helped deepen her relationship with educators she had met on Twitter in her professional learning network. Participant 4 has been a teacher for ten years and currently lives in the Northeast region and started using Twitter in 2013.

When addressing RQ1 and asked IQ2, "Explain why you use Twitter", participant 4 outlined a very similar view of the importance of using Twitter as a professional learning network to make connections.

>Right from the get-go, I was using Twitter with educator conference hashtags that related to professional development conferences I was at. And as a way to connect with other educators, so connecting with other teachers, hearing what they were teaching in their classes, and trading book titles back and forth. Coming up with, you know, projects and things for my students and then hearing what other teachers at other schools all over the country and the world were doing.

Another interesting theme that emerged from the interviews was the participants use of Twitter as a professional learning network and the positive impact it created for the students enrolled in the classes they taught. All participants spoke to the incredible opportunities Twitter provided for their students. When asked FUQ1 to IQ4, "Please describe a specific learning experience", participant 1's story articulated how having a professional learning network using Twitter gave her students opportunities they would not have had otherwise.

>Wow! I think maybe something that would speak to the power of Twitter is I teach American Regional Cuisine in one of my culinary classes and one day I was trying to find recipes for the Midwest. So, I reached out to my friend in Nebraska, and I asked him if he had a Runza recipe which I knew was common in Nebraska. He said well I do have a recipe, but I think I can do better than that and he tagged the Runza restaurant in a tweet and said, "Hey Runza, can you help a

classroom out in southern Oregon and share with them what a real Runza taste

like?". So within hours the Runza restaurant DM'd me on Twitter and said send

your address, and we would love to send your whole class a box of Runza

sandwiches and so sure enough three days later Runza restaurant had a whole box

of sandwiches shipped on dry ice completely frozen. And so here my class in

southern Oregon was able to experience something from another region of the

U.S. and that they would have never had a chance to experience otherwise. That

is just one example of the power of being a connected educator. You're able to

connect and bring in these amazing experiences for your students and yourself

that you never would have ever dreamed of doing before. And so, the

connections are so amazing and so powerful.

Participant 5 has been a 7th grade reading teacher for thirteen years and currently lives in

the Midwest region. She started using Twitter in 2014. Participant 5 also shared several

examples of how the use of Twitter as a professional learning network impacted her

students and the experiences they had because of Twitter use. When asked IQ6, "Why do

you think it was important to start a professional learning network?", participant 5

articulated how Twitter gave students access to authors and experts from around the

world. The feedback can be immediate, relevant, and timely for her students.

The connective opportunities, you know I think about tweeting to the various

authors that then answered my students' questions or authors who saw what my

students and I were tweeting about and responded in some way liking or tweeting

back or offering to connect with us. And when my students saw that, and of

course I would show them you know here's what I'm tweeting out....and I think

about opportunities like, for example, three other educators and I did a connected

Caldecott project, and the four of us would have never met had it not been for

Twitter. But it was because we met via Twitter that we formed friendships and

then we looked for opportunities for our kids to connect and so it became my

favorite project that we did all year. And Twitter was fantastic to be able to

coordinate things like mystery skypes where kids were then given opportunities to

connect with kids who were just like them but from some place completely

different.

Participant 5's story was not uncommon among the participants who shared the

ways Twitter had allowed them to make connections for their students outside of the

physical walls of their classrooms. All participants shared how using Twitter had given

them the ability to create opportunities for their students. Also, using Twitter gave their

students new perspectives. As an English teacher, when asked FUQ2 to IQ7, "How has

using Twitter affected your students?", participant 4 shared about a poetry activity

completed with the professional learning network.

Twitter has very clearly shown the students that the Internet can connect you with

your peers from all over the country and world. I have done activities with other

teachers like a "poem a day" activity. The teacher I know on Twitter used to run

the activity on Twitter, and so she'd tweet out like this week it's red, and my

students would write poems using the color red, and we'd pick images, and we

tweeted our poems with her hashtags and then we'd go through the hashtag and be

able to look at what other schools were doing and respond to it. I think it affects

my students in that it demonstrates how you can connect with people you don't

know in a really positive and productive way.

Participant 4 spoke to what all participants feel is a natural thing for them to do now that

they have built a professional learning network using Twitter. Making connections with

teachers around the world is a realistic possibility when educators utilize Twitter as a

professional learning network. All the participants demonstrated how the power of

Twitter to make connections for their students and themselves was redefining how global

their classroom could actually be. Finding 1 was in direct correlation with interview

questions 1, 2, 3, 4, 6, 7, & 8 and the follow-up questions which were targeted at RQ1 of

this study.

Finding 2: Twitter allows participants to learn, curate ideas, and share resources

The results of this research demonstrated that, for the participants in this study,

Twitter provided a way to learn, curate ideas, and share resources. Furthermore, many

participants spoke about gaining inspiration from the educators they follow on Twitter.

All participants agreed that the ability to share resources and curate ideas was an integral

function of Twitter within their professional learning network. Finding 2 was in direct

correlation to interview questions 1, 2, 3, 4, 6, 7, & 8 and the follow-up questions which

were targeted at RQ1 of this study. To address RQ1, Participant 3 was asked IQ4, "How

has Twitter played a role in your professional development?", she shared how Twitter

allowed for professional growth.

Twitter for me is my number one resource. And so, for me, that's how I can stay

tapped in. It's how I can stay on top of trends and find new tools to share with my

colleagues and use with my students as well. And so, for me, you know, going to

conferences and that type of thing is important, but that's not enough. And so, Twitter really provides the extra. It's that constant stream of information and resources that I can tap into any time any day throughout the school year and the summer......in order for me to grow professionally I had to build that network, and I couldn't do it within my building, within my school, within my district. So, I had to reach out and build that professional learning network using Twitter.

Participant 3's experiences and opinions about the use of Twitter as a professional learning network showcase how utilizing the tool can easily provide resources. Participant 2 explained how he used Twitter to share resources he found valuable. When evaluating RQ1 and asked IQ3 "Please explain what aspects of Twitter you find most valuable for professional development and why?", participant 2 articulated this passage.

To me, the most valuable piece of Twitter are the hashtags because the hashtags collect a lot of information. If I want to search for something that dealt with science I can look up hashtag science. The hashtag collects it in a way that is very easy to look through and curate. Also, for me, it was important to start a professional learning network because I was at a point in my career where I needed more. I needed more information. I needed more eyes on what I was doing. I needed outlets to talk to people to see if what I was doing was actually on the right road. I needed people to bounce ideas off of. I needed people to provide examples of things that were similar to what I was doing. And it was important for me to do that because I realize that there is a universe out there that is much bigger than I am. And I wanted to tap into it to gain more knowledge as well as experience and share the experiences with other teachers.

Participant 2's statement spoke to how as an educator Twitter helped her grow professionally. In her statement below addressing RQ1 when asked IQ3, participant 5, shared how Twitter impacted her as a professional and, like participant 2, how Twitter met her needs.

> Twitter helps me be on the cutting edge and understand what's new and what's out there. So, part of the value of Twitter is that it's a constant stream of people sharing their ideas and sharing what they're doing with different tech tools, sharing resources they've found and sharing not only what those are, but also sharing how they're using them. For me personally, I needed that sense of community to know that I was not alone. I needed other people to help me brainstorm. I needed people to help me problem solve. I needed people to challenge my thinking. I needed people who were sharing their ways of doing things.

Participant 1 gains inspiration from her professional learning network and helps obtain new perspectives in education. She spoke about how Twitter fueled her yearning to be a better professional.

> Honestly, Twitter has become such an amazing source of inspiration and learning that it is hard to put into words how I feel about using Twitter. I am fed through all of these amazing people and ideas that are shared. And I think it's a source of encouragement. I think sometimes in education we get so worn down and tired, and we feel defeated at times, but then I get on Twitter and I'm surrounded by all of these educators that are passionate and as excited about teaching and learning as I am. In creating a professional learning network I've realized that I can learn

from people of all different grade levels and subject areas and some things that

teachers are doing at the elementary level and in English, in science, and social

studies. I'm able to take some of those ideas and integrate it into my Culinary

Arts classroom. So, it's expanded my walls and has made me realize that I'm not

alone.

Participant 1 shared throughout her interview that she could not imagine her life without

Twitter now. As participant 1 articulated, Twitter has encouraged her to try new things

and realize she can connect with amazing people. Participant 1's counterpart across the

country, participant 4, shared about her reasons for using Twitter in this statement.

I tweet when I'm participating in a chat to share my ideas and the things that I do

as an educator that I feel really proud of or things that have worked really well.

Sometimes I'm tweeting to get feedback or advice or book recommendations

from fellow educators. I think the chats that are organized by educators or

professional associations are some of the most helpful and valuable for me

because it's just so rich in resources. So being able to engage with other English

teachers on Twitter to hear how everyone's doing is both reassuring when you see

that they are struggling with what you are struggling with and illuminating when

someone has come up with a really great idea that I can take and use myself. The

professional learning network in my life has expanded my perspectives and

experiences contributing to my point of view as a teacher.

Embedded in participant 1 and 4's statements is evidence that utilizing Twitter as

a professional learning network has encouraged them to be better professionals and

inspired them to curate ideas they could immediately try with their students. Participants

all shared how utilizing Twitter as a professional learning network helped them gain resources, share resources, and curate ideas. Finding 2 was in direct correlation with interview questions 1, 2, 3, 4, 6, 7, & 8 and the follow-up questions which were targeted at RQ1 of this study.

Finding 3: The benefits of using Twitter outweigh the drawbacks

For every participant in this study, the research showed that the benefits of using Twitter as a professional learning network outweighed the drawbacks. Some participants even struggled to come up with drawbacks because they have experienced so many benefits from using Twitter as a professional learning network. To address RQ2, "What do educators perceive to be the benefits and drawbacks of using Twitter as a professional learning network?", the participants were asked IQ5, "Why are you active and continuing to use Twitter as a professional learning network?" and FUQ1, "What are some of the benefits of using Twitter as a professional learning network?" and FUQ2, "What are some of the drawbacks of using Twitter as a professional learning network?" The benefits of using Twitter as a professional learning network were articulated by participant 5's response.

> The power of the professional learning network once again is that personalized learning. That is what matters to you and when you're ready for it. You know, I can check Twitter at any point and time. I can go back and make those connections, and I can ask follow up questions and dig deeper, and it's truly that personalized learning if I follow hashtags that are of value to me. I follow the people that are of value to me and those who are going not only going to affirm my thinking, but challenge my thinking, but it is really truly that idea it is

personal. It is deeply personal, and it's personal because it matters to you, but it

becomes personal because of the relationships that you can build as well.

Participant 5 spoke about how incredibly personal using Twitter as a professional

learning network had become for her. Participant 4 spoke about how the benefits of

using Twitter as a professional learning network continues to be worthwhile of her time

spent using Twitter. She discussed how the fact that it is free is a significant benefit as

well as the fact it is not time-sensitive, and she could pick things up wherever she left off.

I can curate it so I can decide what types of people I want to follow. It's not time

sensitive in the way that a workshop or a conference generally that you have to

pay money and you have to get yourself there. You usually have to find coverage

and take time out of your classroom. None of those things apply to Twitter. The

learning and the connection with professional colleagues can happen anytime

whether you are on the train or in my classroom or sitting on my couch in my

pajamas.

When prompted by FUQ1 to IQ5, participant 1 shared benefits of using Twitter in this

following passage.

I think what is the most powerful thing about my professional learning on Twitter

has been since I've moderated Twitter chats. So, I think it was in 2015 I began

moderating a weekly chat with another author, and through that chat, I helped

develop a Twitter community of educators that were all excited and jumping into

gamification. And so, each week we developed questions, and we gather on

Twitter at a certain time each week, and we discuss gamification and because of

that, a community has developed. I just have found that I have almost like a

family of educators who are supporting and encouraging me and continually I'm

learning so much from. It gives me the courage and the confidence to keep taking

risks and keep sharing out in the Twitter space.

Participant 2 spoke to several benefits of using Twitter as a professional learning network

when he was probed with FUQ1 to IQ5.

One huge benefit is knowing that there are other people who think the same as

you. Another benefit is knowing that there are other people who do not think the

same as you and see a difference and see things differently. Another huge benefit

is knowing that these are people that I can talk to at any time. And we're able to

give advice as well as provide a different perspective in what's going on. I've

gained great insight just by asking questions of my professional learning network.

Therefore, I continue to use Twitter because I realize how important it is to stay

connected and also because I have a voice in a lot of things that are going on in a

lot of different topics and educational technology. Yes, I gained a lot of resources

and things like that, but I also have some information and knowledge that I want

to pass along, and Twitter is an excellent way to do that.

When prompted about the benefits of using Twitter as a professional learning network in

FUQ1 to IQ5 participant 3 shared these thoughts.

Twitter lets you stay connected and so whether it's, you know, just jumping on for

a minute or whether it's participating in a scheduled Twitter chat, it has so many

different purposes, but it really helps me stay on top of what's new and what's out

there, but also to build those personal connections. And if I have a question like

at my school right now, we're really focusing on moving towards project-based

learning. And so, I've been able to make some great connections on Twitter

through that. I mean Twitter is so ingrained in what I do. The Book Dive Into

Inquiry by Trevor McKenzie I saw that someone had posted it on Twitter. I

bought it. I read it. Then I was able to use Twitter to connect with Trevor, and

we ended up doing his book as a book study last spring at my school, and then

through our Twitter connections, we were able to schedule a time to Skype with

him.

Examples like the one shared by participant 3 provide some of the reasons participants

pointed to as benefits of using Twitter as a professional learning network. Participant 3

tries to use examples like the one above to show other teachers how powerful Twitter is

as a professional learning tool.

When speaking to the drawbacks of using Twitter as a professional learning

network, participant 4 mentioned how tweeting back and forth can sometimes feel like

Twitter is hindering the flow of the conversation and there may be a need to take the

conversation to email or a phone call if needed to further explore the topic. She believes

Twitter is a great meeting place and starting point, but "it obviously has limitations

regarding how much depth and breadth of the conversations can have just by nature of

how the tweet works I think." When asked FUQ2 to IQ5 specifically regarding

drawbacks of using Twitter as a professional learning network participant 2 offered these

thoughts.

The one drawback is that they're so far away and you don't have consistent

synchronous access to them. I realize that I'm a people person and one of the

things that I really do enjoy is being able to talk with somebody face-to-face and

with Twitter there is not that face-to-face.

When probed about any specific drawbacks in FUQ2 to IQ5 participant 3 felt from using

Twitter she stated this message.

Twitter is overwhelming and I know for people who are new to Twitter it can be

very overwhelming because there's so much information out there, so much

sharing that's happening. But it takes some time to kind of find your groove with

it and build your network and understand that it's not, you know, people have that

misconception about Twitter where it's oh, it's celebrities tweeting all the time, or

Oh it's, you know, people just pushing news out there or just sharing the random

things that happened throughout their day. It depends on your professional

learning network and how you build your network. For a lot of people just

coming on board with Twitter, it's difficult sometimes to wrap your brain around

that and kind of find the place where Twitter really fits and works for you.

Participant 3 spoke to the misperceptions that take place on uses of Twitter and

particularly what may hold some educators back from using Twitter as a professional

learning network. When asked FUQ2 to IQ5 regarding drawbacks, participant 5 did not

have anything, in particular, to mention but teased by saying "it can become a little

addicting". Participant 5 said she participates in many Twitter chats throughout the

week. She stated this regarding any drawbacks.

One of the drawbacks, and it's not a drawback, for you personally as the Twitter

user, but sometimes that drawback of it not being recognized as a quote-unquote

legitimate means of professional development by districts. And I think that's a

shame and a travesty for a couple of reasons.

When probed by FUQ2 to IQ5 about drawbacks of using Twitter as a professional

learning network participant 1 shared these thoughts.

Honestly, I can't think of a lot of drawbacks unless you are using Twitter solely

for your professional learning network and it's preventing you from connecting

with the people around you and in your schools. But for me, I feel like I'm able

to do both. I'm able to connect and learn from the people around me and grow

my local professional learning network through things like coffee EDU and my

personal learning communities at school. But then I'm also able to extend that

beyond my school walls and my local area and go far beyond that. The

opportunities that have come my way since I've started using Twitter have been

mind-blowing. I have become a blog writer. I'm writing a book. I've been

speaking at a national level. I'm speaking nationally, and public speaking was a

fear of mine, and here I am now doing both, and I am not fearful anymore. And

so I just can't say enough about it, and I feel that every educator really needs to

tap into the power of social media because it is life. It truly is life-changing.

Participant 1's journey of using Twitter as a professional learning network is a

testament to how positively it can impact a teacher. Using Twitter as a professional

learning network can assist teachers from feelings of isolation and inspire them to try new

things and make connections in the classroom. All participants shared certain drawbacks,

but ultimately all of them continue to use Twitter because they find it to be so powerful

for making connections, professional growth, and curating ideas. Finding 3 was in direct

correlation with interview question 5 and the follow-up questions which were targeted at

RQ2 of this study.

Summary

A summary of the three findings from the interviews of participants indicated the

use Twitter as a professional learning network allowed them to create global connections

for professional growth that support the creation of new opportunities for students.

Participants experienced connections that allowed them to learn, curate ideas, and share

resources. All participants shared that the benefits of Twitter for a professional learning

network outweigh the drawbacks of using Twitter. In chapter 5, a study summary, the

findings related to literature, and conclusions are outlined.

Chapter 5

Interpretation and Recommendations

This qualitative study was conducted to examine why educators use

Twitter as a professional learning network and the perceived benefits and

drawbacks. Chapter 5 is presented in multiple sections. The first section consists

of the study summary, an overview of the problem, purpose statement and

research questions, review of the methodology, and the major findings. The next

section relates the findings of the study to the literature. In the final section of the

chapter, conclusions, implications for action, recommendations for future

research, and concluding remarks.

Study Summary

This section presents an overview of the study on the experiences of why

educators used Twitter as a professional learning network and the perceived benefits and

drawbacks. Also, the purpose statement and research questions describe why the study

was conducted. Five participants from all five regions of the United States were

interviewed for this study. The review of methodology and major findings provide

information for the conclusion and suggestions for further research.

Overview of the problem. Educators are utilizing social media to further their

professional learning and collaborate with other educators across the world to improve

teaching and learning, but little research has been conducted on the impact of the use of

tools like Twitter (Langhorst, 2015). Educators who use social media tools like Twitter

for professional development are creating professional learning networks that have

immense value to engage in sharing best practices, relevant content, and ideas on a global

scale (Klingen-Smith, 2009). According to Langhorst (2015), although teachers craved professional development time with peers, budget constraints and time were inhibiting this from taking place.

Meell (2012) and Langhorst (2015) stated that research has shown benefits for teachers who use social media to collaborate and improve their craft. Twitter allows educators to connect in ways that create real and meaningful growth that cannot be replicated offline. Fucoloro (2012) explored educators' perceptions and usage behaviors associated with participation in informal, online professional development networks like Twitter and found that an overwhelming number (90%) of the participants used Twitter as a professional development tool. However, there are currently few studies that have investigated educators use of Twitter as a professional learning network for professional development (Gao, Lou, & Zhang, 2012).

Purpose statement and research questions. The purpose of this research was to study educators' experiences with the use of Twitter as a professional learning network as professional development. This study was also conducted to determine what educators perceive to be the benefits and drawbacks of using Twitter as a professional learning network. The study's two research questions were annotated with the nine interview questions that constituted the chief instrument by which data were collected are:

RQ1. Why do educators use Twitter as a professional learning network?

RQ2. What do educators perceive to be the benefits and drawbacks of using Twitter as a professional learning network?

Review of the methodology. The researcher used a qualitative approach to examine the perceptions of educators who use Twitter as a professional learning network.

The qualitative research approach provided an opportunity to explore the perceptions of the benefits and drawbacks of using Twitter for a professional learning network. The researcher facilitated phone interviews with the participants. The interview questions were designed to gather participants' perceptions and experiences using Twitter as a professional learning network. After the interviews had been conducted and transcribed, they were loaded into Dedoose research analysis software. Dedoose was used to organize the themes that emerged from the interviews.

Major findings. The first major finding from this study was related to the first research question regarding why educators used Twitter for a professional learning network. The results of the interview analysis determined that all participants believed Twitter allowed them to make global connections for professional growth and create new opportunities for their students. The example participant 1 shared about making a connection from her Oregon culinary arts classroom to a fellow teacher in Nebraska that connected her with the local Nebraska Runza restaurant and an authentic learning experience for her students best illustrates the capability of using Twitter as a professional learning network and the opportunities using Twitter provided her students. All participants reported that Twitter played a significant role in their professional learning network and that engaging in hashtags and Twitter chats provided professional learning and growth.

The second major finding of the study was related to how using Twitter allowed the participants to learn, curate ideas, and share resources. The results of this research showed that, for the participants in this study, Twitter provided ways to share ideas, follow others, and curate ideas. The example participant 3 articulated when she

mentioned in order for her to grow professionally she had to build a professional learning network using Twitter because she could not do it within her building, school, or district. This showcases how Twitter helps participants learn and curate ideas from other educators in their professional learning network. Furthermore, that creating a professional learning network extends the possibilities for educators to gain new insights, curate ideas, and share with a broader audience than their local school. Also, when participant 4 stated that Twitter continues to be a valuable tool for her, that is rich and full of resources that she can curate information illustrates how participants can utilize Twitter to curate ideas and share resources. Furthermore, many participants spoke about gaining inspiration from the educators they follow on Twitter. All participants agreed that the ability to share resources and curate ideas was an integral function of Twitter within their professional learning network.

The third major finding of the study was related to the second research question that addressed what educators perceived to be the benefits and drawbacks of using Twitter for a professional learning network. For every participant in this study, the researcher showed that the benefits of using Twitter for a professional learning network outweighed the drawbacks of using Twitter. Some participants struggled to come up with drawbacks because they had such positive feelings regarding the use of Twitter as a professional learning network. Participant 1 literally said she could not think of any drawbacks of using Twitter as a professional learning network. Participant 5 mentioned that using Twitter as a professional learning network changed her life professionally and personally for the better and she could not imagine not using Twitter now.

Findings Related to the Literature

In this section, the results of the current research was compared to previous research. The literature that was pertinent to the study was in chapter 2. Two research questions were used for this study.

According to Powers (2017), the three themes for using Twitter as a professional learning tool that emerged were, "resource acquiring and sharing; collaboration, networking, and chats" (p. 84). These themes were similar to the results found in the current study. The current study found that Twitter allowed participants to make global connections for professional growth. Powers (2017) stated, "resource sharing and acquiring emerged as the top theme with 64 mentions as well as all six participants" (p. 84). Gathering resources, sharing, and curating ideas was a common theme in both studies. The current study found that Twitter allowed participants to learn, curate ideas, and share resources. Powers (2017) found time as the greatest barrier to educators using Twitter for a professional learning network. None of the participants in the current study mentioned time as a drawback of using Twitter for a professional learning network. However, the participants in the current study claimed that Twitter does not allow for complex collaboration because it is not synchronous and one participant stated Twitter is overwhelming to learn how to use. Four participants in the current study mentioned the desire to meet the other educator in person they were connecting with on Twitter because Twitter limited their ability to have a complex conversation.

Trust, Carpenter, & Krutka (2016) set out to explore the nature and impact of professional learning networks and surveyed 1,417 educators. The researchers stated that the responsive nature of a professional learning network provided educators access to

resources and interactions that would help them grow professionally (Trust et al., 2016). This confers with the current study's findings. Furthermore, one-third of the respondents in the Trust et al. (2016) study provided reasons such as "curating information, exchanging opinions, staying current on research and best practices, collaborating with experts, and networking with teachers" (p. 23). This is consistent with findings 1 and 2 of the current study that showed making connections and networking was a valuable part of using Twitter for the participants. Every participant in the current study mentioned that before using Twitter they felt isolated and after building a professional learning network, they were able to make connections that inspired new ideas for them in their classrooms. Two participants in the current study shared stories of collaborating with authors and all participants shared that they networked with other teachers to exchange ideas.

Tucker (2016) conducted a study to examine teachers' perspectives on their decision to adopt or reject the use of Twitter as a professional learning network. The top reason for two of ten participants in Tucker's (2016) study rejecting the use of Twitter was because they had difficulty with the platform and never used it. Eight of the ten participants accepted Twitter for professional growth and would continue to use it (Tucker, 2016). These results are consistent with the current research where all participants plan to continue to use Twitter for a professional learning network. One participant in the current study however mentioned that Twitter is overwhelming and can be difficult for some educators to wrap their mind around the tool and how to effectively use it to build a professional learning network.

The current study also reinforced the study conducted by Wallinger (2016) about Twitter use for professional development. Wallinger (2016) found that users had both positive and negative attitudes about the use of Twitter, but in general, overcame confusion or frustration and participated in professional development using the tool. Teachers also used Twitter to "share experiences, give advice, share lessons, and recommend apps" (p. 99). These findings were consistent with those of the current study although the participants selected in the current study made it less likely that the researcher would talk with people who would not understand the technology. One participant articulated how when she first joined Twitter she lurked for a while before feeling comfortable to participate in Twitter chats. That same participant from the current study stated she felt fairly isolated and realized the world of Twitter opened her up to amazing educators from around the world and that made the investment of time learning to use the tool worthwhile.

In a study conducted by Larson (2016), the researcher set out to determine how educators were using Twitter. Ninety-four percent of the participants reported that they used Twitter for professional learning purposes (Larson, 2016). Additionally, 85% of the participants reported that Twitter provides them with opportunities to collaborate with others (Larson, 2016). These findings correlate with the findings of the current study.

Gustafson (2014) conducted a phenomenological study of professional development in the digital age, and the lived experiences of eight public school elementary principals. Gustafson interviewed principals who were committed to professional development that supported learning in the digitally connected age. Gustafson (2014) stated that the "predominant leadership characteristic shared by the

elementary principals in this study was connectedness" (p. 78). Gustafson's (2014) study also found that the eight participants used Twitter as a tool to facilitate new learning and innovation. Twitter served "as a catalyst for transforming professional development" (p. 78). The current study found similar results across the participants who shared feeling more connected as a result of using Twitter for a professional learning network. One participant in the current study stated that once she realized she did not have to keep up with every single tweet and Twitter was a resource. As she had time, she could connect with anyone on a given topic. One participant in the current study shared how she utilized Twitter to connect with other teachers to trade book titles and project ideas back and forth.

Davis (2012) found five themes throughout her study on teachers' perceptions of Twitter for professional development: sharing knowledge and resources, sense of belonging, meaningful professional development, technical benefits, and technical drawbacks. The themes that emerged in Davis' (2012) study proved to be very similar to the themes that emerged in the current study. Davis' (2012) study found 100% of the participants believed using Twitter for a professional learning network gave them a sense of belonging. This correlates to the current study and the participants citing that Twitter helped with not feeling isolated in their subject or content area. One participant in the current study articulated how working in a smaller community and school made her feel isolated because she was the only teacher at her grade level in the building. Twitter opened doors of isolation for that participant and she was inspired by things being posted on Twitter and it gave her a place to feel like she belonged with other like-minded

teachers in her content area. That same participant said Twitter "expanded my walls and has made me realize that I'm not alone".

According to LaLonde (2011), Twitter provides participants the ability to amplify and promote deeper thoughts and idea to a larger audience. Participant 1 in the current study mentioned using Twitter to share blog posts to a larger audience. Participant 1 shared how she has somebody in her professional learning network from Israel and to have the ability to look at education from a broader perspective has made her educational journey "so much richer because I am not just conversing about education with people from my side of the world". LaLonde (2011) also found that Twitter provides a way for participants to access the collective knowledge of their professional learning network. The results of this research indicated this was true of all participants. One participant in the current study articulated how being able to amplify and promote herself online has "opened up so many doors for me, not just the learning that I initially was seeking, but the connections that allow me to continue to grow professionally". This participant from the current study mentioned how having a professional learning network and presence on Twitter actually got her recruited for the current position she has now.

Conclusions

This qualitative study was designed and conducted to examine the perceptions and experiences of educators who utilize Twitter as a professional learning network. Also, the benefits and drawbacks of using Twitter for a professional learning network were examined. In this section, the implications for action, recommendations for future research, and concluding remarks are included.

Implications for action. The findings of this study provided evidence regarding the value of utilizing Twitter as a professional learning network. The results of the study demonstrated that the cross-section of Twitter users used across five regions of the United States thought using Twitter as a professional learning network was invaluable to their professional growth, their ability to curate ideas, and feeling less isolated. The results of this research lead the researcher to recommend that school administrators and professional development coordinators investigate the potential of training their teachers to utilize Twitter for a professional learning network. Supports need to be put in place to encourage all educators to use Twitter for a professional learning network. Teacher leaders could be put in a position to share their expertise and experience utilizing Twitter as a professional learning network with their colleagues.

The results of this research also demonstrated that Twitter allowed the participants to make global connections for professional growth and created new opportunities for their students. All the participants agreed that using Twitter as a professional learning network was a valuable use of their time and the opportunities and connections made because of Twitter were invaluable for themselves and students. School leadership needs to model the use of Twitter for a professional learning network so teachers will see the value in utilizing the tool for professional development and connecting their classroom to the world.

All participants shared that using Twitter allowed them to learn, curate ideas, and share resources. Each participant discussed how easily they could make connections to experts in their specific area of content by simply logging in and using Twitter. The findings of the current study create a compelling argument for all educators to consider

utilizing Twitter as a professional learning network because of the inspiration, ideas, resources, and connections that could be gained. The ability Twitter gives educators to make connections, learn, curate ideas, and share resources are helpful to districts utilizing instructional technology in classrooms. For example, Twitter can allow redefining lessons to take place because of ability to make connections to authors. The current study showed Twitter allows educators to make global connections for professional growth, learning, curating ideas and resources, and creating new opportunities for students.

All participants agreed that using Twitter for a professional learning network was more beneficial than the drawbacks. Districts need to better understand the value added in developing educators use of Twitter as a professional learning network. Districts should consider using Twitter to potentially recruit and retain teachers who are connecting online across the world like those interviewed in this study by fostering an environment that embraces this social media tool. Actively using Twitter as an educator, leader, or district could potentially allow you to share your story with the world. Others may be inspired and want to be a part of that environment.

Recommendations for future research. The following recommendations represent areas which could be supported through additional research. Researchers could build upon the results of this study to determine whether the experiences of these educators using Twitter for a professional learning network are the same for educators in other states in the regions identified for this study. Since the sample size was small but not limited geographically, it would be interesting to interview an educator from every state in the United States to determine if the same findings would take place.

A mixed methods study could be conducted by adding a pre-interview survey to capture quantitative data. The data could be analyzed and compared to the qualitative data to determine if the results are similar. The quantitative data could also provide information for further questions in the interview process of the study.

Further research could be conducted using educators who do not use Twitter as a professional learning network or are not as active of users as the participants in this study. The participants for this study were active users of Twitter that had over 1,000 followers and who were a part of the researcher's professional learning network. By researching Twitter users who are not as active, the results could determine why they are not as active or a phenomenon that exists with the use of the tool. It would be interesting to conduct a study on the differences between educators who use Twitter and those who do not. What characteristics do educators have that use Twitter and educators who do not?

One of the themes that emerged from this study was the isolation that participants felt before using Twitter. A study could be conducted on how isolated teachers feel and how Twitter broke down that isolation. It would be interesting to study whether educators who utilize Twitter as a professional learning network have more job satisfaction because of the support they feel from using Twitter as a professional learning network versus those educators who do not.

One of the major findings of the current study was that Twitter allowed participants to learn, curate ideas, and share resources. Future research should be conducted comparing educators who use Twitter for a professional learning network. Are they better teachers because of the resources, ideas, connections, and sharing they curate by using Twitter then educators who do not use Twitter. It would be interesting to

see if principals who evaluate teachers were put in a controlled study of evaluating

teachers they know who use Twitter and teachers they know who do not and determine if

there is any significant difference between the effectiveness or perceived effectiveness of

a teacher who uses Twitter or one who does not.

Additional research could be conducted on school leaders who use Twitter for a

professional learning network. A study on school leaders who are active users of Twitter

for a professional learning network could be conducted to determine the value

administrators are potentially finding by using Twitter and the correlations between

teachers and leaders use of the tool.

Concluding remarks. Educators across the world rely on professional

development provided by their school or district. Twitter could provide free online

professional development if educators are willing to invest the time needed to build a

professional learning network. By building a professional learning network, educators

will position themselves to learn, grow, and gain inspiration. School leadership could

investigate the potential of having its educators create a professional learning network to

help transform the teaching and learning happening within the walls of classrooms across

the world. Educators who use Twitter for a professional learning network agree that the

benefits of using the tool far surpass the drawbacks. When educators use tools like

Twitter as a professional learning network, they are empowered to create new

opportunities for themselves and the students they serve.

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Appendices

Appendix A: Interview Guide

QUESTIONS FOR INTERVIEWS

Why do you use Twitter as a professional learning network?

1) Tell me about how you started using Twitter?

   Follow up: Why did you begin using Twitter and if possible, give specific
   reasons?

2) Explain why you use Twitter.

   Follow up: For what purposes do you tweet? Can you give me 2 examples of
   tweets you have sent in the past few days?

3) Please explain what aspects of Twitter you find most valuable for professional
   development and why?

4) How has Twitter played a role in your professional development?

   Follow up: Please describe a specific learning experience.

5) Why are you active and continuing to use Twitter as a professional learning
   network?

   Follow up: What are some of the benefits of you using Twitter as a
   professional learning network?
   Follow up: What are some of the drawbacks of you using Twitter as a
   professional learning network?

6) Why do you think it was important to start a professional learning network?

   Follow up: What or who encouraged you to get started with a professional
   learning network?

7) What is the role of the professional learning network in your professional life?

      Follow up: How has it made you a better professional if at all?

      Follow up: How has using Twitter affected your students?

8) How has your participation on Twitter affected your professional life and development?

      Follow up: Please give two examples.

9) Please add anything else you would like to share about your experiences with Twitter, or experiences with your professional learning network.

Appendix B: IRB Request

BAKER UNIVERSITY

IRB Request

Date **12-5-17**

IRB Protocol Number _____

(IRB use only)

I. Research Investigator(s) (students must list faculty sponsor)

Department(s) **Education** _____

Name	Signature	
1. **Brent Catlett**	*B. Catlett*	Principal Investigator
2. Verneda Edwards	*V. Edwards*	☑ Check if faculty sponsor
3. Peg Waterman	*Margaret Waterman*	☐ Check if faculty sponsor
4. _____	_____	☐ Check if faculty sponsor

Principal investigator contact information

Note: When submitting your finalized, signed form to the IRB, please ensure that you cc all investigators and faculty sponsors using their official Baker University (or respective organization's) email addresses.

Phone **(816) 661-0608**

Email brent.catlett1@gmail.com

Address 2425 S. Whitney Ave.

Independence, MO 64057

_____

Faculty sponsor contact information

Phone _____

Email _____

Expected Category of Review: ☐ Exempt ☑ Expedited ☐ Full ☐ Renewal

II. Protocol Title

Educators' Perceptions of the Use of Twitter for a Professional Learning Network

_____

Baker IRB Submission form page 1 of 4

III. Summary:

The following questions must be answered. Be specific about exactly what participants will experience and about the protections that have been included to safeguard participants from harm.

A. In a sentence or two, please describe the background and purpose of the research.

The purpose of this qualitative study is to study educators' perceptions of the use of Twitter for a Professional Learning Network (PLN) as a means of professional development. This study is also being conducted to determine what educators perceive to be the benefits and drawbacks of using Twitter for a PLN.

B. Briefly describe each condition, manipulation, or archival data set to be included within the study.

No conditions, manipulations, or archival data set are a part of this study.

IV. Protocol Details

A. What measures or observations will be taken in the study? If any questionnaire or other instruments are used, provide a brief description and attach a copy.

An interview will be conducted with each subject that lasts 45 to 60 minutes. The interviews will take place using Zoom, Google Hangouts, or Skype video conferencing tools. The subjects will be asked a series of questions regarding their usage of Twitter and the benefits and drawbacks they perceive with that usage. Since the focus of the study is to explore subjects' lived experiences, no direct observations are required.

B. Will the subjects encounter the risk of psychological, social, physical, or legal risk? If so, please describe the nature of the risk and any measures designed to mitigate that risk.

Participating in this study will not expose the subjects to any psychological, social, physical, or legal risk.

C. Will any stress to subjects be involved? If so, please describe.

Study subjects will not encounter any stress as a result of their participation in this study.

D. Will the subjects be deceived or misled in any way? If so, include an outline or script of the debriefing.

Subjects will not be deceived or misled in any way during this study.

E. Will there be a request for information which subjects might consider to be personal or sensitive? If so, please include a description.

The interview questions used in this study are limited to inquiring into the participants' perceptions of the use of Twitter for a PLN. Any further information provided by the principal investigator will be entirely at the discretion of the participant. Each participant will have an opportunity to review his or her responses as well. Subjects may opt out of answering any question or questions that they consider too sensitive or personal during the interview stage of the study.

F. Will the subjects be presented with materials which might be considered to be offensive, threatening, or degrading? If so, please describe.

Subjects will not be presented any material—written or otherwise—that might be considered offensive, threatening, or degrading as part of this study.

G. Approximately how much time will be demanded of each subject?

Subjects will be asked to participate in one interview session. Each interview session will last no longer than 1 hour.

H. Who will be the subjects in this study? How will they be solicited or contacted? Provide an outline or script of the information which will be provided to subjects prior to their volunteering to participate. Include a copy of any written solicitation as well as an outline of any oral solicitation.

The sample for this study consists of 15 current K-12 educators. Participants will be recruited for this study based on the fact that they meet the criteria for the study: educators who have been identified as active users with more than 1000 followers on Twitter within the researcher's PLN. Each subject is at least 21 years of age and a certified educator in a K-12 school.

I. What steps will be taken to insure that each subject's participation is voluntary? What if any inducements will be offered to the subjects for their participation?

Participants will receive no inducement for participating in this study. Finally, participants may withdraw from the study at anytime and for any reason.

Baker IRB Submission form page 3 of 4

J. How will you insure that the subjects give their consent prior to participating? Will a written consent form be used? If so, include the form. If not, explain why not.

Each participant will be presented an informed consent form, must to be signed prior to participating in this study. To assure the subject's confidentiality, each signed informed consent form will be safeguarded in a place by the principal investigator.

K. Will any aspect of the data be made a part of any permanent record that can be identified with the subject? If so, please explain the necessity.

No aspect of the data collected for this study will be part of a permanent record identified with the subjects. Study participants will be assigned apha-numeric pseudonyms to help protect their identities as a condition for participating in this study.

L. Will the fact that a subject did or did not participate in a specific experiment or study be made part of any permanent record available to a supervisor, teacher, or employer? If so, explain.

No, this study will not be made a part of any permanent record nor made available to a supervisor, teacher, or employer.

M. What steps will be taken to insure the confidentiality of the data? Where will it be stored? How long will it be stored? What will be done with the data after the study is completed?

While the study is in process, each subject will be given a pseudonym. The principal investigator will share what is transcribed from the interviews with his immediate research committee. All other data—electronic and otherwise—will be stored on a flash drive that is password-protected and in the principal investigator's custody. The flash drive and the data contained therein will be destroyed three years after at the conclusion of the study.

N. If there are any risks involved in the study, are there any offsetting benefits that might accrue to either the subjects or society?

There are no risks involved in this study. Further, there are no benefits accruing directly to the participants. However, the findings of the study will add to the emerging research of educators' use of Twitter for a PLN.

O. Will any data from files or archival data be used? If so, please describe.

No data from files or archival data will be used for this study.

Brent Catlett Dissertation Interview Script

1. Tell me about your how you started using Twitter.

   a. Why did you begin using Twitter and if possible, give specific reasons?

2. Explain why you use Twitter?

   a. For what purposes do you tweet? Can you give me 2 examples of tweets you

have sent in the past few days?

3. Please explain what aspects of Twitter you find most valuable for professional

development and why?

4. How has Twitter played a role in your professional development?

   a. Please describe a specific learning experience?

5. Why are you active and continuing to use Twitter as a PLN?

   a. What are some of the benefits of you using Twitter for a PLN?

   b. What are some of the drawbacks of you using Twitter for a PLN?

   c. How has using Twitter affected your students?

6. Why did you think it was important to start a PLN?

   a. What or who encouraged you to get started with a PLN?

7. What is the role of the PLN in your professional life?

   a. How has it made you a better professional if at all?

8. How has your participation on Twitter affected your professional life and

development?

   a. Please give two examples?

9. Please add anything else you would like to share about your experiences with Twitter,

or experiences with your PLN.

Appendix C: IRB Approval

Baker University Institutional Review Board

December 14th, 2017

Dear Brent Catlett and Verneda Edwards,

The Baker University IRB has reviewed your project application and approved this project under Expedited Status Review. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Please be aware of the following:

1.   Any significant change in the research protocol as described should be reviewed by this Committee prior to altering the project.
2.   Notify the IRB about any new investigators not named in original application.
3.   When signed consent documents are required, the primary investigator must retain the signed consent documents of the research activity.
4.   If this is a funded project, keep a copy of this approval letter with your proposal/grant file.
5.   If the results of the research are used to prepare papers for publication or oral presentation at professional conferences, manuscripts or abstracts are requested for IRB as part of the project record.

Please inform this Committee or myself when this project is terminated or completed. As noted above, you must also provide IRB with an annual status report and receive approval for maintaining your status. If you have any questions, please contact me at npoell@bakeru.edu or 785.594.4582.

Sincerely,

Nathan Poell, MA
Chair, Baker University IRB

Baker University IRB Committee
        Scott Crenshaw
        Erin Morris, PhD
        Jamin Perry, PhD
        Susan Rogers, PhD

Appendix D: Participant Consent Form

You are invited to participate in research conducted by Brent Catlett related to how educators use Twitter as a professional learning network. Your participation will take approximately 45-60 minutes.

The purpose of this research is to study educators' experiences with the use of Twitter as a professional learning network as a means of professional development. This study is also being conducted to determine what educators perceive to be the benefits and drawbacks of using Twitter for a professional learning network.

I am asking your permission to conduct and record an interview with you as part of the research. The recording will be used to assist in writing field notes. The recording will be stored on a secure digital file and will be destroyed after the dissertation has been defended. I will not use the recording for any other purpose than those stated in the consent form.

Your signature on this form grants me, as the investigator, permission to record you as described above during participation in the above-referenced research.

If you have read this form and have decided to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent at any time without penalty. You have the right to refuse to answer particular questions. Your individual privacy will be maintained in all published and written data resulting from this study.

If you agree to participate in this research, please sign your name on the line below along with filling out the other information below.

_____   _____
Sign your name   **Date**

_____
Print your name

_____
Email Address

_____
Phone Number

Appendix E: Initial Direct Message Invitation for Participation in Study

I am an EdD student studying why educators use Twitter as a professional learning network. I am conducting a qualitative study that will require the participant to be interviewed by me. There will be 5 individuals that participate from all over the United States in 5 different geographic regions. You are invited to participate in research conducted by me related to educators use of Twitter as a professional learning network and the benefits and drawbacks of using Twitter for professional learning. Your participation will take approximately 30-60 minutes. Would you be interested in participating in a brief interview with me to discuss why you use Twitter as a professional learning network and what are the benefits and drawbacks of participating in professional learning using Twitter?