A HERMENEUTIC PHENOMENOLOGICAL STUDY OF SCHOOL

ADMINISTRATORS' PARTICIPATION IN PERSONAL

LEARNING NETWORKS AND PRIVACY ISSUES

A DISSERTATION IN

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DOCTOR OF EDUCATION

by
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University of Missouri-Kansas City, 2014

ABSTRACT

The purpose of this hermeneutic phenomenological study was to understand how school administrators made sense of their experience utilizing social networking tools to participate in personal learning networks (PLN) while managing privacy. As school administrators digitally collaborate with PLN colleagues, they must construct an online identity and develop and cultivate relationships. Additionally, to engage in a PLN one must decide how much information to disclose on the internet as well as determine methods to regulate online privacy. The potential impact of disclosing too much information could cause undue professional or personal harm against an individual. However, failure to disclose information to PLN members could negatively impact relationships and compromise others' perception of trust.

For this study, interpretive phenomenological analysis (IPA) methods were used with six educational administrators. Data were collected through semi-structured interviews; written documents of participants' experience and perception of PLNs; and analysis of participants' Tweets over a thirty day span. Interviews were analyzed according to a four-part

analytical process. Written documents and Tweets were coded using enumerative and thematic data analysis methods.

The findings of the study revealed three emergent themes that explained school administrators' understanding of PLN participation and privacy issues, which were titled: (1) Must Share and Exchange Resources; Help Others Grow; (2) Power of the People; Personal and Professional Benefits, Powered by PLN; and (3) Privacy Should Not Be the Priority. The findings affirmed school administrators' understanding of participating in a personal learning network utilizing social networking tools as being solely motivated by the sharing of information and resources, with little to no regard of privacy issues.

The results of this study have implications for school leaders as well as digital learning community facilitators.

APPROVAL PAGE

The faculty listed below, appointed by the Dean of the School of Education, have examined a dissertation titled "A Hermeneutic Phenomenological Study of School Administrators' Participation in Personal Learning Networks and Privacy Issues," presented by James Derek Brauer, candidate for the Doctor of Education degree, and certify that in their opinion it is worthy of acceptance.

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GLOSSARY

blog. Website that contains journal-like entries, more commonly referred to as posts (Nussbaum-Beach & Hall, 2012). Most blogs are constructed in chronological order so readers can find the most recent blog post first.

community of practice. A community of practice is a group of practitioners working toward an initiative and must possess the following three criteria: (1) shared interest(s); (2) collective competency/awareness amongst group members; and (3) a common, shared purpose (Wenger, 1998).

microblog. Technological tool that enables users to publish posts, generally less than 140 characters (i.e., Twitter, Plurk).

personal learning environment. Collection of web-based tools that enable a user to gather, organize, and guide their learning (Attwell, 2007; Wilson, 2008).

personal learning network. Network comprised of individuals, online and offline, who share ideas and resources for personal and/or professional gain (Nussbaum-Beach & Hall, 2012).

podcast. Similar to the concept of a blog post, a podcast is an audio or video recording that can be retrieved and/or subscribed to by users.

social bookmarking. Web-based tools that enable users to organize, sort, and file keywords; can be shared with other users on the site.

social networking. A structure through which users are connected by various filters (e.g., relationships, interests, education, employment).

Twitter. A microblogging platform that enables users to publish 140-character posts, known as Tweets, and view or share Tweets from others.

vlog. Short for video log; journal-like video posts that are generally arranged in chronological order so viewers can find the most recent vlog post first.

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It is with great enthusiasm that I acknowledge the academic support, guidance, trust, and encouragement from my committee members: Loyce Caruthers, Jennifer Friend, Robert Leachman, and Dianne Smith. I would particularly like to extend my warmest gratitude to my chair, Loyce Caruthers, for her unwavering assistance and ability to calm my nerves throughout the study.

I would also be remiss if I did not acknowledge the unconditional love, understanding, and patience from my wife, Mandi Brauer, throughout this entire process. The coursework, written examination, research proposal, and dissertation writing phases significantly impacted our immediate and extended family. The sacrifice was experienced by those closest to me, which I hope is reconcilable. I am happy to announce that Mandi can now have her husband and best friend back. She may be as happy to know she will also regain our dining room table, which has served as a makeshift library and writing center during the past few years.

DEDICATION

To my sons, James and Jonathan –

It has been said that "life is short; enjoy it to the fullest."

Some people choose to live their lives building enterprises and conglomerates, while others feverishly work to support the sustainability of such companies.

Some people choose to govern and lead people or organizations, while others commit, dedicate, and pledge themselves to the mission of its leaders, people, and organizations.

Some people are determined to gain fame and fortune, while others humbly relish all they have accomplished and gained.

Some people choose to focus their life's work toward solving societal problems, while others work diligently to maintain a peaceful, serene life.

Some people set out to accomplish all of the above, while others will try, but may fail repeatedly.

Know that I will forever be proud of my children, regardless of the choices and paths pursued.

Here is to a fruitful life – rich with laughs and tears, trials and errors, wins and losses – knowing you will always have the unwavering support and unconditional love of your mother and me.

CHAPTER 1

INTRODUCTION

In November 2010, the United States Department of Education released the National

Education Technology Plan (NETP) (U.S. Department of Education, 2010) with the intent of

transforming and revolutionizing the American educational system through technology.

Through the use of technological tools frequently utilized by educators, the education model

can experience an increase of engagement, empowerment, and relevance for all learners. To

assist educators in the development of personalized and individualized learning experiences,

the U.S. Department of Education supports the use of personal learning networks (PLN), or

communities of practice (CoP). Implementation of PLN and CoP can enhance educators'

opportunities to digitally connect, collaborate, and share resources. Nussbaum-Beach and

Hall (2012) describe PLN as a network comprised of individuals, online and offline, who

share ideas and resources for personal and/or professional gain. A community of practice is a

group of practitioners working toward an initiative and must possess the following three

criteria: (1) shared interest(s); (2) collective competency/awareness amongst group members;

and (3) a common, shared purpose (Wenger, 1998).

The NETP 2010 established a solid vision for educators:

> In connected teaching, classroom educators have 24/7 access to data about
> student learning and analytics that help them act on the insights the data
> provide. They are connected to their students and to professional content,
> resources, and systems that empower them to create, manage, and assess
> engaging and relevant learning experiences for students both in and out of
> school. They are also connected to resources and expertise that improve their
> own instructional practices, continually add to their competencies and
> expertise, and guide them in becoming facilitators and collaborators in their
> students' increasingly self-directed learning. Like students, teachers engage in
> personal learning networks that support their own learning and their ability to
> serve their students well (p. 40).

Utilizing technological tools and social networking resources, educators can expand their role from what was historically executed with relative independence toward one in which teachers work with colleagues from other school buildings, districts, states, countries, and continents. Digital PLN and CoP afford teachers with the ability to "collaborate with their peers and leverage with world-class experts to improve student learning" (p. 42).

The NETP 2010 included goals and recommendations in five core areas: (1) learning; (2) assessment; (3) teaching; (4) infrastructure; and (5) productivity (p. x). Specific to the purpose of this research study was the NETP goal of "teaching," which stated "professional educators will be supported individually and in teams by technology that connects them to data, content, resources, expertise, and learning experiences that enable and inspire more effective teaching for all students" (p. xviii). A sub-goal was included that stated educators should "leverage social networking technologies and platforms to create communities of practice that provide career-long personal learning opportunities" (p. xviii).

Online PLN and personal learning environments (PLE), powered by social networking tools, are critical to achieving this goal. Through PLN and PLE, educators can create professional development opportunities aligned to their interests and proceed at their own pace. Furthermore, educators are capable of discussing educational issues with other practitioners in real-time.

My awareness of PLN began after I attended a digital conference dedicated to the topics of PLN, online communities of practice, and digital collaboration. After learning about the tenets of PLN and digital collaboration, I was immediately interested in creating my own digital channels to communicate with educators around the world. At that time, I was working as an assistant principal and launched my own blog that centered on the theme of

educational transformation. Currently, I am a virtual school principal and utilize PLN tools to connect with colleagues on topics related to online learning, school administration, and education policy and news.

Because of my PLN participation, I have been able to digitally connect, collaborate, and engage in informal dialogue with academics, practitioners, advocates, and pre-service educators across the world. I believe my professional voice can be amplified by using social networking tools, as I am able to penetrate circles of educators that I would not ordinarily have been able to access. Additionally, my PLN has become a powerful tool for informal learning that is entirely guided by my professional needs and interests. Through engagement with those in my PLN, I have experienced how learning truly is social and collaborative. My informal learning has been directly influenced by those within my PLN, just as I have played a role in their learning process.

Statement of the Problem

The problem of this study was related to the emerging web-based technologies that made digital communication and learning more social and communal, resulting in concerns about privacy issues for users. Educators have begun utilizing social networking tools to create PLNs. Through a PLN, educators can collaborate with peers by blogging; microblogging; vlogging; podcasting; discussing in online forums; social bookmarking; chatting; creating multimedia files; attending online workshops and conferences; and/or by uploading images, photographs, audio, and video (Duggan & Brenner, 2013; Purcell, Heaps, Bechanan, & Friedrich, 2013; Colibaba, Vlad, & Dinu, 2012; Ivanova, Grosseck, & Holotescu, 2012; MMS Education, 2012; Tsai, Laffey, & Hanuscin, 2010; Hur & Brush, 2009; Gray, 2004).

School administrators currently participating, or wanting to participate, in a PLN must be willing to share varying amounts of personal and professional information, which will ultimately become a permanent digital footprint. PLNs require connecting and building relationships with others. Therefore, it is essential for participants to establish an online identity and develop relationships with others. Participants must make decisions concerning how much personal information they wish to have published on the web as well as how they will regulate their privacy (Johnson, Egelman, & Bellovin, 2012; Kairam, Brzozowski, Huffaker, & Chi, 2012; Shi, Xu, & Zhang, 2012; Stutzman & Hartzog, 2012; Kramer-Duffield, 2010; Williams et al., 2009). Some fear disclosing too much information as it could potentially cause undue professional or personal harm against the individual (Das & Kramer, 2013; Sleeper et al., 2013; Johnson et al., 2012; Shi et al., 2012). However, failure to disclose information to others within a PLN could negatively impact relationships and the sense of trust with the community (Nikolaou & Tsolakidis, 2012; Fang & Chiu, 2010; Harrison & Thomas, 2009).

<h1 style="text-align:center">Purpose Statement</h1>

The purpose of this hermeneutic interpretive phenomenological study was to understand the phenomenon of how public school administrators participated in a PLN through the use of social networking tools and how they managed privacy. The phenomenon of privacy is traditionally defined as a "state of social withdrawal"; however, for this study privacy is generally defined as "ongoing self-regulation of setting boundaries toward others with whom we interact" (Palen & Dourish, 2003, p. 1).

Phenomenology is used by qualitative researchers to explore a phenomenon in its entirety, as well as better understand how participants make sense of it (Grbich, 2007;

Boeree, 1998). Phenomenology is rooted in the following: (1) the researcher focuses on individuals' life experiences; (2) the researcher is the actual data-gathering instrument; and (3) the researcher identifies, and makes meaning of, a phenomenon based upon actual experiences of individuals (Creswell, 2007; Moustakas, 1994; van Manen, 1990). Hermeneutics is related to phenomenology, although in this tradition the researcher's role is to report and interpret participants' experiences. Smith (1997) described hermeneutics as producing rich textual descriptions to ascertain the "life-world" of individuals as they experienced phenomena.

I sought to understand how school administrators participating in an online PLN connected with colleagues and understood their privacy. Having experienced many positive benefits through my respective PLN, I believe the findings of the study will help increase participation by other school administrators as well as generate an understanding of how to make sense of online privacy. Empirical evidence of school administrators' PLN participation and privacy boundary regulation is significantly limited (Das & Kramer, 2013; Sleeper et al., 2013; Colibaba et al., 2012; Couros, 2010; Lai, Pratt, Anderson, & Stigter, 2008). This research study offers educators a vantage into the participants' worldview, insight, and experience of connecting with others in a digital PLN, and most notably, how they perceived and understood the role of privacy as it related to their digital collaboration.

As a current school administrator, I strategically focused on school administrators with the intent of finding results of relevance and applicability to me. Additionally, research supported the high impact school administrators had on teacher development, learning organizations, and student achievement outcomes.

Marzano, Waters, and McNulty (2005) investigated the effect of leadership "responsibilities" exhibited by school principals and the effect on student achievement. Data suggested that student test scores increased as much as ten percent when the learning organization had an effective school leader. School leaders must be transformational in their leadership approach, which Bass (1997) asserted was a proven approach needed in order to garner successful reform efforts. Leithwood (1996) posited that school leaders must focus on setting directions, developing people, and redesigning the learning organization. Highly-effective schools are those that contain principals who provide ongoing support to students, faculty, and staff (Leithwood, Louis, Anderson, & Wahlstrom, 2004). The impact of student learning is directly correlated to the efforts and motivations of teachers and staff, both individually and collectively. School principals must ensure their organizational members are acquiring collaborative opportunities, while also working to change school culture and create meaningful professional learning communities.

Principals cannot successfully complete all the basic leadership roles alone. Deal and Peterson (1999) insisted that principals contributed to the construction of schools that invited participation, collaboration, and interdependence. School leaders should redesign learning environments and learning networks so that "every member becomes champion, visionary, and poet" (p. 141). School administrators must create learning networks that lead to interdependence, collaboration, and collective continuous improvement, rather than individual development (Carroll, 2009).

School leaders must focus their relationship-building and capacity-building efforts for all organizational members to benefit. Elmore (2000) expanded this further:

> The job of administrative leaders is primarily about enhancing the skills and knowledge of people in the organization, creating a common culture of

expectations around the use of those skills and knowledge, holding the various pieces of the organization together in a productive relationship with each other, and holding individuals accountable for their contributions to the collective result (p. 15).

The role of leadership is ultimately to "cause" people, to fuel people with the desire to build greater organizational capacity (Fullan, 2004). This collective capacity will not diminish or destroy the important role of an individual educator. DuFour and Marzano (2011) argued that it "reaffirms that importance by creating conditions that promote the ongoing, job-embedded professional learning vital to the continuous improvement of educators" (p. 67). Lastly, Markow and Pieters (2011) conducted a survey that indicated two-thirds of teachers and seventy-eight percent of principals indicated that an increase in collaboration "would have a major impact on improving student achievement" (p. 9).

I designed this study specifically to learn how school administrators digitally collaborate, learn with others, and enhance their professional development through PLN participation while managing privacy.

Research Questions

Central question:

- How do school administrators make meaning of their experience utilizing social networking tools to participate in a personal learning network and understand privacy?

Subquestions:

- How do school administrators describe their experience with personal learning networks and privacy?

- What themes are identified from their experience for the group?

Conceptual and Theoretical Framework

Miles and Huberman (1994) described a theoretical framework as a written demonstration that explained "the main things to be studied – the key factors, concepts, or variables – and the presumed relationships among them" (p. 18). As theoretical and conceptual frameworks are constructed, they could contain the following: (1) researcher's own experiential knowledge; (2) existing theory and research; (3) pilot and exploratory research; and (4) thought experiments (Maxwell, 2005, p. 37). This theoretical framework is guided by existing theories that help "map" and "explain" what I believe to be true of the phenomenon.

This theoretical framework includes traditional and newer theories of learning that can be applied to learning environments utilizing emerging technologies. At the turn of the twenty-first century, newer web-based communication tools shifted how technologies could be used for teaching and learning. As a result, newer learning theories have emerged that challenge individuals to explore how emerging technologies positively affect teaching and learning (Anderson, 2010).

This research design is based on a theoretical framework rooted in the principles of PLNs. The theoretical underpinnings, which provide a holistic understanding of educators' creation of, and participation within, a PLN, include: personal learning networks; social cognitive theory; adult learning theory; connectivism; social penetration theory; and boundary regulation theory.

Personal Learning Networks

Early in the twenty-first century, internet technology evolved away from sources that allowed users only to consume information (Web 1.0) toward sources that allow users to create, connect, share, and contribute content (Web 2.0). With the new technology came

opportunities for users to begin personalizing and self-guiding their learning. The Web 2.0

technologies also began to afford individuals the resources to collaborate with others, shifting

learning experiences to become joint-efforts with others. Thus, grew the PLE.

A PLE is not an application or software tool; rather, it is a collection of web-based

tools that enable a user to gather, organize, and guide their learning (Attwell, 2007; Wilson,

2008). The term was first coined during the annual Joint Information Systems Committee –

Centre for Educational Technology Interoperability Standards conference in 2004 (Schaffert

& Hilzensauer, 2008). Soon after its ideological birth, various researchers defined PLE as

serving different purposes. PLEs are described as a user-controlled system that grows and

evolves with technological services; a collection of software applications (Schaffert &

Hilzensauer, 2008); an internet-driven system for interacting with others (Johnson &

Brierley, 2007); and a user's technological infrastructure for forging connections, generating

content, and sharing resources (Downes, 2007).

A PLE can also be thought of as a user's digital landscape for informal learning,

driven by the user's needs and wants. Attwell (2006) cited the primary benefit of a PLE as

affording users the autonomy to create their own learning environments as they create,

consume, share, and collaborate with others within the technological environment. Users can

retrieve digital resources, documents, information, tools, and personal connections from

within their PLE. Additionally, users can become content authors, syndicators, organizers,

authorizers, and curators (Downes, 2006).

Out of the grander digital landscape of a PLE, users can begin connecting with others

for personal and/or professional purposes. Once groomed and cultivated, these connections

become the foundation of an individual's PLN. This network functions via online platforms

and is strategically comprised of weak and strong ties to the user (Rajagopal, Joosten-ten, Van Bruggen, & Sloep, 2012). The PLE is a flexible system that is taken control of by individuals to manage their learning. At one's disposal include blog tools; social networking tools; crowdsourcing sites; knowledge-management resources; video tools; and content curation tools. Individuals use these resources as they build a group of people with whom they will connect and collaborate in a quest for information, assistance, resources, and/or support (Stanley, 2010). In short, this is a personal learning network.

At the center of this evolving network is the individual – orchestrating and managing the entire environment to select, browse, and interact with only the most relevant resources and connections (Schaffert & Hilzensauer, 2008; Rajagopal et al., 2012). In Fig. 1.1, Couros (2006) depicted a visual format of how a PLN would be represented for an educator. For the purpose of this theoretical framework, a PLN is defined as "…the sum of all social capital, and connections that result in development and facilitation of a personal learning environment" (p. 125).

Social Cognitive Theory

Social cognitive theory is grounded in the idea that individuals are ultimately in control of their own actions, beliefs, and emotions. People possess self-beliefs, which directly influence what a person does, or does not, seek to do. Bandura (1986) asserted that "what people think, believe, and feel affects how they behave" (p. 25). Ultimately, individuals' self-belief is the key mitigating factor for their sense of control. Social cognitive theory is also known as social learning theory, asserting that humans learn based upon observations of other humans. Individuals learn from others in various social contexts. Observable behaviors that appear to yield positive outcomes tend to become behaviors internalized and replicated
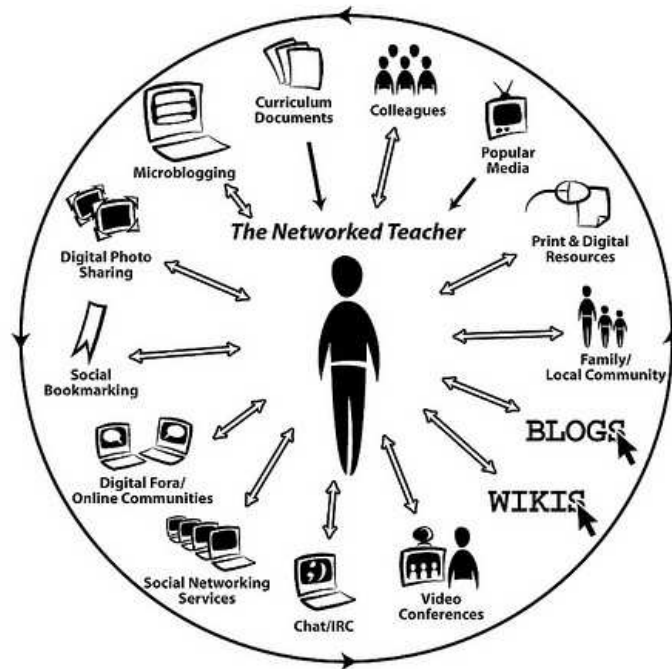
Figure 1. "The Networked Teacher"

The Networked Teacher

Figure 1. "The Networked Teacher" is a visual depiction of an educator's potential personal learning network (PLN). Adapted from Couros, A. (2006, December 18). Typical teacher network [Couros' Flickr image upload]. Retrieved from http://www.flickr.com/photos/courosa/344832591/

by others (Bandura & Walters, 1963).

At the absolute core of social cognitive theory is self-efficacy, "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391). If individuals do not have the confidence and conviction to successfully execute a task, they will not make an attempt to do so. People will also make decisions to engage in future activities based upon their previous success and/or failure (Pajares, 2002). In short, individuals will follow through with particular activities and tasks with which they feel confident and will avoid those with which they do not. Educators' beliefs in their respective efficacy guide their professional outcomes.

Self-efficacy is also a determinant of how much effort an individual is willing to allocate toward task-completion and how long they will persevere and remain resilient when faced with challenges and obstacles (Pajares, 2002). Individuals with high self-efficacy possess greater intrinsic motivation. These individuals are capable of setting personal goals and attempting tasks regardless of difficulty. Higher self-efficacy will also enable a person to feel confident enough to reattempt task completion despite potential unsuccessful initial attempts. Individuals that possess high self-efficacy feel an internal drive to complete tasks, regardless of difficulty. However, if they are unsuccessful in their attempt they are less willing to reattempt and work through potential challenges and hardship. This notion of self-efficacy provides better insight as to why some educators may cite specific professional development tasks and learning as being irrelevant and not aligned to their daily professional needs.

Adult Learning Theory

Learning theories prior to the mid-20th century were centered on changes in human behavior, but lacked a specific understanding of how adults learned. Knowles (1968) asserted that adults learned very differently than individuals under the age of eighteen. Adults were more self-directed with their learning, built upon their previous experiences, and were more motivated to learn information that was "closely related to the developmental tasks of his or her social role" (p. 272). According to Tough (1971), the majority of adults self-directed their acquisition of knowledge through informal learning opportunities. Self-directed learning was defined by Knowles (1975) as "a process which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing

appropriate learning strategies and evaluating learning outcomes" (p. 18). Knowles (1984)

extended the classification of adult learners as possessing a greater self-directed learning

tendencies and richer professional and personal experiential context; a desire to relate

learning to present goals; and problem-centered and task-oriented practices (Knowles, 1984).

Adults are intrinsically motivated to pursue learning that is formal and informal, but only if

what one seeks to learn is directly connected to their personal or professional needs. Learning

that is imposed or pressed upon adults will be met with little satisfaction or compliance.

Adult learners must be able to draw upon their previous experiences and schema to

understand issues and engage in problem-solving (Merriam & Cafferella, 1999). Adults need

to be afforded ample time to critically think, analyze, and reflect on various issues. Lastly, in

order for adults to expand and develop their ideas, they must be provided opportunities to

"think critically, which is mandatory to effecting a transformation" (p. 330).

      The focus of how adults learn, compared to learning processes for children, is better

known as "andragogy." Though first coined by Alexander Kapp in the early nineteenth

century, Knowles (1968) introduced the concept to American scholars more than a century

later. Rossman (2000) stated that andragogy, "…has gained wide acceptance as a set of

assumptions, designed to guide the development of programs for adults" (p. 1). Andragogy is

built upon several assumptions related to adult learning theory, which include: (1) adults

need to know why they must learn something; (2) adults must guide and self-direct their own

learning; (3) adults must engage in experiential learning; (4) adults must learn information

that is relevant to their personal and professional needs; (5) adults learn through problem-

solving and task completion; and (6) adults must ultimately be motivated to learn (Knowles,

Holton, & Swanson, 1995).

In an effort to avoid an institutionalization of learning, Illich (1973) encouraged learners to establish learning webs that yield open access to informational resources and networking opportunities with communities of learners. Illich advocated for adult learners to utilize emerging environmental and technological resources to access information, solve problems, and collaborate within a larger network of learners. Similar sentiment was shared by Hase and Kenyon (2000), who affirmed that individuals should be equipped with the power, control, and self-determinism to guide their learning.

Modern technological advances with Web 2.0 and social media enable adults to further their formal and informal learning through self-directed experiences. Internet technologies have forever altered the quantity and accessibility of information readily available to individuals. Digital communication has spawned efficient means of generating, retrieving, and archiving information via text, voice, and video recording. Communication can be mediated from individual-to-individual, individual-to-multiple persons, or multiple persons-to-multiple persons – synchronously or asynchronously. The advent of social media and social networking websites afford learners with opportunities to generate and answer questions, collaborate with others, and share resources. Now, information is widely available through Open Source sharing projects, repository projects, wiki-type websites, and websites populated with user-created and crowd-sourced information. Whereas learners once relied exclusively on educators for the dissemination of information, today's learners can now learn socially. Search engine technology has also rapidly transformed using advanced algorithms that provide individuals with the power to retrieve information from billions of websites in a fraction of the time.

As Andersen (2004) asserted, technological advances have transformed the modern digital learning environment. Web 2.0 and technological tools enable adults to extend learning outside a traditional classroom structure. Now, learners tap into the power of blogs, microblogs, crowd-sourced wikis, and other social networking tools to work collaboratively with others. But because a learner must navigate through an excess of digital information, it is essential they acquire the capabilities and competencies to become "the major agent in their own learning, which occurs as a result of personal experiences" (Hase & Kenyon, 2007, p. 112). Ultimately, heutagogy seeks to enhance one's self-efficacy utilizing web-based tools and informational sources. The importance of heutagogy was also furthered by Hase and Kenyon (2000), who indicated that "knowing how to learn will be a fundamental skill given the pace of innovation and the changing structure of communities and workplaces" (p. 1).

Web-based technology has empowered individuals with the use of user-centered web tools that enable one to contribute and share information. Online communities and networks have formed, empowering groups of learners to access, create, share, curate, and archive information. Through online communities and social networks, learning has become collaborative, social, and chaotic. Siemens (2004) described this chaotic learning:

> Unlike constructivism, which states that learners attempt to foster understanding by meaning-making tasks, chaos states that the meaning exists – the learner's challenge is to recognize the patterns which appear to be hidden. Meaning-making and forming connections between specialized communities are important activities (p. 1).

Boyd (2007a) classified web-based social networks as having four distinct characteristics. First, communication is always present and flowing through time and distance, which allows individuals to communicate at different times and locations. Secondly, individuals' digital contributions can be searched within the social network. Such

contributions include text; blog entries; comments; photos; avatars; and/or recordings. Third, digital contributions by social network participants are generally highly replicable. Because of the purpose of social networks, digital contributions by participants are generally intended to be commented upon, shared, linked, and reposted on others' social networking profiles and websites. Lastly, social network websites contain an audience that can be invisible or anonymous. Participants do not always have access to who may be accessing, sharing, and engaging with one's digital contributions.

To learn in a digital environment, individuals must seek information from as many different sources, or friends, as possible and then begin to self-organize information to make meaning. Rocha (1998) defined self-organization as a "spontaneous formation of well organized structures, patterns, or behaviors, from random initial conditions" (p. 3). The Information Age in which we currently live requires individuals to establish connections with their sources of information and ultimately create patterns from these connections. Technology has morphed the acquisition of learning away from our personal experiences toward connections formed with other individuals and sources of information. Stephenson (1998) stated that "experience has long been considered the best teacher of knowledge. Since we cannot experience everything, other people's experiences, and hence other people, become the surrogate for knowledge. 'I store my knowledge in my friends' is an axiom for collection knowledge through collecting people" (p. 1).

Connectivism

This was the catalyst for the inception of a specific learning theory for the digital age; it holds the premise that all learning is reliant on the connections built by an individual and sees further acquisition of knowledge as being more important than what one already knows.

Siemens (2005) described this learning as a network of nodes that are each full of information. Individuals ultimately learn by acquiring and connecting to other nodes of learning. As individuals make connections to other nodes, information is extracted, fed back into the network, and ready to again be shared with peers, experts, and gurus. This cyclical process of learning allows individuals to always remain current and proficient in their respective field. Through connectivism, individuals increase their own learning network and continue to forge connections to nodes within other learning networks. Ultimately, connectivism does not stress the information attained; instead it focuses on the ways in which individuals create paths to new knowledge (Anderson, 2010).

At the focal point of connectivism is the individual. The personal knowledge attained is the entire network within which one is positioned. Knowledge is fed into other organizations, institutions, and digital environments and is then modified and returned to the network, ultimately deriving more meaning and knowledge for the individual. "This cycle of knowledge development (personal to network to organization) allows learners to remain current in their field through the connections they have formed" (Siemens, 2004, p. 5).

Connectivism allows learning to occur outside of traditional and formal environments; individuals can learn away from school buildings and classroom walls. Connectivists would argue that individuals do not truly learn until they have the autonomy to create their connections to other nodes of information found within digital communities of like-minded individuals. Downes (2006) stated:

> Learning…occurs in communities, where the practice of learning is the participation of the community. A learning activity is in essence a conversation undertaken between the learner and other members of the community. This conversation, in the Web 2.0 era, consists not only of words, but of images, video, multimedia and more (p. 22).

The final component of this research study's theoretical framework is an understanding of how individuals establish relationships online and maintain their privacy. Because connectivism requires individuals to seek other nodes of information within a network, a digital relationship must be forged. This relationship may masquerade in pure anonymity, since the individual may merely be acquiring information as a passive reader. But active participants in a PLN must connect, share, and collaborate with others. No different than meeting somebody face-to-face for the first time, it is important to understand how relationships are established and maintained.

Social Penetration Theory

Altman & Taylor (1973) described a process of relationship development (social penetration theory) that indicated that the longer a relationship was established, communication amongst individuals would transition from being shallow and guarded to becoming deeper, more personal, and intimate. The first component is the "orientation of interaction," which is generally conducted in a public and open environment. During this stage of development, individuals immediately analyze others and draw upon their observations and inferences. First impressions are critical in this stage. In the "exploratory affective exchange" stage, individuals tend to drop their guard and reveal aspects of their personality that were previously guarded. During this stage, individuals reveal more details of their lives (Roloff & Miller, 1987, p. 259). As relationships strengthen, individuals are more willing to divulge personal information about their self, work, relationships, and family. Lastly is the "stable exchange" phase, described as the most intense phase. At this stage of relationship development, individuals have full confidence in one another and hold no

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secrets. They are no longer concerned with the barriers they once used to shield and protect themselves from exposing potential vulnerabilities.

Participation in PLNs require individuals to connect and collaborate. To do so, individuals must progress through the "social penetration steps in order to achieve the desired relationship and/or friendship" (Smith, 2002, para. 10). Just as in face-to-face experiences, digital relationships undergo a similar development phase that includes vetting others and choosing to keep certain information private. This adoption of privacy must also be explored as the notion behind PLNs is to collaborate, connect, and share personal and professional details of one's life. Additionally, many web-based and social networking tools are becoming embedded in daily personal activities of many people. As a result, individuals wishing to utilize PLN tools must make decisions concerning the openness and privacy of their respective personal and professional affairs.

Boundary Regulation Theory

In the traditional sense, privacy was deemed by Altman (1977) to be a "boundary regulation system," determining one's "openness" and "closedness," entirely self-regulated by the individual. Given the technical parameters and mixed purposes of varying social networking and web-based tools, individuals must make choices concerning how to regulate their privacy boundaries. There are three boundaries said to be critical to privacy management: (1) disclosure – determinations made about what information should be disclosed under various circumstances; (2) identity – which includes one's affiliations to various organizations and how to disclose identity based upon an audience; and (3) temporality – boundaries set based on past, present, and future implications of disclosed information (Palen & Dourish, 2003).

Participants in online PLNs make the concerted decision to "go public" and be "seen" or "heard." In many cases, such participants wish to market their expertise, lend their knowledge, or learn from others. Active participation in a networked community requires individuals to share knowledge and find the appropriate amount of information to disclose, without compromising relationships with others. According to Palen and Dourish (2003):

> Not only do we take pains to retain certain information as private, we also choose to explicitly disclose or publicize information about ourselves, our opinions and our activities, as means of declaring allegiance or even of differentiating ourselves from others (p. 3).

The dilemma concerning disclosure for PLN participants is that the very nature of participating in such a community requires disclosure and full participation. PLN members must strategically set a boundary of what to disclose without compromising their privacy, which I now address in further detail.

Individuals must also be cognizant of the overall identity they wish to share when participating in PLNs. As individuals create online content, the public will generally perceive their content as work of the individual; however, the individual will always be linked to the particular organizations with which they are affiliated – employer, educational institution, family, community, or circle of friends. Individuals must also set strict boundaries regarding how much information to disclose so that it does not negatively impact their perceived identity. Information accessible to the public via the internet is open to interpretation and subjectivity by others, leaving an individual with little power or control over influencing how others perceive information. Ultimately, this leaves individuals vulnerable to a public that can fairly, or unfairly, judge and critique online content (Palen & Dourish, 2003).

The final component of Altman's "boundary regulation system" considered the temporal realities of past, present, and future implication on regulating one's online privacy.

An individual's decision to disclose or publish online information begins the temporal sequence of potentially affecting future actions based upon one's historical digital actions. Individuals have limited control over how online content will be judged or perceived in future contexts, leaving difficult decisions about what content to digitally publish and in what formats. Do individuals wish to have flexibility to alter and amend their past publications at a later date? Is this even possible, give the likelihood that other PLN members redistributed, quoted, and/or referenced original postings (Palen & Dourish, 2003)?

"Technology itself does not directly support or interfere with personal privacy; rather it destabilizes the delicate and complex web of regulatory practices" (p. 5). In order for PLN members to fully participate, individuals must negotiate their boundary regulations and make critical decisions on what identity to publicize and how much privacy should be regulated.

Overview of Methodology

In this study, I employed interpretive phenomenological analysis research methods to understand how the participants made sense of their experiences using social networking tools to participate in their PLN while managing privacy. Qualitative research methods transcend simple statistics and numeric data sources to help the reader wholly understand the experiences of others. Creswell (2007) stated that qualitative designs helped empower and elevate the accounts, experiences, stories, and realities of others. Through qualitative methods, individuals' stories and voices are captured and shared with a much larger audience. "Interactions among people…are difficult to capture with measures" (p. 40) and thus, are best shared via qualitative methods.

In regard to phenomenological approaches, Grbich (2007) stated that researchers sought to unravel the "hidden meanings" and overall essence of an experience based upon

how participants made meaning of their experiences (p. 84). Unlike case study traditions, which report on a single unit of analysis, phenomenological studies derive meaning from a phenomenon based upon common themes/experiences that are analyzed from the data of all participants (Creswell, 2007). The unit of analysis within this study was the understanding of privacy.

> Phenomenology literally means the study of phenomena. It is a way of describing something that exists as part of the world in which we live. Phenomena may be events, situations, experiences or concepts. We are surrounded by many phenomena, which we are aware of but not fully understand. Our lack of understanding of these phenomena may exist because the phenomenon has not been overtly described and explained or our understanding of the impact it makes may be unclear (Hancock, 1998, p. 4).

Creswell (2007) stated that phenomenological studies describe "the meaning for several individuals of their lived experiences of a concept or phenomenon…describing what all participants have in common" (pp. 57-58). Researchers employing phenomenological studies collect data from participants that have experienced the phenomenon and derive an overall essence, or experience, of the participants. Ultimately, the researcher's findings detail what the participants experienced and how they experienced the phenomenon (Moustakas, 1994).

"Personal identity is tied to the soul. A person's soul is her psychological essence, a nonphysical entity in which thoughts and feelings take place" (Conee & Sider, 2005, p. 10). The meaning of this study was revealed through the essence ascertained by the participants, who revealed personal experiences of their PLN participation and perceptions toward their privacy. For this reason, phenomenology was an appropriate research tradition, since it "focuses on descriptions of what people experience and how it is that they experience what they experience" (Patton, 2002, p. 107).

The hermeneutic form of phenomenological inquiry produces multiple meanings; multiple interpretations may result from different perspectives (Chang, 2010). Hermeneutics relies on the interpretation of the researcher, which is subject to the researcher's past experiences and context.

> I cannot remove my subjectivity from my work, but I can take it up with a sense of responsibility in recognizing how it translates into the way I listen to my participants, what I hear, what stands out to me, and how I interpret it (Moules, 2002, p. 24).

To effectively insert hermeneutic inquiry into a research design's findings, the researcher should never determine findings to be "absolutes"; instead, they are mere interpretations concocted by the researcher's biases and conceptual frameworks.

Patton (2002) encouraged researchers to describe the social environment that encompassed the study's participants, highlighting the methods of grouping participants, communication patterns, background characteristics, and/or changes in the environment. The setting for this study was non-physical; it was a digital learning community that utilized a microblogging resource (Twitter) for its PLN collaboration. Members of this learning community represented various educators, including teachers; administrators; academics; and others interested in K-12 education topics.

The online community created its PLN presence on Twitter in January of 2013, founded by two school administrators. To preserve confidentiality for this study's participants, the learning community name has been purposely omitted. I first became acquainted with this specific learning community after viewing several Twitter posts that had been shared and copied by some Twitter members I had already followed. By clicking on the hashtag that was posted with the Tweets, I was able to begin following the live digital conversation. Inevitably, I participated with a few of the questions posted by the facilitators.

The online community of learners meets weekly for one hour to discuss a different educational topic in an informal question-and-answer format. The session is moderated by three different community leaders who gauge the pulse of the participants and determine when to field a new question. Participation is open and accessible; there are no admission requirements or guidelines. To reply to a question, participants typically provide a 140-character or less reply which includes a hashtag identifier (such as #nameofPLN). Participants have the option to respond to others, repost a participant's posting, or mark a posting as a favorite. This activity will then become visible on a user's Twitter feed. At the conclusion of each week's session, the moderators email a transcription of the hour-long session through a content curation tool that automates the process.

Because there is no formal registration process, it is not possible to track the total number of "members" that belong to the online learning community. According to a social media hashtag analysis of Twitter session activity over a four-week period from May 26 – June 16, 2013, the average number of Tweets posted during the session was 402, with a maximum estimated reach of 81,941 accounts (Topsy, 2013).

In this study, to better ensure that I would be able to extract rich data that investigated the intended phenomenon, I utilized criterion sampling techniques to recruit participants. Laverty (2003) asserted the importance of utilizing participants that have ample experience with the phenomenon being investigated.

As a part of purposefully sampling participants, I established the following criterion requirements:

- Current public or private school administrator job assignment at the K-12 level;

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Figure 2. Doctoral study participants needed: School admins using Twitter in PLN

- Actively communicates on the microblogging tool Twitter; and

- Must agree to participate in this study.

Smith and Osborn (2007) suggested smaller sample sizes when engaging in interpretative phenomenological analysis. In this study, I collected data from six participants, all of whom are school- and district-level administrators. Participants were recruited based on their involvement, or digital presence, from the state-specific Twitter chat session archives. My initial contact with the participants was through an introductory Twitter message (Tweet), as seen in Fig. 2.1. I also contacted participants via Twitter direct message and email. The initial Tweet and introductory email provided information about the study's requirements as well as a link to an introductory website that contained more specific information concerning the study's purpose, participants' roles, confidentiality assurance, and disclaimer.

The data sources for this qualitative study included (1) semi-structured interview; (2) written document; and (3) participants' Tweet analysis. Semi-structured interviews served as the primary data source of this study, furnishing rich data of participants' perceived

understanding of and experience with social networking tools, PLN participation, and privacy. Additionally, participants constructed a written document that shared information about their initial experience with a PLN and perceptions of social networking tools. Lastly, participants' Tweets were analyzed. The analysis helped me to bridge connections with findings of the study. In addition to the aforementioned data sources, I also maintained a reflective journal that contained analytical memos of my initial reactions, interpretations, and/or explanations of participant data. These memos were conceptual and aided my progress during the data analysis process. I maintained analytic memoing throughout the entire data collection and data analysis processes.

My data analysis methodology was rooted in hermeneutics and interpretive phenomenological analysis. Smith, Flowers, and Larkin (2009) described the distinct steps of the four-part analytical process: (1) reading and re-reading; (2) initial noting; (3) developing emergent themes; and (4) searching for connections across emergent themes. As I employed the four-step analytic process, I assigned specific codes to data based on descriptive, linguistic, and conceptual interpretations I made from the participants' interview transcripts. After the initial noting/coding process had concluded, I connected the findings to construct emergent themes. Ultimately, these emergent themes were then analyzed and connected across all participants to create "superordinate themes." These superordinate themes are detailed at length in Chapter 4. The written documents were analyzed using enumerative and thematic coding procedures as prescribed by Miles and Huberman (1994). The findings of the written document analysis are available in Chapter 4.

Significance of the Study

To effectively participate in a personal learning network or online community of practice, one must disclose information through collaboration and engagement with social networking tools. But to maintain privacy, Altman (1975) urged individuals to carefully control the dissemination of one's personal information. Once information is disclosed online, it forever becomes a byproduct of those with whom it was shared, including those within their networks (Shi et al., 2012). Ultimately, a user permanently loses control of information shared through digital collaboration with others. Studies are needed to better understand the privacy maintenance and boundary regulation practices by educators utilizing social networking tools to participate in PLN (Das & Kramer, 2013; Sleeper et al., 2013; Colibaba et al., 2012; Kairam et al., 2012; Stutzman & Hartzog, 2012; Castaneda et al., 2011; Badge et al., 2011; Harrison & Thomas, 2009; Williams et al., 2009). The number of studies focused on this area remains severely limited (Das & Kramer, 2013; Sleeper et al., 2013; Colibaba et al., 2012; Couros, 2010; Lai, Pratt, Anderson, & Stigter, 2008; Koh & Kim, 2003) and "the empirically based literature…is spare and largely untested" (Stuckey, 2004, p. 2). Disclosure of information is vital to establish trust within a PLN; therefore, understanding PLN participation and how users regulate boundaries to maintain privacy is an important concept for researchers and practitioners (Nikolaou & Tsolakidis, 2012; Harrison & Thomas, 2009; Ioinson & Paine, 2007; Feng, Lazar, & Preece, 2004; Nichani & Hung, 2002).

Summary

In Chapter 1, I detailed the problem, purpose, guiding research questions, conceptual and theoretical framework, methodological overview, and significance of the study. A review of literature, particularly empirical studies, related to the theoretical framework is found in

Chapter 2. This study's methodological design and data analysis procedures are described in

Chapter 3. The results and findings are captured in Chapter 4, with thick data statements

from participants to support the findings. Lastly, a discussion of the findings, implications,

and recommendations for future research are included in Chapter 5. Corresponding

documentation and a complete list of references can be retrieved from the Appendix.

CHAPTER 2

REVIEW OF LITERATURE

This study closely examined how school administrators utilized social networking tools to participate in PLN while maintaining their online privacy. The following research questions framed the study: (1) How do school administrators make meaning of their experience utilizing social networking tools to participate in a personal learning network and how do they understand privacy?; (2) How do school administrators describe their experiences with personal learning networks and privacy?; and (3) What themes are identified from their experiences for the group?

The purpose of this literature review is to provide a qualitative review and synthesis of existing literature that addresses personal learning networks and online privacy regulation. The literature review is based upon the aforementioned central research question. It begins with a brief overview of recent studies that have investigated factors affecting participation in a personal learning network or online community of practice. Additionally, the literature review synthesizes research studies that explored social networking activity and online privacy regulation. A discussion of the key issues and themes that emerged from the literature synthesis, all of which are directly aligned with this study's research questions, are embedded in this review. Lastly, a concluding statement that signifies the importance of this study, as well as highlighting the gap in literature, is provided.

Literature Search

Following Tuckman (1998) and Galvan (2009), this literature review is guided by this study's research questions. In the quest to identify appropriate literature sources, careful consideration was made as PLNs are a relatively new field of research. Since PLN first

became the target of research less than a decade ago, my literature search needed to be broadened. Meticulous care was taken so that the broader search did not include concepts not aligned with tenets of PLN, thereby avoiding citations that would not furnish empirical studies relevant to this study's topic and research questions.

The literature search included published, peer-reviewed publications from the United States and worldwide, published after 2002. The initial search included primary and secondary sources, conceptual and theoretical articles, and empirical studies. Electronic journal databases through the University of Missouri-Kansas City library system used for the search included Academic Search Complete; ERIC; JSTOR; and Google Scholar. Prior to utilizing the databases, a list of keywords was developed and strategically altered during the search process. The following keywords (including their singular/plural use) were utilized for the search query: *adult learning*; *personal learning network*; *PLN*; *personal learning environment*; *PLE*; *online community of practice*; *social networking*; and *boundary regulation*.

Over 600 citations were acquired during the search. The process of citation selection began by filtering through empirical and non-empirical studies. Only empirically-based studies were selected for this review. Bridgeman and Holton (2000) considered empirical studies to be those that included large amounts of data that led the researcher to derive a final conclusion not based upon pre-determined formulation of the outcome(s).

Once sorted, each study's abstract was analyzed and selected based upon its relation to this study's research questions. Those that were loosely related to this study's topic, or addressed subjects not tied to the specific research topic, were removed. Full texts of chosen citations were read and coded/categorized to identify emerging themes from the literature.

Ultimately, eighty-one empirical studies were analyzed and synthesized for this literature review.

Limitations of Review

Upon completing the literature review search, Stuckey's (2004) assertion that "the empirically based literature…is spare and largely untested" appeared to be quite accurate (p. 2). Even more challenging, the empirical studies directly related to the education field were severely limited (Koh & Kim, 2003). Many of the studies related to the education field focused on higher education and classroom-oriented models of establishing a personal learning network for collegiate courses. Additionally, a number of articles were obtained that addressed communities of practice or learning networks but did not target online personal learning networks and/or online personal learning environments (Couros, 2003; Couros, 2010; Lai et al., 2008; Squire & Johnson, 2000). Many studies that focused on students' participation and perception of PLN were removed since the students' participation in the PLN was mandated as a part of their course requirements. Wenger (1998) asserted that a true learning network/community cannot be fully, authentically forged by a moderator serving in the capacity of teacher/instructor. Additionally, this research study is dedicated to professional educators' participation in a self-generated PLN, not one in which they were required to participate.

During the broadened search, more articles on the topic of online communities of practice were discovered. Because the framework of community of practice is different than that of personal learning network, strict attention was dedicated to each study to determine if it aligned sufficiently to this study's research questions.

This literature review may not be deemed exhaustive. But it is my opinion that the studies encompassed in this literature review provide my readers with a thorough overview of the most recent literature on the topic as it relates to educators' use of personal learning networks and privacy regulation. Though the literature review highlights empirical studies, the synthesis was subject to my interpretation.

Literature Synthesis

Of the eighty-one studies reviewed, the overwhelming majority of studies were rooted in the education industry and featured self-generated personal learning networks; however, some studies focused on online learning communities affiliated with an organization. The overall size of the online learning communities varied widely from a few individuals to tens of thousands of participants. Most of the studies focused on better understanding the factors that affect participation in PLN or online learning community. Studies also contained a variety of methodological approaches, including case studies; phone and online interviews; observation; surveys; and content analysis. Key issues that emerged in the literature included the following topics: factors affecting adults learning online; factors affecting PLN participation; barriers to PLN participation; social networking; and social networking and boundary regulation.

Factors Affecting Adults Learning Online

Researchers have been interested in understanding how adults learn, particularly within learning environments. Whereas the majority of young learners acquire their knowledge in formalized educational environments at brick-and-mortar and/or virtual schools, adults acquire knowledge through informal learning environments. Previous empirical studies (Johnstone & Rivera, 1965; Livingstone, 2001; Tough, 1971, 1978) found

that adults spend the majority of their time learning in informal environments. A landmark study by Tough (1971) determined that more than two-thirds of adults seek knowledge through self-directed means in informal learning environments. As technology continues to advance, more adults are gravitating to digital learning environments to further their acquisition of knowledge. But what factors affect adults learning online? The review of literature found sixteen studies that targeted the factors that affect adults' learning in online environments, including: (1) self-directed learning; (2) overall engagement/interaction; (3) relevance to career and personal interests; (4) age; (5) external influences; (6) competency with technology; (7) desire to learn new skills; (8) love of learning; and (9) developmental changes toward one's learning.

Self-directed learning. Scanlon (2009) sought to understand the life-world of adult learners (N = 35) within adults' formal and informal learning environments. Based upon findings of a three-year research project, which involved in-depth interviews with learners from the Tertiary Preparation Certification program at Glenview College, the researcher was able to confirm participants' perspectives of learning as being rooted in autonomy and self-direction. Participants revealed that their formal classroom learning experiences left them feeling restricted and disempowered; not all of their instructors applied learning strategies that encouraged self-directed learning opportunities. Data suggested that participants overwhelmingly desired respect from their instructors. Rather than being treated as though they were struggling students, respondents sought opportunities to set their own goals and be identified as a true adult learner. According to the findings of an online survey concerning learners' (N = 283) perceptions of self-directed learning in online learning environments, Lai (2011) revealed participants' comfort with using technological tools to self-instruct and guide

their respective learning. Data revealed participants' ability to effectively self-direct their learning as they were able to identify their needs and take action to achieve their learning goals. Participants experienced higher interest and yielded greater learning outcomes after determining their own courses of interest, setting their own learning pace, and creating their own study schedule. Chiu and Tsai (2009) examined 541 Taiwanese adult learners in a paper survey to learn of their preferences and ability to learn in online environments. According to the findings, the higher individuals' self-directed learning skills were, the more essential it was to learn within environments that provided opportunities to construct original ideas, collaboratively problem solve, and participate in the process of creating learning activities online. To ensure the proper learning environment for adults, the importance of online instructors is key (Lai, 2011; Scanlong, 2009).

Ruey (2010) sought to understand how constructivist instructional design could benefit adult learners in an online learning environment. According to the case study data, participants enrolled in two separate courses, fall semester (N = 17) and spring semester (N = 15). These showcased differences in their overall efficacy, performance, and perceptions toward self-directed learning within online environments. Participants from both semester courses misperceived the course as a self-study format, only to quickly realize their academic success relied on their self-management of setting goals, engaging with classmates, and collaborating on group work. Ultimately, participants that exhibited high self-directed learning traits were less motivated by the culminating course grade and instead had more interest in the course content.

Korean adult bloggers (N = 70) were the focus of an online survey administered by Park, Heo, and Lee (2011) to explore the usefulness of blogging and its impact on adults'

lives and learning. Quantitative and qualitative findings deemed informal learning as being positively impacted since the blogging was "self-directed, practical, situative, unlimited and accessible, and self-regulated" (p. 158). The bloggers used this mode of informal learning to share information; engage in personal interests and hobbies; communicate self-expression and reflection; foster personal and professional relationships; increase expertise; and develop self-identity. The researchers determined that a blog could become a personalized online space and learning environment that could be used for collaboration. Bloggers reported high perceptions of meeting their learning goals and outcomes.

Ghost Bear (2012) sought to understand more about the learning process endured by participants (N = 38) of an online auction website. Results from an online questionnaire reported high levels of satisfaction by respondents who had to develop self-directed learning skills in order to effectively maneuver through the website's tools and resources. Users strengthened their self-directed learning skills as they determined their own goals; created objectives; allocated resources; implemented newly developed strategies to experience success; and evaluated their progress (Park et al., 2011; Ruey, 2010; Scanlon, 2009). As participants acquired new skills and fostered greater competence and comfort, they underwent a boost in learning developmental. This quest for continuous learning became the primary motive for participants, rather than the sole reason for engaging in digital commerce.

Not all research studies reported positive findings concerning adult learners' self-directed ability or interest to learn digitally. Findings from a two-part qualitative action research project involving pre-service secondary educators (N = 24) found that asynchronous methods of learning with peers did not satisfy or elicit positive self-directed learning experiences (Ham & Davey, 2005). Participants cited lack of motivation and technical

difficulties as prohibitions to their learning experience. Results indicated discontent toward the instructors for not communicating frequently or failing to provide feedback to learners. Overall, instructors in this study did not adequately prepare its learners with the skills necessary to create their own goals, determine their instructional outcomes, and implement strategies (Ghost Bear, 2012; Park et al., 2011; Ruey, 2010; Scanlon, 2009). In a quasi-experimental study using quantitative methods and open-ended questioning to gauge police officers' efficacy and preference for completing professional development in an online environment, the data suggested that traditional instructional methods were preferred (Donavant, 2009). The study involved two phases: data from a Likert scale self-assessment measuring participants' (N = 188) perceived strengths and weaknesses learning in an online environment and open-ended questionnaire responses about participants' (N = 150) environmental preferences. Data indicated that participants favored face-to-face interactions when learning about certain topics. Police officers' self-directed learning was primarily impacted by convenience; flexibility; access from remote locations; and ability to work at one's pace (Ghost Bear, 2012; Park et al., 2011; Ruey, 2010; Scanlon, 2009; Ham & Davey, 2005). Donavant (2009) posited that online learning was most appropriate for adult learners who were self-motivated and could work independently in their personal and professional pursuits.

Engagement/Interaction. Engagement and interaction were found to be key contributing factors to adult learners' overall interest and motivation to learn online. Synchronous peer-to-peer interactions proved to be remarkably beneficial to adult learners (N = 39) participating in an online animation course that utilized live video conferencing technology (Scott, Castaneda, Quick, & Linney, 2009). Findings indicated that video

conferencing yielded high perceptions of connectivity with peers, despite geographic differences. Additionally, the study found that this community of learners was highly effective at peer-reflection and -critique. Participants reported their pleasure with live video conferencing to enhance their own work and products, despite having no teachers or mentors present (Ghost Bear, 2012; Park et al., 2011; Ruey, 2010; Scanlon, 2009). Synchronous learning opportunities were praised by adult learners for the opportunity to collaborate and gain instant feedback from colleagues (Ruey, 2010). Users indicated high validation and support upon receiving feedback and acknowledgement from online peers, including those that were not frequent participants. Opinions and viewpoints of others online also framed and reinforced users' newly acquired information and knowledge.

Adult learners were not always the recipient of positive outcomes through peer collaboration. Unlike the favorable perceptions toward online connectivity with peers found by Scott et al. (2009), adult bloggers viewed their online learning as a means for information acquisition and reflection (Park, Mi Heo, & Lee, 2011). Bloggers reported sensations of isolation from a larger community and sensed less interest in developing a community of practice because their blogs were not identifiable with a larger community.

Barkan et al. (2011) conducted a mixed method case study investigating prison guards' (N = 176) perceptions of participating in an online foreign language program. Findings determined that while participants enjoyed aspects of learning online, many believed they would be more successful with face-to-face instruction. This differs from Lin and Chiu (2008), who reported a positive correlation of higher performance on student assessments and synchronous/asynchronous co-learning opportunities. Particularly for

learners with introverted preferences, asynchronous learning opportunities resulted in positive learning outcomes.

Ham and Davey (2005) revealed users' great disappointment in being unable to adequately engage or collaborate with peers. Adult online learners needed additional motivation from their colleagues. The asynchronous learning opportunities failed to provide a "live" learning opportunity and left participants with accessibility concerns. Learners experienced an inability to communicate and collaborate that resulted in a feedback delay and breakdown of discourse amongst peers. This lack of personal collaboration and interaction was found to be the primary detractor for adults wanting to pursue online learning options (Donavant, 2009).

Some adult online learners' experiences were negatively impacted by the actions of their peers. Ruey (2010) found that some users felt online collaboration was too time-consuming, citing the efficiency of collaboration as being diminished as discussions deviated into personal matters and grew counter-productive to learning objectives. Others stated lower motivation to collaborate with others online since the engagement must be done using tools that leave a digital footprint (Ham & Davey, 2005). Learners' thoughts, opinions, projects, and outcomes were perceived to be of greater importance due to their permanence compared to face-to-face interactions. Adult learners also experienced negative discourse with peers, leaving some feeling incompetent and undervalued (Scanlon, 2009). Smith (2005) conducted a qualitative case study to inspect the experiences of adult learners (N = 25) within online collaborative groups. Prior to the actual study, participants were assigned to groups which resulted in tension from participants' prior experiences with group work. These participants recalled inequitable and uneven member participation. Sociocultural differences also created

ambivalence amongst group members. As the study progressed, some participants did not

value group collaboration as it stripped them of their autonomy and individuality. The group

collaboration was critiqued for ultimately establishing a group voice and identity, stifling

communication and eliminating individuality.

Three studies attributed the overall engagement and interaction of adult online

learners to the involvement of course instructors and facilitators (Lai, 2011; Ruey, 2010;

Ham & Davey, 2005). Adult learners valued direct, frequent feedback from instructors when

working with asynchronous tools like threaded discussion boards (Lai, 2011). If instructors

did not provide clear expectations of how asynchronous tools should be used for

collaboration, interaction decreased. This confirms a previous study by Conrad (2002) which

found that adult learners were apt to ignore threaded messages in digital message boards if

facilitators did not participate and provide feedback. Limited feedback and interaction led to

decreased motivation to learn in an online environment (Ruey, 2010). Mere correspondence

between learners and instructor was not sufficient for participants in Ham and Davey's

(2005) study. These participants wanted to know their assessor and evaluator in greater

depth.

Relevance to career and personal interests. Lai (2011) cited the internet as a

tremendous source, rich with information that enabled adult learners to achieve their learning

goals and enhance their professional and personal lives. Online adult learners were found to

feel satisfied with their acquisition of knowledge, prompting them to immediately apply new

concepts to professional practices and share information within their work and personal

environments (Ruey, 2010). Research suggests that online learning activities should be

directly tied to participants' personal and professional realities so they may be used as an

effective contextual resource and knowledge base (Barkan et al., 2011; DiBiase & Kidwai, 2010). Bloggers who engage in informal learning through their blogs feel inclined to do so in their pursuit for sharing information; practicing their personal interest/hobby, self-expression and -reflection, maintenance of professional relationships; and ongoing development of professional expertise (Ghost Bear, 2012; Barkan et al., 2011; Park, Heo, & Lee, 2011; DiBiase & Kidwai, 2010).

The benefits of online learning for adults were revealed in a developmental action inquiry study that sought to understand how adult education helps meet the demands of adults' twenty-first century lives. Dzubinski, Hentz, Davis, and Nicolaides (2012) confirmed that adult learners (N = 60) saw online learning as a means of gaining great convenience and flexibility with their learning, all of which was appropriate for their respective personal life demands (Donavant, 2009).

Age. DiBiase & Kidwai (2010) conducted a mixed methods study to learn more about the performance and attitudes of undergraduate (N = 101) and adult continuing education students (N = 178) enrolled in the same course during a nine month time span. The study's findings revealed the following results: (1) older participants invested more time and participated more in the online learning activities; (2) younger students performed equally well, despite having participated less time; (3) younger students were found to have committed more academic integrity violations than older students, generally by copy-and-paste infractions; and (4) younger students were less satisfied with the course and instructor compared to older students. Life experience was determined to be a factor for older students as they were more prepared to engage in independent learning activities, possessed more

professional expertise, and were generally more competent with the technology of their respective field.

Age was cited as a relevant factor for yielding greater self-perceptions of learning. Older students spent more time and effort in their learning activities and were found to demonstrate greater enjoyment (Lai, 2011). Older learners expressed the value of seeking new knowledge and collaborating with peers, whereas younger learners were more interested in connecting newly acquired knowledge directly to practice (Ruey, 2010). As learners worked through course requirements, older learners sought less course requirements, rules, and policies. Dzubinski et al. (2012) found that younger students did not view their learning experiences with classmates as being part of an online community, although they did cite a sense of community as critical to a successful online learning experience. White (2012) analyzed the questionnaire data of more than 47,000 respondents who completed an adult continuing education course, finding that adult learners are believed to have gained intrinsic and extrinsic beliefs toward the power of education, making them that much more suitable to achieve academic outcomes within online environments.

External influences. Dzubinski et al. (2012) recommended that instructional designers and instructors of online courses be cognizant of learner's life stages and external influences when creating learning activities. Older learners' participation, efficacy, and self-direction to learn in an online environment was crafted by work conditions and family experiences (Lai, 2011). Instructors must establish a culture of learning that is enthusiastic and receptive to older learners' personal and professional lives. Children were found to negatively impact learning as time must be spent parenting and not studying (Scanlon, 2009). An adult learner with children experienced difficulty internalizing and living the role of a

learner compared to parent. A different study by Vandenbroeck, Vershelden, and Boonaert (2007) reported that motivation for learning was higher for adult learners with children in their families.

Some adult learners found online learning too time-consuming and difficult to complete due to limitations such as one's workplace or work schedule (Barkan et al., 2011; Donavant, 2009). In the study involving police officers' online professional development, completion of courses was not possible during the work day; this forced police officers to complete courses during their personal time in off-hours. Similar findings existed in Barkan et al.'s (2011) study of prison guards completing online foreign language courses, none of whom were able to complete their learning during the workday due to intense security requirements and limited technology. In both studies, participants experienced decreased motivation to pursue online courses.

Competency with technology. Adult learners' proficiency and comfort with technology was found to be a contributing factor that affected the desire to learn online. Online learners were generally more comfortable with the learning process if they were already comfortable and confident using internet resources (Lai, 2011). Technical difficulties could negatively impact participation (Ham & Davey, 2005). Additionally, technological tools could drive participation. If the online tools and resources were beyond the competency and comfort of users digital collaboration was significantly affected (Ruey, 2010; Ham & Davey, 2005). The higher adults' technological proficiency was, the higher their overall standards of what they required to effectively engage with others during learning activities (DiBiase & Kidwai, 2010).

Desire to learn new skills/Love of learning. Scanlon (2010) found that adult learners want learning environments that are inclusive of all learners – students collaborating with students as well as teachers collaborating with students – which ensure authentic learning experiences. When learners possessed a hunger to gain knowledge and skills to improve their expertise, higher academic outcomes could result in online courses (Donavant, 2009). Learners that enjoyed learning new skills would generally find online course content useful and transferable to their work (Lai, 2011).

Developmental changes toward one's learning. Through online learning, adult learners' technological and professional skills were also enhanced, leading to transformational changes in their developmental learning process (Ghost Bear, 2012). As adults collaborated and learned with peers digitally, some might establish new learning preferences and ultimately reassess their role from a "learner" to that of a "member" of a larger community of learners (Smith, 2005). This redefinition of understanding how learning can be enhanced with others could result in transformational changes in learning habits and strategies (Ghost Bear, 2012; Ruey, 2010; Smith, 2005).

Factors Affecting PLN Participation

As individuals utilize web-based resources and tools to support their formal and informal learning, they may choose to create an individualized network of learners with whom they collaborate and connect around a specific concept or practice. What factors affect a learner's participation in a PLN? The review of literature furnished thirty-one studies that specifically investigated the factors affecting a person's decision to build, or participate in, a PLN, which included (1) communality; (2) contacts; (3) organization; (4) active participation; and (5) professional motives.

Communality. Findings from the review of literature implied that a learner's sense of communality was a primary motive for developing PLN. A learner was motivated to create a PLN based upon their professional interest(s), organizational affiliation, or connections with others (Adamic & Adar, 2005). Hur and Brush (2009) conducted a case study to examine the reasons why teachers (N = 23) participated in an online community composed only of K-12 grade level teachers. Through semi-structured interviews and content analysis of archived digital thread postings, it was deduced that teachers wanted to share knowledge and emotions online; utilize online technological tools; reduce perceptions of professional isolation; explore new ideas; and experience professional camaraderie. Alderton, Brunsell, and Bariexca (2011) were interested to know why teachers utilized social networking sites to collaborate with colleagues within their PLN. Results from an online survey (N = 10) reported participants' use of social networking sites, including Twitter, was to access resources and information; engage in philosophical discussions; pool resources; answer education-related questions; and socialize with peers (Colibaba et al., 2012). The majority of Tweets were education-related, though a high percentage were also social in nature. Teachers sought participation in a PLN to enhance knowledge, beliefs, and attitudes within their professional practice (Alderton et al., 2011; Hur & Brush, 2009). Colibaba et al. (2012) detected that teachers' use of social networking tools was predominantly for professional reasons and socialization with colleagues, based upon their mixed methods study (N = 174). Facebook and Twitter were the two most popular platforms, cited for their ease of connecting with others, sharing information, and disseminating information quickly.

Similar findings of the development of communality were noticed in a study involving school administrators (N=17), including principals and department chairs

(Bouchamma & Michaud, 2011). Data collected in semi-structured interviews denoted a newly developed collegiality from their experiences participating with the PLN. School leaders felt their digital collaboration focused more on practitioner-based topics rather than engaging in theoretical discussion. Other advantages evident in the data included being able to speak out about topics in safer environment, since it was removed from the physical confines of their own school district; a greater sense of agency for their positions and others (Gray, 2004); reduced sensations of isolation (Hur & Brush, 2009); and having an avenue for reflective practices. Participants also confirmed their sense of mutual security, trust, openness, hospitality, and professionalism (Bouchamma & Michaud, 2011). The collaborative efforts led to newly formed friendships and actions to help other colleagues outside of the network. Gray (2004) analyzed the experiences of the Alberta Community Adult Learning Council's coordinators (N = 43) engaged in an online community of practice. Through a qualitative analysis, evidence informed researchers of a reduction in perceived workplace isolation (Bouchamma & Michaud, 2011; Hur & Brush, 2009). Participation in the online network furnished motivation; opportunities to collaborate; development of a sense of community; a collective knowledge base; and the acquisition of a group identity. An increased understanding of individual and organizational goals and responsibilities resulted. Ultimately, PLN participants gained a greater professional awareness of their colleagues that was previously absent (Bouchamma & Michaud, 2011; Gray, 2004).

Not all educators understand how to create and participate in a PLN, let alone conceptually understand its purpose. Tsai et al. (2010) explored the perceptions of pre-service and practicing elementary science teachers (N = 49) as they developed PLN proficiencies while working within an online community of practice. Pre- and post-test

survey data and two separate open-ended interviews indicated significant gains of overall perceptions of social navigation, comfort with technological tools, and usefulness/utility with technological resources. Similar to Gray (2004), participants indicated satisfaction for having gained access to divergent viewpoints; increased connections with professional educators (Bouchamma & Michaud, 2011; Hur & Brush, 2009; Gray, 2004); perceived increase in professional confidence; and the development of a sense of community and collegiality within their practice (Tsai et al., 2010).

Fry (2006) conducted a case study approach to detect the impact of an online community of practice, Technology Supported Induction Network (TSIN), on elementary-level student teachers (N = 15). TSIN was established to provide induction, mentorship, and student teacher support to teachers assigned in rural locations throughout Wyoming. The study's findings indicated positive impact for some participants with regard to their reflective practice, curricular and emotional support, and connections with peers (Tsai et al., 2010; Gray, 2004). Fetter, Rajagopal, Berlanga, Sloep, and Cao (2011) investigated a group of participants (N = 795) through eTwinning, a European teacher network; they participated in a peer-supported Ad Hoc Transient Groups (AHTGs) project, which included online and in-person professional development and activities. Participants completed an online survey regarding their connections and perception of being connected to others. Quantitative findings indicated more than half of participants' connections were exclusively online. A secondary component of the study provided an interview opportunity (N = 22) to gather insight into teachers' goals for participating in the eTwinning network. Results were qualitatively analyzed and indicated a belief that the future of education requires international collaboration with practitioners; PLNs afford a method of personalized and social learning

through social networking and social media tools; and PLN affords a great opportunity to share knowledge and experiences with colleagues (Colibaba, 2012; Tsai et al, 2010; Hur & Brush, 2009; Gray, 2004). Ardichvili, Page, and Wentling (2003) found that when organizational members perceived knowledge as a collective byproduct of its organizational members, knowledge was more prevalent and was exchanged readily amongst its members. Their qualitative study looked at participants' motivation and barriers for participation within an online knowledge sharing network at a Fortune 100 company. Data (N = 30) suggested that members were more apt to contribute and participate if they felt like an expert; otherwise they feared misleading or misguiding others. While such perceptions can actually negatively impact a personal learning network or online community of practice, it speaks to the overall commitment participants exhibited toward their learning network.

Personal learning networks and online communities of practice did not create positive outcomes in a study involving school administrators and teachers who participated in a pilot online networking project (Carr & Chambers, 2006). According to the results of semi-structured telephone interviews, participants (N = 13) expressed a lack of commonality, purpose, and culture amongst the members. The ultimate finding of this research study suggested that the "one size fits all" form of online network, one comprised of professionals without a specific common interest, was less likely to succeed.

Additional evidence of communality can be found in a study that analyzed communality within a PLN as it exists during live events (Harris, Earl, Beale, Phethean, & Brughams, 2012). Results of open-ended interviews (N = 14) and content analysis of social media postings confirmed that participants could develop and expand a PLN during a live conference. Through social networking, PLN contacts were increased and participants

penetrated networks of other attendees they may not have met in person. Nikolaou and

Tsolakidis (2012) inspected participants' (N = 14) engagement with PLN members through

Second Life, a three-dimensional virtual world. Second Life allows its users to construct

avatars; engage in verbal conversation via digital communication tools; chat; listen to audio;

send messages and Notecards; and use built-in gesture commands to express various human

emotions. The study's findings indicated that participants were driven to this mode of a PLN

knowing that other members were like-minded and interested in networking, contributing to

the collective knowledge-base, and socializing with other professionals (Colibaba, 2012;

Fetter et al., 2011; Tsai et al, 2010; Hur & Brush, 2009; Gray, 2004). Participants' decisions

to add new contacts to their Second Life PLNs were strongly based on initial perceptions of

trust and authenticity (Nikolaou & Tsolakidis, 2012; Harrison & Thomas, 2009). As

participants sought to expand their PLN contacts, the development of joint subject

knowledge was a key motive (Harris et al., 2012; Nikolaou & Tsolakidis, 2012; Carr &

Chambers, 2006).

   Contacts. A personalized learning network cannot remain sustainable, or indeed even

exist, without valuable contacts with whom an individual can connect and learn. Evidence of

how one's contacts affect the building of or participation in a PLN can be found in

Rajagopal, Verjans, Sloep, and Costa (2012). This study included data collected during a

workshop and an online survey (N = 46) regarding participants' perceptions of valuable PLN

traits contacts should possess. According to the results, the factors of valuable PLN contacts

included those with different perspectives; aligned values; passion and inspiration; and

trustworthiness. Lowest ranked factors included being a participant's mentor or role model

and those who are eccentric or influential. These findings likely suggest that users add

contacts to a personal learning network if they are a weak tie and offer a differing, thought-provoking viewpoint. Forte, Humphreys, and Park (2012) determined that teachers looking to add other teachers to their Twitter PLN preferred teachers who did not work within their respective school building. The research indicated teachers outside of one's place of employment generally led to an increase in bridged relationships to other educators. In essence, weak ties served as an informal "information broker" (p. 109) for one's PLN. Evidence also indicated that teachers wishing to collaborate with like-minded colleagues were unable to do so within one's respective school building and instead sought new connections on Twitter.

Alderton et al. (2011) found that profession was the overwhelming reason for adding Twitter contacts to a PLN, driving a search for educators, content experts, and others with similar professional interests. Ivanova et al. (2012) surveyed forty-one educators, revealing that participants preferred to connect and follow people of professional interest, including authors; keynote speakers; others with whom they had loosely connected through digital collaboration; and those of whom they were aware via personal recommendation. In an ethnographic study investigating graduate students' (N = 6) participation in an online community, Harrison and Thomas (2009) determined that social networking tools led to the expansion of a learning network, not just the maintenance of such a network. Social network users generally inspected others' profiles for authenticity and perceived trust. Friend requests with profiles that did not appear genuine were discarded. Social media tools yielded participants with the power to find "significant others" and mediate their personal learning network (p. 121).

Organization. Effective knowledge sharing and digital collaboration relies on a solid organizational culture (DeLong & Fehey, 2000). Members of a network must understand the purpose, vision, and goal(s) of the digital learning community in order to maximize participation and generate meaningful conversation or dialogue amongst its members (Wise, Padmanabhan, & Duffy, 2009; Carr & Chambers, 2006). In a qualitative analysis of two distinct online communities, Jones and Preece (2006) confirmed that a shared vision was critical to collaborative dialogue within the community. A study by Ardichvili et al. (2003) of corporate online knowledge community members determined that additional supports were necessary to ensure cohesive collaboration of members. In Fry's (2006) study inspecting an online support network for rural student teachers, it was found that various technological functions should be incorporated, including discussion boards; document sharing features; weekly live chats; and a support network bridging experts with those seeking additional knowledge.

An effective online personal learning network is also dependent on trust within the community. Nichani and Hung (2002) considered trust as the "…glue that binds the members of the community to act in sharing and adapting manner. Without trust, members would hoard their knowledge and experience…" (p. 51). Fang and Chiu (2006) studied the implication of trust perceived within a Taiwanese IT-specific virtual community (N = 142). Their findings suggested that knowledge sharing was built upon trust. A virtual community's leader is responsible for the organization and management that yields greater trust. If a virtual community was not self-generated, a manager or moderator was recommended to elicit engagement amongst members. A qualitative case study was conducted by Sallan, Rodriguez-Gomez, and Armengol-Asparo (2010) on three online communities and the

moderators' role for knowledge sharing. The study's data, collected by online community managers (N = 6), moderators (N = 6), and network members (N = 10), reported their involvement in various functions – organizational, intellectual, social, and technological – all of which contributed to the engagement of the online community members.

Active participation. Fang and Chiu's (2010) study identified that altruistic behaviors contributed to the ongoing active participation of an online community's members. A personal learning network and online community were more apt to succeed when members were willing to make intellectual contributions for others' gain without expecting reciprocity. The practice of cooperation and sharing of resources was an indication of a primary action of learning, detected in Nikolaou and Tsolakidis's (2012) study. Cooperation and sharing of resources occurred when like-minded people collaborated towards a common goal or initiative (Nikolaou & Tsolakidis, 2012; Wise et al., 2009; Carr & Chambers, 2006). As individuals sought to expand or participate in a personal learning network, the challenge lay in finding others that brought value to informal learning goals. Harrison and Thomas (2009) conducted a longitudinal study of graduate students (N = 6) to understand the process of mediation in an online community. As online network users constructed their own learning infrastructure, they assumed the role of mediator, controlling their informal learning processes.

Hanewald and Gesthuizen (2009) analyzed a case study of an Australian online learning community of IT teachers (N = 33) to better understand the behavior, motivations, and reasons for persistent engagement. Qualities of effective participants included a willingness to contribute and share; initiate and maintain debate or dialogue; and demonstrate technological proficiency. Favorable online community interactions included posting links

and resources; reading diverse viewpoints and methodology; actively participating in discussion; and co-contributing and collaborating of work output with colleagues.

Professional motives. Through the review of literature, a significant factor affecting participation in a PLN pertained to the professional motives of a learner. These included access to resources; acquisition of new skills; development of professional identity/vision; knowledge sharing; and collaboration.

Access to resources. One of the primary outcomes for PLN users' professional motives addressed access to resources and information (Alderton et al., 2011; Ivanova & Chatti, 2011; Tsai et al., 2010; Hanewald & Gesthuizen, 2009; Hur & Brush, 2009; Ardichvili, 2003). In the Hur and Brush (2009) study, evidence suggested that teachers used their PLN to retrieve different teaching ideas and resources aligned with the specific needs and contexts that met their goals. Teachers' lesson activities and instructional practices were also influenced by their PLN resources.

Personal learning network creators establish their network of contacts by various means, including social media platforms that afford microblogging opportunities. Several studies found that the most popular reason for utilizing Twitter as a PLN resource was to access resources and information from colleagues (Forte, Humphreys, & Park, 2012; Alderton et al., 2011; Castaneda, Costa, & Kompen, 2011; Ivanova, Grosseck, & Holotescu, 2011). In Forte's (2012) quantitative study surveying teachers (N = 37) about their practical uses for Twitter as a personal learning network resource, findings revealed that Twitter was used as a source of generating new professional ideas and information about technological tools. Additionally, Twitter allowed participants to share resources through links and retrieval tools. Of the specific Tweets analyzed, more than half were exclusively education-

related. This was similar to the findings from the Alderton et al. (2011) study that reported approximately 53% of Tweets were education-related. Ivanova et al. (2011) surveyed forty-one teachers participating in various social networking platforms within their PLN. Results showed that 81% of participants utilized Twitter purposely for sharing information and learning new things. Castaneda et al. (2011) collected data during a project to amass personal accounts and stories of teachers' (N = 25) use of Twitter. Despite challenges regarding limited characters and perceptions of expertise by others, participants expressed significant usage for information sharing and collaboration.

As PLN participants seek and retrieve resources, peer-support tools can be used for collaboration. Fetter et al. (2009) found that teachers seek various resources, including discussion opportunities; ideas; professional development; technical solutions; and/or curricular resources. Corporate employees' use of peer support online communities viewed their digital knowledge sharing tool as an encyclopedia (Ardichvili et al., 2003). More than half of the corporate participants accessed their knowledge community for problem-solving and a third cited their desire to access a subject expert for assistance. Listserv collaboration was evaluated by Hanewald and Gesthuizen (2009), who determined that almost all participants utilized their listserv to access information and resources.

Acquisition of new skills. Personal learning networks afford the opportunity to share resources and information, which ultimately allow members to explore new approaches and acquire new skills for practical and professional purposes (Bouchamma & Michaud, 2011; Castaneda & Soto, 2010; Tsai et al., 2010; Hanewald & Gesthuizen, 2009; Gray, 2004; Ardichvili et al., 2003; Wenger & Snyder, 2000). In a qualitative case study of twelve teachers participating in an online learning network, results demonstrated participants'

acquisition of newer skills: online communication skills; technical skills; collaborative learning techniques; and leadership/facilitation skills (Riverin & Stacey, 2008). As proficiency was enhanced, overall confidence and comfort with one's professional responsibilities increased. Through collaboration, story exchanges, and question and answer communication with colleagues, learners gained the sensation that their job was made easier (Gray, 2004). Acquisition of new skills could come casually and indirectly (Castaneda & Soto, 2010) or after purposeful interaction with subject experts and those with more experience (Bouchamma & Michaud, 2011; Ardichvili et al., 2003).

Ivanova and Chatti (2011) and Castaneda and Soto (2010) studied the perceptions of learners after being introduced to concepts of the technological aspects of a PLN and online community of practice. In their two-year project, undergraduate learners (N = 60) participated in a series of interviews to reveal their insights toward learning the ways in which a PLN can affect their informal and formal learning experiences. Results confirmed that effective construction of one's PLN can positively impact their overall learning experience (Ivanova & Chatti, 2011). Castaneda and Soto (2010) worked with 150 students by introducing concepts of PLN through workshop opportunities where they could directly apply new PLN skills. Data indicated participants' beliefs that the acquisition of new technological and social networking skills would likely benefit future learning experiences; however, participants widely connected such tools directly to their tasks, rather than to themselves. This suggested that participants did not fully understand how the construction of a PLN might aid in informal and social learning. Instead, users might view PLN as a process utilized only during tasks and projects. Those new to PLN concepts were very excited about the knowledge and proficiency of new technological skills and sought ways to control their

learning as they applied skills in concert with their learning needs and styles (Ivanova &

Chatti, 2011; Castaneda & Soto, 2010).

     Development of professional identity/vision. Participation within a PLN or online

community of practice was found in the literature to be a factor that helped users

professionally as they developed or expanded their professional identity or vision (Tsai et al.,

2010). Through direct collaboration with strong and weak ties, users' educational vision and

philosophies were enhanced and furthered (Rajagopal, Joosten-ten, Van Bruggen, & Sloep,

2012). Users contextualized the experiences and contributions of others in their network to

build professional identity. By connecting and collaborating with colleagues throughout the

world, while using the latest technologies, users felt like educational pioneers in the

dissemination of innovation (Nikolaou & Tsolakidis, 2012). Alderton et al. (2011)

determined that some users believed collaboration through Twitter assisted in the evolution

of a solid professional reputation. Communication via PLN tools amplified presence, which

led to positive recognition and respect. Additional findings indicated that Twitter was

instrumental in the transformation of educational vision. Hanewald and Gesthuizen (2009)

reported that over 90% of participants valued feedback from others. This feedback allowed

users to position their opinions against others, further validating or challenging viewpoints.

Another study found that veteran members' involvement in a learning community might have

restricted new members' contributions, thereby impacting the collective identity of the

community (Riverin & Stacey, 2008).

     In Gray's (2004) study, coordinators of an educational learning organization

strategically focused on professional identity and vision through their online community of

practice. Through digital dialogue within the community, participants developed a greater

sense of their professional position and how it related throughout the region. Participants also developed a collective, mutual understanding of their roles, which led to increased ways of supporting and assisting colleagues (Hur & Brush, 2009). The mutual construction of professional identity was a common goal for communities of practice, which "come together not only to engage in pursuing some enterprise but also to figure out how our engagement fits in the broader scheme of things" (Wenger, 1998, p. 162).

   Knowledge sharing. Hew and Hara (2007) conducted a comprehensive study of teachers participating in a community of practice to understand how, and why, teachers share knowledge. Data was collected through semi-structured interviews (N = 20) about teachers' motivators for knowledge sharing. The findings of the study indicate that teachers shared two types of knowledge with community members – book knowledge and practical knowledge. Teachers were motivated to share such knowledge primarily due to sensations of collectivism and reciprocity, which was consistent with previous research by Wasko and Faraj (2000). However, Hew and Hara's (2007) study yielded evidence that teachers were motivated to share information for several reasons, not because of a single motivator. Knowledge sharing amongst legal professionals was driven exclusively by egoist principles, to bolster one's overall reputation, according to a mixed methods qualitative study (N = 604) that inspected a digital learning network for lawyers (Wasko & Faraj, 2005). Hur and Brush (2009) found that some teachers wished to also share their positive and negative emotions. Participants of their study indicated they felt relieved and encouraged to learn of others' professional struggles and hardship.

   Knowledge sharing was more prone to occur in environments perceived as safe and welcoming (Ardichvili et al., 2003; Wasko & Faraj, 2000). Additionally, the behaviors of

information seekers could affect how users in a community disseminated and shared

information (Hew & Hara, 2007). In an exploratory qualitative case study (N = 2) approach,

it was determined that before choosing to distribute information or resources, disseminators

cast judgment based upon perceived seekers' cues to gauge overall interest or excitement

toward information (Lichtenstein & Hunter, 2005). In congruence with those findings, Chiu,

Hsu, and Wang (2006) collected data from 310 members of a virtual learning network about

their knowledge sharing behaviors. According to their findings, members were more inclined

to share information because of community outcomes rather than personal goals or desires.

When such beliefs are embedded into a learning organization's culture, knowledge

disseminators and contributors focus more on the operability, survival, and sustainability of

the learning network.

     Collaboration. Riverin and Stacey (2008) studied an online learning network of

teachers' (N = 12) professional development engagement in an ethnographic case study

approach. Through their findings, it was determined that the group greatly benefited from

initial face-to-face interactions as a particular bond developed and carried forward through

their digital collaborations. Within this study, veteran members of the organization did not

adapt easily to newer members, reducing the overall spirit of collaboration and community

within the group. Over time, the groups' work output was reduced, consistent with research

that emphasizes strength of community as a factor of online community effectiveness

(Ardichvili et al., 2003).

     Microblogging, particularly via the platform Twitter, was mentioned in the literature

as a tool for collaboration. Twitter was a popular option amongst participants, as it enabled

users to forge connections with others outside their general vicinity (Forte et al., 2012;

Badge, Johnson, Moseley, & Cann, 2011; Alderton et al., 2009). Forte et al. (2012) published

that teachers followed large numbers of teachers outside their schools and fewer from their

local school community. Harnessing the power to establish connections beyond their local

school – with people whom they previously met, attended a conference or event, or stumbled

across online – teachers become "information brokers" (p. 109). In contrast, Hanewald and

Gesthuizen (2009) found that 97% of participants physically shared information and

resources attained through PLN with colleagues at their workplace. Furthermore, participants

overwhelmingly reported that workplace colleagues were the initial source of information

and knowledge that was disseminated to others through their PLN. Participants did report

initial confusion with sharing information due to the potential for blurring personal and

professional boundaries. The overlap of personal and professional collaboration was accepted

in Harrison and Thomas's (2009) study, which indicated participants' experiences of

collaboration were similar to socializing and hanging out in a collegiate residential hall. The

digital collaboration was deemed rich in the social and cultural interactions with peers.

Mackey and Evans (2011) published findings from their qualitative case study investigation

of fifteen teachers' online professional development in an online community, suggesting that

socialization was not sought by its participants. While evidence did highlight sharing and

collaboration, participants believed the relationships that formed were superficial and

contrived. Participants did utilize their autonomy to create their own network and establish

desired connections, but this resulted in little desire to create personal relationships from their

collaboration (also evident in Forte et al. (2012)).

Alderton et al. (2009) reported that 61% of their users' microblogging activity

showed an indication of professional discourse and collaboration. However, users did not

limit their collaboration only to Twitter. Evidence of collaboration was extended to other platforms like wikis, Facebook, Skype, blogs, forums, and face-to-face meetings. Badge et al. (2011) conducted a qualitative online survey that found that participants (N = 15) utilized microblogging platforms to collaborate on upcoming tasks as well as coordinate meeting and event logistics. European teachers wanted more opportunities to collaborate with colleagues in person (Fetter et al., 2011). Their networks were comprised of about half strong ties from their workplace and the other half weak ties from across the continent. Implications of the study have prompted community organizers to seek methods that instill a "blended" network, rather than one that is exclusively digital.

Barriers to PLN Participation

As was evidenced in the first part of this literature review, research indicated many reasons why people would build, and participate in, a PLN or online community of practice. However, it is equally important to understand what the potential barriers of PLN participation may be as the success of an online community relies on a safe climate, joint vision, and ever-present collaboration amongst its members (Nikolaou & Tsolakidis, 2012; Tsai et al., 2010; Harrison & Thomas, 2009). Ardichvili et al. (2003) stated that while virtual learning communities and personal learning networks might be a newer phenomenon, identifying the characteristics to maintain their sustainability were important. This assertion was furthered by Yang and Chen (2007), who posited that "factors impacting knowledge sharing should be the most important consideration in any knowledge management effort" (p. 575).

Through this review of literature, several barriers to PLN participation were identified, which included lack of knowledge/comfort; lack of connections; lack of norms/rules; lack of engagement; and lack of time.

Lack of knowledge/comfort. Lack of knowledge and/or comfort, as a barrier to PLN participation, was cited often throughout the literature. Gray (2004) found that members new to an online community, particularly those that did not fully understand the community's culture, were hesitant to contribute and felt as though they had "nothing to offer." These individuals tended to participate in the PLN on the periphery, more as "lurkers" than as regular contributors. Riverin and Stacey (2008) observed that several participants new to an online community were so overcome by technological barriers that they inevitably left the community. Such action is congruent with findings of a Gairin-Sallan et al. (2010) study, which found that a major reason users abandoned an online community was their inability to overcome technical issues encountered during their early experiences as a community member. In a different study, it was found that new members attempting to engage in a personal learning network had the comfort, proficiency, and efficacy to learn how to utilize appropriate technological tools in a PLN but could not conceptualize how all the technological tools and networked learners were interconnected (Castaneda & Soto, 2010). A Guldberg and Mackness (2009) study, which surveyed twenty-six participants, stated that technological competencies were needed to effectively participate in a PLN. In some cases, it took upward of four weeks to acquire the requisite skills and comfort to use certain technological tools.

A different hurdle that impacted users' participation utilizing Twitter was the conceptual understanding of how the platform could enhance digital collaboration. Castaneda

et al. (2011) shared that many users were initially turned off by Twitter updates by other members. They criticized other users for disclosing information that was unnecessary and excessive. They initially experienced a sensation of information overload before inevitably developing greater comfort with the purpose of Twitter and microblogging tools. Hew and Hara (2007) determined that technology could also restrict the social cues users were accustomed to experiencing during in person communication. Such hindrances could potentially lead to misinterpretations of communicated material, causing discomfort with and inevitable avoidance of collaboration.

Carr and Chambers (2006) investigated teachers' participation in an online learning community, National Quality of School Pilot Project, developed through the Australian Government. Part of their findings included teachers' lack of experience and familiarity with technological tools for digital collaboration. The culture of the project was not conducive to maximizing member participation (Hew & Hara, 2007; Ardichvili et al., 2003; Wasko & Faraj, 2000). Hur and Brush (2009) posited that with adequate training, teachers' efficacy and agency would increase, resulting in great confidence and comfort.

Lack of connections. Guldberg and Mackness (2009) observed that some online learning network users might lack feelings of belonging to the community. Data suggested that varying levels of connections were established by users, some with strong ties and others with weaker, inactive ties. In many cases, connections were forged with a community facilitator or leader rather than with multiple members of the group. Many relationships persisted over time; this differs from the Carr and Chambers (2006) study that found members had no social connection with community members outside of any group tasks/projects.

Different to other studies, Ardichvili et al. (2003) determined that some online community members gradually ceased their participation as they sought exclusive collaboration with those they favored from their self-generated informal groups. Over time, members began identifying colleagues, whom they contacted on a regular basis, and targeting collaboration with them exclusively. Ultimately, the learning network became obsolete or redundant to certain users. Loosely related, research by Carr and Chambers (2004) explained that users considered their digital collaboration to be a barrier when compared to collaborating face-to-face. Users expressed the feeling that without a physical rapport established prior to solely collaborating online, the potential for successful collaboration was not feasible. Mackey and Evans (2011) observed that some participants were limited in finding colleagues that shared teaching assignments or curricular interests. In such cases, users attempted to forge connections with others whose interests somewhat aligned to their own, but that collaboration was superficial.

Lack of norms/rules. If members of an online community did not understand stated or implicit norms and expectations, they were subject to experiencing negative sensations. Ultimately, the negative sentiments might reduce interaction or lead to outright isolation. Riverin and Stacey's study (2008) reported that users new to an online community immediately experienced intimidation. Rules and norms were too structured and there was an overall lack of etiquette and trust toward new members. One participant referred to veteran members within the community as an "old boys club" (p. 52). The sense of community was compromised, causing a lack of belonging amongst the new members (Hew & Hara, 2007; Carr & Chambers, 2006; Ardichvili et al., 2003; Wasko & Faraj, 2000). Members of online networks noted frustration with misuse and/or overabundance of email and other forms of

digital communications (Guldberg & Mackness, 2009; Hanewald & Gesthuizen, 2009). A lack of familiarity with technological tools and their purposes led to negative experiences by new members of an online community that primarily used Twitter (Castaneda et al., 2011). Without fully understanding the rules and expectations of digital collaboration or discourse via microblogging, users misunderstood users' intentions as nothing more than the sharing of random, useless information (Castaneda et al., 2011). A phrase used to identify newer users of this learning community was "breakfast syndrome" because they were apt to ask "what do people care what I had for breakfast this morning?" In such cases, users required a little time to acclimate to proper rules of discourse. Alternatively, some users inserted themselves immediately into the community and learned as they proceeded. Ardichvili et al. (2003) posited that an effective learning community required norms and rules, which included norms that promoted a trustworthy organizational culture; multiple face-to-face communities of practice, which could inevitably morph into virtual communities or groups; and clear and concise standards for sharing knowledge.

Lack of time. Evidence from the research indicated that lack of time was a barrier to PLN participation. Fry's (2006) study involving student teachers participating in an online learning community indicated that the primary reason for not participating was based on time. Because of professional responsibilities, participants could not find time during the day to actively collaborate with peers; this has also been evidenced in other studies (Hew & Hara, 2007; Carr & Chambers, 2006). Teachers' participation in a PLN or online community of practice was subject to the restrictions of a workday schedule and other professional responsibilities. Ultimately, this led to the belief by their school leaders that it was not a priority (Carr & Chambers, 2006). Because PLN are self-generated and used to enhance

one's informal learning, it could be expected that teachers would only participate with those in their PLN when time permitted. Ardichvili et al. (2003) identified the lack of time the learning community managers caused due to their needing to approve members' contributions and postings.

Lack of engagement. Lack of engagement was identified as barrier to PLN participation. Hanewald and Gusthuizen's (2009) study involved participants that requested greater involvement from online community members. Some participants explained that it was their duty as a member to participate and urged others that were reticent to increase their involvement. Limited engagement also plagued another online community, where less than 20% of members were logging in to the community's main site (Guldberg & Mackness, 2009). The researchers did make the distinction that logging in could not be equated to online participation; however, it did correlate to the overall drop in participation levels observed in the study. The final conclusion was that many members not actively participating shifted to the periphery and became casual learners/engagers within the community. Data confirmed that these periphery learners did indicate high levels of satisfaction and perceived learning despite not being actively involved at rates that mirrored other members. Through the review of literature, it was not uncommon to see educators and participants self-identify more as an observer than as an active participant (Ivanova et al., 2012; Castaneda, 2011), whereas others identified as inactive (Fetter et al., 2011; Fry, 2006; Ling et al., 2005).

Since an online community depends on active participation from its members (Nikolaou & Tsolakidis, 2012; Fang & Chiu, 2010; Harrison & Thomas 2009), a better understanding of why people choose to participate as observers is essential. Nonnecke, Andrews, and Preece (2006) sought to examine those that merely observed and compare their

attitudes to those actively engaged. In their quantitative study, they sampled 375

communities using an open-ended survey. The findings of their study showed that 18.4% of

participants (N = 1188) were deemed "lurkers" for not actively participating and instead

observing activity of the online community. Lurkers' motives for joining an online

community were similar to those actively engaged, citing personal reasons instead of work or

school. Once joining, lurkers and active members reported their primary activity as gaining

an understanding of the community and reading the stories/conversations of others. Lurkers

were not reported as possessing the desire to tell stories, build relationships, make friends, or

offer expertise to others. The study found that lurkers' needs were satisfied by merely

reading and observing the contributions and actions of other members. Lacking confidence

was offered as an explanation for lurkers' behavior.

As noted in previous studies, sense of community was important for the vitality and

sustainability of surviving. Lurkers indicated they did not perceive a sense of a culture of

collectivity or community within the online network, nor did they perceive themselves as

actual members. Such negative sentiments might be a factor in demonstrating lower levels of

respect toward active members of the community. Overall, tolerance of lurkers was evident

in online communities, although many active members did not consider lurkers to be

community members (Nonnecke et al., 2006).

Social Networking

According to a quantitative phone survey administered to 1802 participants to learn

about social media habits, approximately 67% of internet users frequented social networking

platforms (Duggan & Brenner, 2013). Internet users under the age of fifty were more apt to

utilize social networking sites, particularly those within the age range of 18-23. Women were

more likely than men to utilize social networking sites, as well as urban over rural residents. Data suggested the top social networking platforms are Facebook, Twitter, Pinterest, and Instagram, respectively. Twitter experienced a doubling of participants since 2010. Smith (2011) conducted phone surveys of 2277 internet users to learn about social media behaviors. Primary reasons for using social networking websites included to stay in touch with friends; remain in contact with family members; and connect with friends with whom the user had lost contact. Only 14% of participants indicated use of social networking sites for connecting with others on a hobby or topic of interest. Connecting with popular and public figures was a popular drive for Twitter users.

Hogebook, McDermott, Perrin, and Osman (2010) sampled 2284 adults over the age of fifty to learn about internet and social networking use. The study reported that adults over age fifty increased their contact with family and friends as their usage of internet and social networking increased. Internet users over the age of fifty were also more active in civic and volunteer organizations. The study also indicated that middle-aged adults utilized internet and social networking tools at higher rates than older adults.

Educators' use of social networking tools/PLN tools. The push for districts to experiment with social networking and collaborative personal learning network opportunities was established by the United States Department of Education, as outlined in the National Education Technology Plan (NETP) (U.S. Department of Education, 2010). The NETP calls for the establishment of digital collaboration amongst American educators as they create personal learning networks and online communities of practice. Ultimately, digital collaboration will become prevalent in American classrooms and instructional activities, transforming our educational model.

To establish a uniform set of standards that school administrators should know and/or do to support effective technological integration in schools, the International Society for Teachers in Education established the National Educational Technology Standards for Administrators, also known as (NETS-A) (ISTE, 2009). The NETS-A standards covered five focal points: (1) visionary leadership; (2) digital-age learning culture; (3) excellence in professional practice; (4) systemic improvement; and (5) digital citizenship. In a mixed methods study that investigated school administrators' (N = 27) perceptions of educational technology leadership, it was found that the school leaders were described as being a learning-based technology leader; organizational technology leader; change-agent technology leader; or facilitative leader (Militello & Janson, 2007). The findings also indicated that school administrators had different perceptions about how the NETS-A standards applied to their overall educational technology leadership.

Before school administrators and educators rush to social networking and digital collaboration, it is important to review the risks and potential legal implications. Bumgardner and Knestis (2011) reported that before school districts integrate social networking opportunities into the instructional regiment, full consideration of multiple concerns was necessary. Can study safety be maximized? Are educational and learning benefits possible? Must an acceptable use policy be implemented and enforced? Additionally, the free speech and expression of teachers on digital platforms, social networking, blogs, and/or microblogging should not be assumed to be guaranteed. Particularly for communication deemed outside of an educator's work responsibilities, teachers may be liable for their actions (Bathon & Brady, 2010; *Garcetti v. Ceballos*, 2006).

As school districts seek to adopt policies and practices concerning social networking or acceptable use, little comprehensive guidance is available. The results are scattered local policies that are not congruent with other districts (Miami-Dade County Public Schools, 2012). School administrators' overall leadership on this issue was said to be one of the single most critical factors of effectively integrating technology into schools (Schrum, Galizio, & Ledesma, 2011). While some districts have adopted full bans on social networking tools on school district technology devices, research indicates such practices could have negative effects on student collaboration and learning opportunities (Bosco, 2011; Bumgardner & Knestis, 2011; Stout, 2011).

Miami-Dade County Public Schools' Office of Assessment, Research, and Data Analysis (2012) published several recommendations for school districts and school leaders when creating social networking policies and practices: (1) develop an appropriate use policy (Bosco, 2011; Goldfarb, Pregibon, Shrem, & Zyko, 2011); (2) adhere to federal laws concerning students' internet use (Willard, 2012; Bosco, 2011; Goldfarb et al., 2011; Davis, 2010); (3) sample and experiment with various social networking sites (Brady, 2010); (4) utilize multiple approaches and software to block unacceptable websites (Bosco, 2011; Willard, 2006); (5) administer social networking training to teachers (Goldfarb et al., 2011; Foulger, Ewbank, Kay, Popp, & Carter, 2011; Willard 2006); and (6) implement and enforce policies that restrict or regulate online teacher-student communication (Brindley, 2012; Willard, 2012; Goldfarb et al., 2011; Saunders, 2011; Downing & Shannon, 2010).

Teachers who use social networking sites do so at a percent higher than the national average, according to a 2012 phone survey gauging American teachers' perceptions of social media technology (Purcell et al., 2013). Most popular social networking sites include

Facebook, YouTube, LinkedIn, and Google+, respectively. Teachers under the age of thirty-five are most likely to use social networking sites. This is similar to findings by Duggan and Brenner (2013). YouTube was a popular site for teachers and was used by 97% of teachers from the Purcell et al. (2013) study. The popularity exhibited by teachers for YouTube and similar video uploading sites conformed with the number of participants and viewers of online streaming video sites that developed circa 2007 (Purcell et al., 2013). Quantitative evidence indicated that teachers were frequent content creators, responsible for building websites, online blogs, and other digital crowd-sourced or mashup-type sites. Teachers more commonly utilized the internet to retrieve resources rather than to collaborate or share knowledge with colleagues. This is in stark contrast to the primary motive for so many teachers utilizing social networking sites for participation within a PLN or online community of practice (Colibaba et al., 2012; Tsai et al., 2010; Hur & Brush, 2009; Gray, 2004). Teachers did utilize the internet for professional collaboration, but this paled when compared to the popular practice of subscribing to daily or weekly industry-specific newsletters and emails (Purcell et al., 2013).

An online quantitative and qualitative survey was administered to educators (N = 694), including school administrators and teachers, to gain more insight into their experiences with social media and online communities (MMS Education, 2012). Data indicated a significant increase in teacher membership on social media sites since 2009, although they continued to be concerned about privacy. Facebook was the most popular platform (Duggan & Brenner, 2013; Purcell et al., 2013), along with LinkedIn, Twitter, and Google+, in that order. Teachers kept two separate profiles on most sites to distinguish between personal and professional activities (Forte et al., 2012; Kairam et al., 2012; Johnston

et al., 2012). In addition to social network sites, teachers favored blogs, wikis, document

sharing tools, photo upload, and video sharing sites as preferred tools for instruction and

collaboration. Webinar participation was the most popular professional activity for teachers.

Privacy was an overwhelming concern for joining a social networking site (MMS Education,

2013).

In the Colibaba et al. (2012) study, world language teachers reported their use of

social networking platforms. According to the qualitative and quantitative data, the majority

of participants overwhelmingly stated they participated on Facebook; about three-quarters

were members of Twitter and Google+; and a little more than half of users had registered for

LinkedIn. Participants were most interested in social networking tools for maintaining

contact with friends and family; to remain updated on professional matters of interest;

collaborate and share resources with colleagues; and attend web-based webinars. Ivanova et

al. (2012) stated that less than half of teachers believed Facebook could be a supportive tool

for professional development or that Twitter could be utilized for personal and professional

development.

Social Networking and Boundary Regulation

Boyd (2011) stated that as users became more familiar with social networking tools,

privacy behaviors became more informed. Overall awareness of privacy was also

strengthened by increases in knowledge through the media, input from family or friends, and

by observing behaviors from within their own social networking groups. In the Kairam et al.

(2010) study, less than 25% of users actually enacted necessary steps to limit their audience

based on privacy concerns. In contrast, Johnson et al. (2012) furnished results from a mixed

methods study involving Facebook users (N = 260), of whom 95% took appropriate action to

establish privacy parameters and restrict information for unknown audiences. Palen and Dourish (2003) posited that the disclosure of information was a "necessary consequence of participating in a networked world" (p. 129). This reality is not unknown or foreign to users. Burchill (2010) indicated that more than 85% of millennial-aged users fully acknowledged the necessity of turning over aspects of their privacy in order to utilize social networking tools and platforms.

   Disclosure. Ioinson and Payne (2007) defined disclosure as "the telling of the previously unknown so that it becomes shared knowledge" (p. 237). As users increased and persisted with activities on social networking activities, their comfort with sharing information became more commonplace (Matyszczyk, 2010). Youn (2005) referenced an Annenberg Public Policy Center study (Turow & Nir, 2000) that explored online habits of teenagers and drew the conclusion that younger social network users freely disclosed and shared information; they continued to publish information for "instant gratification such as a free gift" (p. 90). Lee, Im, and Taylor (2008) administered a mixed method study to identify bloggers' (N = 7) motivations for disclosure. According to their findings, the top motivations for self-disclosure by bloggers were self-presentation; relationship management; to keep up on trends; information storage and sharing; entertainment; and showing off. Waters and Ackerman (2011) were interested in the perceived motivations of voluntary disclosure by active Facebook users (N=59) measured by a Likert scale survey. The motivations for self-disclosure on Facebook almost mirrored the results of Lee et al. (2008), only differing in priority. Information sharing, entertainment, keeping up with trends, and entertainment were the top four motivators for Facebook disclosure (Waters & Ackerman, 2011). Facebook users were likely to disclose information to strengthen relationships with strong ties and potentially

expand their weak tie network; this is consistent with research (Stutzman et al., 2012; Nikolaou & Tsolakidis, 2012; Hur & Brush, 2009).

Kairam et al. (2012) conducted a mixed methods study involving quantitative analysis of 64,005 users who shared content on a specific social networking platform during an entire calendar week. Additionally, the researchers conducted a follow-up survey of select participants (N = 168) and in-depth interviews with twelve participants. According to the survey data results, 98% of participants used multiple social networking tools during the course of the study. Sharing patterns were disaggregated through survey data, indicating frequent sharing of website links and photos. Less than half of participants stated they shared video and almost two-thirds claimed to have never shared their location in content postings. Data also reported that more than half of users' posts were published for public viewing. Reasons for sharing content online were unraveled through survey data, including perceived value of content; sharing about self (Hanewald & Gesthuizen, 2009); discourse; and evangelism. Strategic posting of online content was also found to be a key driver toward an individual's expansion of an online network in that they hoped to increase contacts by using content as a lure (Kariam et al., 2012). As well, social networking users tended to share content they believed would be of use to others, particularly that deemed "interesting, exciting, or cool" (p. 1070). Though not as frequently shared, content perceived as funny was another factor for sharing content online.

Similar to the findings of Hur and Brush (2009), the desire to share personal experiences, particularly those with strong emotional elements, was a top factor for choosing what to share online. The desire to spur a conversation on important or controversial topics was a factor that motivated users to share content online. This notion was corroborated by

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Forte et al. (2012), whose study demonstrated that not all teachers wanted to broadcast information only. Instead, they wanted to engage in a digital dialogue. Within their study, they referenced "meforming" vs. "informing." This was used to make a distinction between online content comprised of only status updates versus information that could be used professionally by others. Only 2.5% of participants' online content was coded as "meforming," lending credence to the theory that teachers wished to utilize microblogging tools for dialogue and discussion (Kairam et al., 2012; Castaneda et al., 2011). Forte et al. (2012) found that teachers were initially drawn to microblogging and Twitter for personal reasons, only to evolve their use toward a predominant professional purpose. Participants in the study by Castenda et al. (2012) feared their use of microblogging might blur the boundaries between personal and professional purposes (Stutzman & Hartzog, 2012).

Identity. To effectively grow and sustain one's personal learning network, or participate in an online learning community, a user must collaborate with others using various social networking platforms (Stutzman, Vitak, Ellison, Gray, & Lampe, 2012). Many social networking tools automatically allow the public access to an individual's digital profile; this profile can also be restricted to one's "friends" and/or "followers." As users seek to expand their PLN, online interpersonal communication is contingent upon trust (Nikolaou & Tsolakidis, 2012; Hur & Brush, 2009). Evidence was analyzed from a quantitative study involving twelve technologically-savvy participants to learn about the effect of empathy on online interpersonal trust through instant messaging texts. The findings suggested that a person could become more "likeable" and gain additional trust by divulging more information and stories online (Ioinson & Paine, 2007; Feng, Lazar, & Preece, 2004). Another study exploring social network users' (N = 516) understanding of privacy concerns

and risks found that 36% strongly trusted other people with their personal information on social network sites, compared to only 28% believing social networks run by companies could be trusted with personal information. (Karr-Wisniewski, Wilson, & Richter-Lipford, 2011; King, Lampinen, & Smolen, 2011; Petronio, 2007, 2002). Social network users' (N = 348) privacy risk behaviors and attitudes were surveyed using a Likert scale survey to learn what the most frequent information users (N = 315) posted and made available on Facebook (Williams et al., 2009). According to the results, the more frequently disclosed information included name; gender; photos; friends; relationship status; and date of birth. The study also discovered that younger users consistently posted more information at higher percentages than older aged groups. Johnson, Egelman, and Bellovin (2012) revealed that less than half of users had no information available to strangers and unknown audiences, while others had status updates, public photo albums, and lists of friends from their respective networks available for public consumption.

Stutzman, Gross, and Acquisti (2012) conducted a longitudinal study to document and analyze how social network users' privacy and disclosure evolved over an extended period of time. The mixed methods study focused on over 5000 Facebook users between 2005 and 2011. Evidence from the study drew contrasting results, including how users' disclosure of online information to strangers decreased over time (Boyd, 2011) but significantly increased near the end of the study. Researchers believed this increase might be attributed to changes in Facebook's privacy policy and overall interface (Stutzman, Gross, & Acquisti, 2012; Waters & Ackerman, 2011).

Online disclosure of personal information increased potential privacy threats, since information was made available to a larger network or community of people over whom the

user had no control. Shi et al. (2012) asserted that the body of research concerning interpersonal privacy management and interactions within social networks was lagging. To collect more data, they implemented a content analysis of 1463 Facebook comments made on Facebook "Friendship Pages" during a three month span to investigate interpersonal communication and privacy concerns. Their preliminary findings suggested users were concerned by the addition of Facebook Friendship Pages, which allowed user activity to be accessed across a user's friend's network. Through this mode of interpersonal communication, information no longer resided with "a single user's own domain, but… [was] co-owned and co-managed by multiple shareholders" (p. 579). A survey of social networking privacy and disclosure was administered to a random sample of undergraduate students (N = 2500). The decision to share information and engage in strategies to protect that information was likely the mitigating factor in determining if disclosure would occur (Stutzman et al., 2012). In one study, users were most concerned with online information becoming accessible by strangers, coworkers, and friends of network friends (Johnson et al., 2012).

In the Williams et al. (2009) study on privacy risk behaviors and attitudes, the majority of participants responded that they had updated privacy settings on Facebook. However, contrary to previous research (Boyd, 2011), the percentage of users who updated privacy settings declined as age increased (Williams et al., 2009). Interestingly, informing users about a network's privacy settings or risks did not result in increased motivation to change settings (King et al., 2011). In a separate study on Facebook privacy concerns, Reynolds, Venkatanathan, Goncalves, and Kostakos (2011) analyzed practices of 103 users, yielding results that showed older users' privacy settings were more restrictive and changed

frequently. Additionally, female users tended to have more "open" Facebook profiles and less privacy restrictions, which contradicts Youn (2005), whose research indicated that females were more concerned about potential disclosure risks and threats to identity.

Altman (1975) stressed that privacy should be considered a dynamic, fluid process and individuals should control the disclosure of one's information by regulating their social interactions. Kairam et al. (2012) determined that social network users managed their contacts based upon their personal/professional "life facets" and tie strengths. Users with strong ties had stricter privacy and boundary regulation mechanisms in place, which led to sharing of more personal information. Weak ties utilized "catch-all" restrictions so personal information would not be leaked to unknown audiences. The assignment and regulation of audiences into particular groupings was likely to change over a user's practice with the network (Williams et al., 2009). Quantitative evidence asserted that a social network likely contained contacts with whom users were not always comfortable sharing all online information and content (Johnson et al., 2012).

Social networking platforms have recently begun building user capability by segmenting connections into groups so that users can control which groups can see online contributions. Facebook enables its users to create lists of contacts. Johnston et al. (2012) reported users creating lists for various reasons, including privacy; family; and reasons that could not be recalled by users. Stutzman et al. (2012) posited networks with more boundary and privacy restrictions should contain higher levels of trust, thereby resulting in an environment suitable for sharing and disclosing more information with connections (Nikolaou & Tsolakidis, 2012; Hur & Brush, 2009). This form of boundary regulation was investigated in a quantitative web survey about social network use that was administered to

undergraduate students (N = 444) (Stutzman & Kramer-Duffield, 2010). The findings confirmed that as social network users regulated content for specific audiences, this resulted in privacy violations by weak ties and increased interpersonal privacy management. These violations could result in users taking correction action against contacts, such as blocking; unfriending; deleting posts; and/or disabling comments from others (Karr-Wisniewski et al., 2011).

Kairam et al. (2012) sought to learn how users of online social networks created groups of people with whom they shared limited information. Google+ is a social network platform that recently gave users the ability to create circles of contacts, distributing specific information to members within each circle. Results of the study identified four factors used as the basis for limiting contact to specific audiences: privacy (considering all risks to privacy by distributing information to others in the circle); relevance (identifying specific circles of contacts who might find content to be of interest); social norms (considering if content would be appropriate for a specific, or general, circle of contacts); and distribution (maximizing the potential of expanding one's circle of contacts). Kairam et al. (2012) hypothesized that social network users were gradually altering boundary regulation away from what an audience was allowed to view online, toward regulating the reasons to release and distribute select information. This change was likely due to empirical evidence that suggested social network users were concerned with potential "insider threats," fearing information might be misused or inadvertently received by those within circles of strong ties (Johnston et al., 2012).

Stutzman and Hartzog (2012) interviewed social media users (N = 20) with multiple profiles to learn how they maintain their identity. The qualitative data showed that as a means

to regulate identity, some social network users hid their profiles behind pseudonyms to conceal identity or obscure details so they were unidentifiable (Harrison & Thomas, 2009). Others created separate profiles, posting online content relative to one's personal or professional context. Separate profiles were believed to segment content to specific audiences (Forte et al., 2012; Kairam et al., 2012; Johnston et al., 2012).

  Temporality. Shi et al.'s (2012) study of Facebook users' experiences with Facebook's Friendship Pages highlighted a key violation of temporality as information and interactions were made available to unknown audiences. Though the user agreed to disclose aspects of information to those within their network, the original thinking was that such information would not inevitably become available to others. This violation of temporality caused users to reevaluate boundaries and consider the future implication of disclosed information, past and present (Page, Kobsa, & Knijnenburg, 2012). Johnson et al. (2012) learned that more than half of users untagged or deleted a photograph of themselves that appeared on their own Facebook profile or that of a friend. Users feared the photograph might one day harm their image or reputation. Similarly, nearly two-thirds of users deleted a photograph of a friend at their request to reserve privacy and/or assist with reputation management.

  An online survey of Twitter users (N = 1221) was conducted by Sleeper et al. (2013) to learn more about any regrets experienced after publishing a Tweet. Data revealed the most regretted Tweets addressed topics that involved work-related frustration, relationships, politics, or rants by the user. In such cases, users generally employed a variety of repair strategies within hours, which included deleting the post; apologizing; acting as though nothing had occurred; and/or publishing an excuse to justify the content of the post. The

findings also provided more insight toward the emotional state of users prior to publishing a regretted message. The commonly cited negative emotions included stress; anger; and frustration. Users indicated the original intent of the postings was to inform others of their emotion with the hope others would sympathize.

In an exploratory analysis of data from 3.9 million Facebook users over a seventeen day period, Das and Kramer (2013) analyzed self-censorship behavioral trends. Preliminary data revealed that almost three-quarters of users self-censored online content, including status updates, group posts, and event timeline contents. Users also censored comments placed on their uploaded photographs, timeline posts, and status updates. The conclusion of the study was that censorship increases if (1) network connections are predominately weak ties of no specific relationship and (2) if online posts are intended for a specific audience or group.

Page, Kobsa, and Knijnenburg (2012) interviewed twenty-one users and non-users of location-sharing technologies that were incorporated into social networking platforms. The purpose of the study was to learn how location sharing affected users' boundary regulation systems. Data suggested participants were reluctant to divulge location information to particular strong ties or inner circle contacts. They feared a potential negative impact on future relations. Similar to the Johnson et al. (2012) study, participants frequently deleted and untagged social network posts to eliminate potential threats to their privacy.

Practices for PLN Participation and Boundary Regulation

The literature on personal learning network participation identified factors affecting PLN participation, barriers to PLN participation, and social networking. Research suggested that one of the primary factors affecting PLN participation was the necessity for a mutual sense of communality amongst members (Bouchamma & Michaud, 2011; Hur & Brush,

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2009; Gray, 2004), including the desire to share knowledge in a safe, professional

environment (Ardichvili et al., 2003; Wasko & Faraj, 2000). Personal learning network

participation was also affected by the contacts with whom a user sought to collaborate.

Research indicated PLN contacts were typically those who had different viewpoints;

possessed aligned values; were passionate and inspirational; and were trustworthy (Rajagopal

et al., 2012). Through one's PLN connections, users could improve professional motives,

such as accessing resources and information (Forte et al., 2012; Alderton et al., 2011;

Castaneda, Costa, & Kompen, 2011; Ivanova, Grosseck, & Holotescu, 2011); acquire new

skills (Bouchamma & Michaud, 2011; Castaneda & Soto, 2010; Tsai et al., 2010; Hanewald

& Gesthuizen, 2009; Gray, 2004; Ardichvili et al., 2003; Wenger & Snyder, 2000); and

develop a professional identity and vision (Rajagopal et al., 2012; Tsai et al., 2010; Hur &

Brush, 2009; Riverin & Stacey, 2008; Gray, 2004).

In addition, the literature examined social networking privacy and boundary

regulation. While the literature highlighted educators' use of social networking and PLN

tools (Duggan & Brenner, 2013; Purcell et al., 2013; Colibaba, 2012; Ivanova et al., 2012;

MMS Education, 2012; Tsai et al, 2010; Hur & Brush, 2009; Gray, 2004), what was missing

was a thorough overview of how educators, specifically school administrators, participated in

PLN and regulated boundaries. Research highlighted examples of regulating boundaries by

updating social networking privacy settings (Williams et al., 2009); allocating contacts in

specific groups and disclosing information accordingly (Kairam et al., 2012; Kramer-

Duffield, 2010); creating profiles that established anonymity (Harrison & Thomas, 2009) or

utilized pseudonyms to conceal identity (Stutzman & Hartzog, 2012); deleting, self-

censoring, or modifying social networking posts that identified users (Das & Kramer, 2013;

Sleeper et al., 2013; Johnson et al., 2012; Shi et al., 2012); and avoiding the use of location-bearing social networking tools (Page et al., 2013). This study seeks to better understand the experience of school administrators that participate in a PLN and privacy issues, particularly as they regulate boundaries.

Summary

In this chapter, I described the purpose of the literature review and synthesized existing literature and empirical studies that addressed personal learning networks and online privacy regulation. The chapter opened with an overview of recent studies that explored factors affecting participation in a personal learning network or online community of practice. Empirical studies that highlighted social networking activity and online privacy regulation were also synthesized. This chapter also contained a discussion of the key issues and themes that emerged from the literature synthesis, which are aligned to this study's research questions. The chapter ended with a concluding statement of the study's importance, as well as an indication of gaps in the literature.

In Chapter 3, specific details are set out concerning the rationale for qualitative research methods; the study's design, setting, and sampling technique; and a description of participants, data collection, and analysis methods. Additionally, a discussion of validity, reliability, limitations, and ethical considerations is reviewed.

CHAPTER 3

METHODOLOGY

Problem and Purpose

The purpose of this qualitative, hermeneutic phenomenological study was to understand the phenomenon of school administrators' use of social networking tools to participate in a personal learning network (PLN) while maintaining privacy. A traditional definition of privacy was described by Palen and Dourish (2003) as the "state of social withdrawal," but for the sake of this research study it will be more clearly defined as "ongoing self-regulation of setting boundaries toward others with whom we interact" (p. 1). At the onset of designing this study, I intended to explore how school administrators participated in an online PLN; connected with peers; disclosed personal information; and managed their privacy.

The problem of this study was related to emerging web-based technologies that made digital collaboration and learning experiences more social and collective, ultimately resulting in concerns about privacy issues for users. Educators utilize Web 2.0 technology and social networking resources to create PLNs through which collaboration occurs via blogging; microblogging; vlogging; podcasting; online forums; social bookmarking; curating content; chatting; sharing multimedia files; and attending online workshops and webinars (Duggan & Brenner, 2013; Purcell, Heaps, Bechanan, & Friedrich, 2013; Colibaba, Vlad, & Dinu, 2012; Ivanova, Grosseck, & Holotescu, 2012; MMS Education, 2012; Tsai, Laffey, & Hanuscin, 2010; Hur & Brush, 2009; Gray, 2004).

To effectively participate in a PLN, school administrators must be willing to digitally share their personal and professional information. As educators vary their level of

participation, decisions about how much information they wish to digitally publish, as well as how they will regulate their privacy, must be determined (Johnson, Egelman, & Bellovin, 2012; Kairam, Brzozowski, Huffaker, & Chi, 2012; Shi, Xu, & Zhang, 2012; Stutzman & Hartzog, 2012; Kramer-Duffield, 2010; Williams, et al., 2009). The disclosure of too much information could create professional or personal problems for the individual (Das & Kramer, 2013; Sleeper et al., 2013; Johnson et al., 2012; Shi et al., 2012). However, failure to disclose information could also negatively impact relationships and could compromise the sense of trust within the community (Nikolaou & Tsolakidis, 2012; Fang & Chiu, 2010; Harrison & Thomas 2009).

In this chapter, I have included an overview of the overall research design methodology. The description begins with a rationale for why qualitative research methods have been employed, as well as the corresponding research traditions used. A detail of the study's design is discussed, including the setting, sampling procedures, and description of participants. Attention is given to the varying data sources used, techniques for data collection, and the process that will be used to analyze and interpret the data. Lastly, I include a discussion of validity, reliability, limitations, and ethical considerations to the study.

Research Questions

Central question:

- How do school administrators make meaning of their experience utilizing social networking tools to participate in a personal learning network and understand privacy?

Subquestions:

- How do school administrators describe their experiences with personal learning networks and privacy?

- What themes are identified from their experiences for the group?

Rationale for Qualitative Research

Qualitative research was chosen for the purpose of capturing school administrators' experiences of participating in a PLN and using social networking tools while maintaining privacy. Qualitative research is used by researchers to gain meaning and a more thorough understanding of individuals' lives in *their* respective worlds. At the core foundation of qualitative research are individuals' stories, beliefs, actions, behaviors, perspectives, and opinions. It is the duty of a qualitative researcher not only to listen and record others' voices, but to analyze their statements into meanings that can be applied to a particular phenomenon.

Qualitative research methods help elicit the "how, what, where, when, and why" of a phenomenon or issue. Quantitative studies and surveys yield numeric data but fail to extract detailed information from participants. Qualitative research methodology focuses its emphasis on the process of gathering, analyzing, interpreting, discovering, and explaining the overall meaning from non-quantified data.

Denzin and Lincoln (2005) summarized the role of qualitative researchers as working in settings that were commonplace to participants, "attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them" (p. 3). By doing so, researchers could gain a more authentic and personal understanding of how an individual viewed a particular phenomenon. This requires more than basic surveys and questionnaires, since the researcher must enter the world of his/her participants to collect data and derive meaning. Despite the ability of qualitative methods to gain larger amounts of profound data, it is worth

noting that it is quite impossible to ever understand the full experience of another person (Patton, 2002). But to gain data that are as holistic as possible, various qualitative research methods and traditions must be employed.

Researchers must analyze the research questions and overall philosophical perspective that underlie their study to determine what appropriate research methodology should be employed (Shepard, Jensen, Schmoll, Hack, & Gwyer, 1993). Research that is based upon how individuals experience a phenomenon make for a strong phenomenological study.

The focus of my study pertained to school administrators' understanding of privacy while using social networking tools to participate in a PLN. As researcher, it was my intent to extract vivid details from the participants that revealed their experience with PLN participation, boundary regulation, and decisions to disclose or withhold personal information. The qualitative research tradition used in this study was based on interpretive phenomenological analysis and supported by hermeneutic inquiry. Patton described phenomenology in further detail:

> …descriptions of experience and interpretations are so intertwined that they often become one. Interpretation is essential to understanding of an experience and the experience includes the interpretation. Thus phenomenologists focus on how to put together the phenomena they experience in such a way as to make sense of the world, and in so doing, develop a worldview (p. 107).

The phenomenon studied was school administrators' privacy as they participated in a PLN. In discussing phenomenology, Grbich (2007) stated it was an "approach which attempts to understand the hidden meanings and the essence of an experience together, with how participants make sense of these" (p. 84). But phenomenology is pre-reflective and reports only participants' essence with a phenomenon (Ajjawi & Higgs, 2007). Further

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interpretation is needed to explain the actual, lived experience of participants' PLN engagement and their privacy. For this reason, hermeneutic phenomenology was incorporated into the research design.

Hermeneutic inquiry afforded me the opportunity to bridge my own personal experiences and knowledge into the study. At the root of hermeneutic inquiry is that the role of researcher is not just encouraged, but required, in order to interpret data findings. Having personal experience as a participant in PLN, I possessed specialized knowledge that was needed to express clear, distinct context to my participants' data. This direct involvement and close relationship between researcher and participants was what provided validation to the study (Bentz & Shapiro, 1998).

The results of this study were determined by the experiences expressed by the participants, interpreted and retold by me as the researcher. Within qualitative studies, particularly phenomenological studies rooted in hermeneutics, the researcher is the instrument of the study. My insight proved to be critical during the data analysis phase as I interpreted the phenomenon in terms of how the participants experienced it, what they experienced, and how they interpreted their experience with the phenomenon.

Theoretical Traditions

Phenomenology

Phenomenology differs from other forms of experimentation, which call for researchers to develop a hypothesis, design a research study, and test variables for results. Instead, researchers turn to phenomenological research so that a phenomenon can "reveal itself in its fullness" and inevitably "speak for [itself]" (Boeree, 1998, p. 180). Phenomenology is also described as "an approach which attempts to understand the hidden

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meanings and the essence of an experience together with how participants make sense of these" (Grbich, 2007, p. 84) or simply put, "the study of essences" (van Manen, 1990, p. 10). I plan to describe the essence of the phenomena for a group of administrators who are currently engaged with PLNs.

Creswell (2007) described the importance of phenomenology as exploring "the meaning for several individuals of their lived experiences of a concept or a phenomenon…what all participants have in common as they experience a phenomenon" (p. 57). Phenomenology has the following core attributes which will be adhered to in the proposed inquiry: (1) the researcher conducts the study by focusing on individuals' life experiences; (2) the researcher is the actual data-gathering instrument; and (3) the researcher identifies, and makes meaning of, a phenomenon based upon actual experiences of individuals (Creswell, 2007; Moustakas, 1994; van Manen, 1990).

Phenomenology is complex to understand, particularly because it includes various meanings and methods. Phenomenology is referred to as a philosophy; inquiry paradigm; theory; social science analytical perspective; qualitative tradition; or a research methods framework (p. 104). Schwandt (2001) described how the understanding of phenomenology became even more confusing with the evolution of varying forms of phenomenology – transcendental, existential, and hermeneutic. Lastly, Sonneman (1954) coined the phrase "phenomenography," meaning "a descriptive recording of immediate subjective experience as reported" (p. 344).

Historically, phenomenology was first used by a German philosopher, Edmund Husserl (Patton, 2002). Husserl strove to better understand how individuals described things and experiences through their senses. At the center of phenomenological inquiry is an

understanding of the "life-world," which is comprised of all the objects around us. But most importantly, the life-world focuses on how individuals perceive and experience these objects (Finlay, 2008). Phenomenology is that which "we can only know what we experience" (Patton, 2002, p. 105). "The overall aim of life-world research is to describe the lived world in a way that expands our understanding of human being and human experience" (Dahlberg, Dahlberg, & Nystrom, 2008). The life-world of school administrator participants, in their efforts to find ways to collaborate and engage with others in a PLN, was infused into the study's overall analysis.

In life-world, an individual's consciousness is always focused on the objects placed throughout the world. So long as individuals are conscious, then they are conscious of something to which they are in direct relation. This becomes the key for researchers as they attempt to investigate the relationship between that which the participant is consciously focusing attention toward and what they are experiencing (Finlay, 2008). Researchers must bring meaning to how participants transform their experiences into their consciousness. To successfully do so, researchers must holistically capture how individuals experience a phenomenon – "how they perceive it, describe it, feel about it, judge it, remember it, and make sense of it" (Patton, 2002, p. 104). Once researchers have a greater grasp of how individuals experience a phenomenon, they must "suspend previous assumptions…to be open to the phenomenon as it appears" (Finlay, 2008, p. 2).

The first step of phenomenological analysis is referred to as "epoche," or as Moustakas (1994) defined it, when "the everyday understandings, judgments, and knowings are set aside, and the phenomena are revisited" (p. 33). Being cognizant of epoche, researchers must become aware of internal biases and rid themselves of any involvement,

preconceived notions, prejudices, or assumptions they may possess about the phenomenon (Patton, 2002; Katz, 1987). After doing so, the researcher can then approach analysis of the data with a fresh, open mind.

Husserl identified various ways researchers should bracket and set aside conceptions of how things are supposed to occur so they can focus on the specific phenomenon that is experienced. Bracketing is a process engaged in by the researcher that includes removing the phenomenon from how it is defined or interpreted according to academic literature and scholarly understanding (Husserl, 1913; Denzin, 1989). Denzin outlined bracketing in five steps:

> (1) Locate within the personal experience, or self-story, key phrases and statements that speak directly to the phenomenon in question; (2) Interpret the meanings of these phrases, as an informed reader; (3) Obtain the subject's interpretations of these phrases, if possible; (4) Inspect these meanings for what they reveal about the essential, recurring features of the phenomenon being studied; and (5) Offer a tentative statement, or definition, of the phenomenon in terms of the essential recurring features identified in step 4 (pp. 55-56).

Grbich (2007) indicated the ultimate goal of phenomenology was for the researcher to provide a thorough description "of the structures of consciousness of everyday experiences at first hand" (p. 86).

The necessity for researchers to report findings solely on themes that emerged from participants' experiences with a phenomenon might be misinterpreted unless they are reported with a contextual description. But if researchers follow phenomenological data collection and analysis methods with a strict regimen, readers will lack the context in which the phenomenon existed. Furthermore, researchers may wish to provide readers with an interpretation of how a phenomenon is experienced, or its overall essence. Researchers need to employ appropriate research methods that enable the reporting of the essence of a

phenomenon, according to the cultural context in which it exists (Patton, 2002). In short, a method of inquiry should be used by researchers so they can interpret individuals' experiences with a phenomenon.

For this particular research study, the phenomenology investigated was centered on privacy management by school administrators participating in a PLN. The vast majority of data collected from participants described their experiences of using social networking tools; how and when they disclosed information; how they perceived their privacy; and what they believed PLN meant to them as learners and professionals. From this data, I was able to bridge and connect my own experiences and knowledge to interpret meaning. "Phenomenology is not only a description, but it is also seen as an interpretive process in which the researcher makes an interpretation of the meaning of the lived experience" (Creswell, 2007, p. 59). As a school administrator that regularly participates in a PLN, I shared meaning and experiences with the study's participants. As such, I was better able to interpret and report my interpretation of the participants' experiences with the phenomenon.

Hermeneutics

Hermeneutics is one such inquiry model associated with phenomenology; it targets the researcher's role in reporting and interpreting participants' experiences. Smith (1997) described it as a "research methodology aimed at producing rich textual descriptions of the experiencing of selected phenomena in the life-world of individuals that are able to connect with the experience of all of us collectively" (p. 80).

Founded by Frederich Schleiermacher (1768-1834), hermeneutics contains a guiding framework to assist researchers in interpreting and providing context to reported experiences by participants (Patton, 2002). Though hermeneutics was originally implemented to analyze

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important texts such as the Bible, the process has become popular amongst qualitative

researchers when analyzing interview transcripts and recorded dialogue (van Manen, 1990).

> Hermeneutists are much clearer about the facts that they are constructing the
> 'reality' on the basis of their interpretations of data with the help of the
> participants who provided the data in the study.
> …If other researchers had different methods, or had different purposes, they
> would likely develop different types of reactions, focus on different aspects of
> the setting, and develop somewhat different scenarios (Eichelberger, 1989, p.
> 9).

Hermeneutic phenomenology was developed by Martin Heidegger (1889-1976), a

German theologian. Similar to phenomenology, hermeneutic phenomenology focuses on

human experiences as they are lived (Laverty, 2003). Hermeneutic phenomenology places

greater emphasis on illustrating the details of an experience with the ultimate goal of

generating meaning and understanding of the experience (Wilson & Hutchinson, 1991).

Heidegger desired to know more about humans' understanding of being human in the world

(Laverty, 2003). He believed that understanding was a main component of being human: not

necessarily in how we understand the world, but rather the way humans are. Pre-

understanding is a foundation for human existence in the world, which is the collection of

culture of which encompasses humans without their knowing. This pre-understanding

inevitably becomes a part of humans' background, or history. Koch (1995) asserted that

humans generate meaning as they construct their world-being from their background and

history. To be human and seek meaning, humans make interpretations of the world around

them based on their background and history. Annells (1996) considered hermeneutics an

interpretive process that bridged understanding with a phenomenon through language.

Hermeneutics is seen as a study of humans as texts that one comes to understand through

interpretation and meaning (Kvale, 1996). Heidegger posited that understanding is contingent

on humans' background and history, which cannot be avoided. As a result, humans must admit and identify all such interpretive influences that may bias understanding. This can be done by engaging in a hermeneutic circle that shifts from parts of an experience to the totality of an experience and back and forth to increase engagement and understanding with a text (Laverty, 2003; Annells, 1996). Kvale (1996) stated this cycle ceased when a human reached understanding, free of contradictions or misinformation.

Hermeneutic research methods differ from phenomenology, calling for the researcher to greatly reveal his/her experience and background as it relates to the phenomenon. A reflective journal, or memoing, is a tool that can assist researchers through this process (Laverty, 2003). Hermeneutic phenomenological data should be comprised of the researcher's personal notations of the phenomenon, participants' data, and contextual information about the phenomenon. Participants of hermeneutic phenomenological studies should be purposely selected so that only those with ample life experiences with the phenomenon can yield thick, rich data (van Manen, 1997). Researchers should ask open-ended questions so participants can share personal stories and lived experiences with the phenomenon (Koch, 1996). Careful attention should be made not to focus exclusively on verbal transcription, but instead on implied and hidden meaning.

The data analysis process for hermeneutic phenomenological studies results in a process of "self-interpreted constructions of the researcher and each participant, thus reflecting many constructions or multiple realities" (Laverty, 2003, p. 21). As Heidegger insisted about meaning, hermeneutics is a process involving researcher and participants through reading, reflecting, and interpreting.

As a qualitative researcher in this study, my role was to best understand how the participants came to understand their experience with the phenomenon of participating in a PLN while regulating their privacy. Again, because I have shared meaning and experiences, I was better equipped to provide valid interpretation and meaning of participants' experiences with the phenomenon. Because of my role as a research instrument in this study, it was rooted in double hermeneutics (Smith, Flowers, & Larkin, 2009). As Patton (2002) stated, "one can only interpret the meaning of something…from a certain standpoint, or a situational context" (p. 115).

Interpretive Phenomenological Analysis Compared to Traditional Phenomenology

In traditional approaches to phenomenology (Moustakas, 1994; van Manen, 1990; Husserl, 1967) research focuses on the "study of the life-world – the world as we immediately experience it pre-reflectively rather than as we conceptualize, categorize, or reflect on it" (van Manen, 1990, p. 9). By comparison, interpretive phenomenological analysis centers on the lived experiences of individuals as they reflect and interpret on their experiences with a phenomenon. Smith et al. (2009) described how a phenomenological researcher and an interpretive phenomenological researcher would differ in their approach if studying the phenomenon of anger. A traditional phenomenological researcher might ask "What are the main experiential features of being angry?" (p. 45) and focus on "the common structure of 'anger' as an experience" (p. 45). An interpretive phenomenological analysis researcher, on the other hand, would ask "How do people who have complained about their medical treatment make sense of being angry?" (p. 45), centering their research on "personal meaning and sense-making in a particular context, for people who share a particular experience" (p. 45).

In this study, I explored how school administrators participated in PLN and how they understood and made meaning of their PLN participation and privacy practices after engaging them in a reflective interview dialogue.

Role of the Researcher

At the root of qualitative research is the overall process of obtaining rich, detailed data from participants; this requires the researcher to become the key instrument. Contingent on the research study, qualitative data may be obtained through interviews, focus groups, observation, and object analysis. The data collection methods must be pre-planned, implemented, analyzed, and reported by the researcher.

In this study, I sought an appropriate research design that would enable me to extract descriptive data from the school administrator participators that would help explain their experience with utilizing social networking tools and participating in a PLN while maintaining elements of their privacy. I selected hermeneutic, interpretive phenomenological analysis research design methods for the purpose of strengthening my role as a key instrument in this design. Through such research methods, I was able to interpret the experiences and understanding of the participants, ultimately revealing the overall essence of all participants. Such essence was based upon multiple sources, including the infusion of my personal experience and knowledge. The integration of my experience and knowledge on this topic maximized the overall credibility and validity of my interpretive findings. Patton (2002) stated:

> Judgments about the significance of findings are thus inevitably connected to the research's credibility, competence, thoroughness, and integrity…be attentive to and conscious of the cultural, political, social, linguistic, and ideological origins of one's own perspective and voice as well as the perspective and voices of those one interviews and those to whom one reports (pp. 64-65).

Chapter 4 is solely dedicated to reporting the findings of the study. The findings were written in first person, and used the strategic placement of thick participant quotations to support my interpretive findings.

Design of the Study

Maxwell (2005) asserted that there is no prescriptive model for conducting a research study, as it is contingent on the issues and phenomena about which the researcher wishes to learn more. Researchers should also "prestructure" their design, which will "reduce the amount of data that you have to deal with, simplifying the analytic work required" (Moustakas, 1994, p. 16). The following subsections provide specific details of this research study.

Setting

The setting for this study was a relatively new digital learning community that utilized a microblogging website as its primary means of collaborating within a PLN. The membership of this specific digital learning community was composed of educators, including teachers; school administrators; higher education professors; and others with an interest in K-12 education topics.

The online learning community was founded in January 2013 by two school administrators. To preserve confidentiality for this study's participants, the name of the learning community was purposely omitted. My involvement with the learning community began two weeks after the group's first Twitter-based question-and-answer session. Several members I followed on Twitter had published posts that included a hashtag used to follow or participate in their weekly Twitter chat; I eventually used this to join. Soon, I was answering

questions and engaging in digital conversation and collaboration with educators from across the county on a topic related to improving school culture.

Participants met for one hour each week to engage in a collaborative question-and-answer dialogue and address education-related questions. The community was "open" to the public; no admission requirements or restrictions existed aside from the fact that those who wished to digitally collaborate needed to have access to Twitter. According to a social media analysis of the learning community's interactions, the average number of posts per Twitter chat session within a four-week period (May 26 – June 16) was approximately 402, with an estimated reach of 81,941 Twitter accountholders (Topsy, 2013).

Sampling

One of the greater challenges in qualitative design was sampling techniques. Unlike quantitative research sampling methods, which draw upon probability and convenience sampling, qualitative research methods require a more "purposeful" technique of sampling. Maxwell (2005) described four specific reasons to utilize purposeful sampling: to (1) ensure the "representativeness or typicality of the setting"; (2) develop a sample size that exhibits heterogeneity; (3) "deliberately examine cases that are critical for the theories that you began to study"; and (4) "establish particular comparisons to illuminate what is going on in a way that representative cases cannot" (pp. 89-90).

The goal of this hermeneutic phenomenological research study was to gather and report rich, detailed descriptions that explained how school administrators that participated in a PLN using social networking tools while managing their privacy, came to understand and make meaning of their experiences. In an effort to maximize the extraction of rich information from participants, the sample size and participants were purposeful and not left

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to randomization (Denzin & Lincoln, 2000; Patton, 2002). Purposeful sampling methods are consistent with hermeneutic phenomenological data analysis method (Llewellyn, Sullivan, & Minichiello, 1999).

> The aim in participant selection in phenomenological and hermeneutic phenomenological research is to select participants who have lived experience that is the focus of the study, who are willing to talk about their experience, and who are diverse enough from one another to enhance possibilities of rich and unique stories of the particular experience (van Manen, 1997).

For this research study, I utilized criterion sampling methods to ensure that participants met certain guidelines that would yield greater quantities of information-rich data. To better understand participants' experience with the phenomenon, it was critical that the participants were experienced with the phenomenon (Laverty, 2003).

In determining what participants would be most suitable for the study, I established the following criteria for eligibility:

- Must have been a current K-12 public, or private, school administrator at the district- or school-level;

- Had actively communicated using the microblogging tool Twitter; and

- Must have agreed to participate in the study.

Smith and Osborn (2007) suggested smaller sample sizes so researchers could effectively engage in interpretive phenomenological analysis. Researchers must use discretion when determining sample size based upon their overall research question (Laverty, 2003). For this study, I selected six participants. Of the six participants, there was a variety of school administrative job titles, including an assistant superintendent, principals, and technology directors. There was a noticeable difference in the number of male participants to females; only one female communicated interest in participating in the study. All of the

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members had been actively engaged in Twitter PLNs, including having associations with the initial state-specific PLN targeted in my sampling technique. All participants were initially contacted through Twitter posts, direct messages, and email. The messages provided a brief description of the study's purpose along with a link to an informational website I created that provided more details about the study.

<div align="center">**Data Sources**</div>

In qualitative research, credibility is lent to studies that undergo data triangulation from a variety of sources (Patton, 2002). For this study, I utilized multiple forms of analysis from my data sources to "crystallize" and validate my data analysis. For this proposed study, I drew from the following data sources: (1) semi-structured interviews and (2) documents, which included a written account by participants and a second document of participants' Twitter posts (Tweets).

Interviews

One of the central tenets of phenomenological studies is the process of viewing a phenomenon through participants' worldviews. Finlay (2008) spoke of allowing the phenomenon to present itself naturally rather than being forced by researchers. "Openness is the mark of true willingness to listen, see, and understand" a phenomenon (Dahlberg, Dahlberg, & Nystrom, 2008). Smith and Osborn (2007) indicated that interpretive phenomenological researchers sought data sources that provided rich details about how participants perceived and made sense of a phenomenon. A popular data source for interpretive phenomenological studies is a semi-structured interview.

Patton (2002) succinctly described the primary purpose of interviewing participants as allowing the researcher to "enter into the other person's perspective" (p. 341). Other

qualitative research methods, such as observation and document analysis, do not wholly

enable the researcher to understand a participant's emotions, feelings, beliefs, sentiments,

motivations, and/or thoughts.

In this study, the primary data source was an in-depth, semi-structured interview.

During the interview, each participant was asked questions about social networking, personal

learning networks, and their privacy. The intent of the interview was to engage participants in

a discussion that helped bring out their understanding and meaning of the aforementioned

topics as well as the phenomenon of this study.

Moustakas (1994) asserted that interviews are primary data collection tools in

phenomenological studies. The semi-structured interview draws upon formal procedures and

protocol for questioning and recording while leaving room for deviation in the interview

guide. Such deviation would be guided by the participant's open-ended responses. Merriam

(1998) provided more detail about the process of a semi-structured interview:

> …more open-ended and less structure…guided by a list of questions or issues
> to be explored, and neither the exact wording nor the order of the questions is
> determined ahead of time. This format allows the researcher to respond to the
> situation at hand, to the emerging worldview of the respondent (p. 74).

According to Wertz (2005), semi-structured interviews should lead to concreteness;

specific details should be gained instead of abstract and interpretive responses. Questions

need to be concrete and open-ended, leaving plenty of opportunity for participants to provide

vivid, candid details of their experiences. Though semi-structured interviews are not entirely

controlled by the researcher in that questions are contextualized and posed according to the

experiences of the participants, researchers are encouraged to create an interview schedule in

advance (Smith & Osborn, 2007). It is also essential that researchers ask as few direct

questions as possible with the hope that the participants' responses will "stay as close to the lived experiences as possible" (Laverty, 2003, p. 19).

To ensure certain questions were asked of each respondent an interview schedule of questions was created in advance of each interview. This can be viewed in Appendix C. The interview questions were strategically selected so that participants could delve into their experiences with social networking tools, PLN participation, and privacy while making sense of their meaning and experience. The questions were created to be open-ended and often included follow-up questions to engage the participant in thorough discussion on the specific topic.

Semi-structured interviews should generally last more than sixty minutes and should be uninterrupted (Smith & Osborn, 2007). "People usually feel most comfortable in a setting they are familiar with, as in their own home" (p. 63), although this is difficult to regulate given the potential geographic diversity of the study's participants. Each interview was conducted via telephone and recorded by a third-party, NoNotes.com. Participants provided authorization of the recording and transcription of the interview in advance of the study. "It is not possible to do the form of interviewing…without tape recording" (p. 64).

Following the semi-structured interviews, data was transcribed and analyzed according to interpretive phenomenological analysis methodology.

Documents

Archived records, written documentation, and written artifacts have long been used in anthropological studies and are generally referred to as "material culture" (Patton, 2002, p. 293). "Personal documents are a reliable source of data concerning a person's attitudes, beliefs, and views of the world" (Merriam, 1998, p. 116). In this study, participants were

asked to construct a written document explaining their past experience with social networking tools and PLN participation. There were no specific guidelines imposed on the participants' written documents; it was only requested that they attempt to share their "journey" using social networking tools while participating in a PLN. Written documents were to be submitted prior to the semi-structured interviews. However, not all participants did so. In one such case, a participant (Amy) submitted her written document approximately two weeks after the interview occurred.

Additionally, I created a document that contained the participants' Tweets. Specifically, I collected fifty Tweets from each participant published over a thirty day period (November 15 through December 15, 2013). Tweets are digital Twitter posts of no more than 140 characters; they often contain a hashtag (words or phrase written with the symbol "#" positioned at the front) or hyperlinks to internet sources. My intention in collecting participants' Tweets was to provide me with a better understanding of the actual use of Twitter by the participants. This could then be analyzed and used to draw connections to emergent themes from the semi-structured interviews and written documents.

Analytic memoing

Glaser (1978) described a memo as "the theorizing write-up of ideas about codes and their relationships as they strike the analyst while coding" (p. 83). Memos are intended to be conceptual and help derive deep reflection for researchers. Memos are not intended to rehash data. Instead, memos are for researchers to bridge connections across data.

After I conducted the semi-structured interview with each participant, I intended to read the transcript on multiple occasions. With each reading and coding, I began memoing for various reasons including what surprised or puzzled me; interpretations or initial

explanations; reflections on the coding process; and my perceptions and thoughts (Miles &

Huberman, 1994). Each concept was coded separately. This assisted in my analysis as I

"move[d] easily from empirical data to a conceptual level…building toward a more

integrated understanding of events, processes, and interactions" (p. 74).

Data Analysis Procedures

The data analysis of this research study was used to identify emergent themes and

patterns as it related to my research questions: (1) How do school administrators make

meaning of their experience utilizing social networking tools to participate in a personal

learning network and understand privacy?; (2) How do school administrators describe their

experiences with personal learning networks and privacy?; and (3) What themes can be

identified from their experiences for the group?

"The aim of interpretive phenomenological analysis is to explore in detail how

participants are making sense of their personal and social world" (Smith & Osborn, 2007, p.

1). To analyze the data and derive meaning from the perspectives of participants, I instituted

a double-hermeneutical approach aligned with the Interpretative Phenomenological Analysis

(IPA).

> Meaning is central, and the aim is to try to understand the content and
> complexity of those meanings rather than measure their frequency. This
> involves the investigator engaging in an interpretive relationship with the
> transcript (p. 66).

For researchers new to IPA implementation, Smith et al. (2009) encouraged the

integration of a "heuristic framework" (p. 80) to aid in the analytic process. The dual-stage

interpretation approach enables participants to make sense of their world while allowing the

researcher to try to make sense of the participants and their world. My data analysis process

was aligned to Smith et al. (2009), often referred to as a four-part analytic process. To assist

in the data analysis process, I purchased a one-year software subscription to NVivo, a qualitative data analysis software program.

Four-part Analytic Process

Smith et al. (2009) called the first step of the four-step analytic process *reading* and *rereading*. During this initial step, I immersed myself in the audio transcriptions from the six participants' semi-structured interviews. During the reading and rereading stage, I only looked into one participant's interview transcript at a time before moving on to the next participant. This methodological practice better enabled me to enter the participant's life-world and interpret their experiences. Smith et al. (2009) recommended IPA researchers listen to audio recordings during the reading and rereading process to allow the participants' tones, emotions, and nuances to be connected to the transcription. By adding the audio recording to my immersion of reading through transcripts, I believed I was better able to understand and interpret the participants' data. Smith & Osborn (2007) would agree with this decision, arguing that qualitative data analysis is "a personal process and the analysis itself is the interpretive work the investigator does at each of the stages" (p. 67). At the same time as these initial steps, I launched my use of "analytic memoing" (Smith et al., 2009, p. 82). The analytic memos included initial perceptions, thoughts, reflections, and identification of thoughts in a pre-interpretive manner. I also found myself recording analytic memos using a third-party interview recording program (NoNotes.com). Each of my verbal analytic memos provided me with additional memos that could have been cross-referenced to my written memos.

After closely reading and rereading transcripts I began the second step: *initial noting* (Smith et al., 2009). During this stage, I analyzed lines of the transcript, continued with

analytic memoing, and designated codes for the data that appeared meaningful. Codes were assigned in three distinct categories, as described by Smith et al. (2009):

- *Descriptive*. Researcher's identification of key topics and phrases; identifications; descriptions; and/or explanations of the interview subject.

- *Linguistic*. Researcher's attempt to put meaning behind words; identification of participants' use of language, grammar, expressions, pauses, etcetera.

- *Conceptual*. Researcher's identification of preliminary concepts and themes that would begin to describe participants' experience with the phenomenon.

Smith and Osborn (2007) indicated that this initial mode of data analysis is similar to textural analysis, dividing a text into various units of meaning. The hope is to find participants' expressions that can be identified as "theoretical connections within and across cases" (p. 68).

After my initial noting process ended, I moved into the third of the four-step analytic process: *developing emergent themes*. During this stage I drew upon the coded data derived from step two and sought connections amongst possible themes from my interpretations of data from all six participants. As themes began to emerge, emphasis was placed on my coded data rather than the verbatim transcription of participants' interviews. According to Smith and Osborn (2007), some of the themes will cluster together and pull others with them. The emergent themes are typically "expressed as phrases which…contain enough particularity to be grounded and enough abstraction to be conceptual" (Smith et al., 2009, p. 92). These themes closely reflected my interpretation and analysis, not the verbatim text of participants. "This form of analysis is iterative and involves a close interaction between the reader and the text" (p. 72).

The final step of my data analysis was *searching for connections across emergent themes*. During this phase, my coded data was used to generate my overall analysis. I inspected the coded data to determine what patterns and/or connections were evident amongst the data. With the assistance of NVivo, I recorded and entered all the "conceptual" coded data and began to formulate them into logical groupings. Each grouping received a special name, indicative of my interpretation or assumption of the overall theme that joined the coded data together.

The "results" and "discussion" sections can be structured in two various ways. According to Smith and Osborn (2007):

> In the first, the 'results' section contains the emergent thematic analysis, and the separate 'discussion' links that analysis to the extant literature. An alternative strategy is to discuss the links to the literature as one presents each superordinate theme in a single 'results and discussion' section (p. 76).

"Whatever method of writing up is used, the key is to try to capture the complexity and ambiguity of the lived world being described" (Finlay, 2008, p. 6). My findings of this data are available in Chapter 4, while Chapter 5 provides a discussion of the findings. The findings include participants' verbatim text to support my interpretive findings.

Documents

Participants' written document and Tweets were coded using data analysis methods prescribed by Miles and Huberman (1994), which involve enumerative and thematic coding procedures. Data from the documents and Tweets were assigned codes which were later clustered into themes and concepts. My codes, or "tags or labels for assigning units of meaning to the descriptive or inferential information complied during a study," helped bring meaning to the data (Miles & Huberman, 1994, p. 56). My codes were classified into two

categories: descriptive and interpretive. The interpretive codes I created were conceptual and were subject to my interpretation of the data.

Analytic memoing

As I progressed through the four-part data analysis, I compiled my early thoughts and interpretations in a reflective journal. These posts served as my analytic memos. Analytic memos are designed for engaging in further inspection of and reflection on the participants' experience with the phenomenon through all four data analysis stages. My memos were categorized and later used to interpret participants' transcripts. Each memo code was assigned its own definition and description.

<p align="center">**Limitations and Ethical Considerations**</p>

Limitations

Every research study is prone to particular limitations that can compromise its validity and reliability. Because of this possibility, care was taken to reduce potential limitations from impacting the study. The following limitations have been identified in this research study: (1) exclusion of participants who were not school administrators or school leaders; (2) exclusion of participants not utilizing Twitter; (3) lack of demographic data collected during participant recruitment phase; and (4) subjectivity of the researcher.

The key limitation to this study was derived from my decision to only sample participants that were practicing school administrators and only those who participated in a digital learning community with microblogging tools such as Twitter. Having used purposeful sampling techniques, I was better able to collect rich data. However, it is important to note that the sample size may not have reflected the PLN population at large. Demographic data were not collected during the participant recruitment process, including

participant-provided gender/sex or ethic/racial information. The sample of participants was comprised of five males and one female. It is possible the study's sample was comprised of a homogenous racial and ethnic demographic. Ultimately, the sample size may not have been representative of the greater PLN.

Patton (2002) asserted that it is impossible for a researcher to truly observe participants' internal feelings, emotions, and thoughts. Because of this, researchers must rely on personal interviews with participants. Unfortunately, interview data collection methods cannot guarantee that accurate data will be collected encapsulating participants' thoughts, particularly that of a larger population. "The quality of the information obtained during the interview is largely dependent on the interviewer" (p. 341).

Lastly, another limitation to this study concerns my past and current experience using social networking tools to participate in PLNs. This may have biased my overall objectivity toward the phenomenon studied. Critics of qualitative research methods generally assert that it is impossible for researchers to fully remove their biases, worldviews, and preconceived notions of a phenomenon. To gain further credibility, I employed a data analysis method that emphasized my direct involvement with the phenomenon, rather than diminishing and excluding my insight. As I interpreted participants' data, I kept a journal about my experience and reactions. This process provided transparency regarding my biases and interpretations of how the phenomenon affected each participant.

Validity

Qualitative studies differ greatly from quantitative in that researchers do not generally design a study to safeguard it from "anticipated and unanticipated threats to validity" (Maxwell, 2005, p. 107). Qualitative researchers, on the other hand, employ various data

analysis strategies that increase the likelihood of greater validation such as triangulation of data; bracketing; and/or member checks of data. Qualitative research abandons methods that rely on the generalization and reliability of data. Instead, Creswell (2003) asserted that qualitative research emphasizes a finding's validity. To increase a study's validity, a researcher must make choices about the design's overall relevance and significance to the participants, setting, and phenomenon (Altheide & Johnson, 1998). Perhaps more simply put, Polkinghorne (1989) stated validation occurs when "an idea is well grounded and well supported" (p. 57).

Internal Validity

The following strategies were implemented to increase the internal validity of this study: (1) crystallization; (2) member checking; (3) data saturation; and (4) reflexivity.

Following Ellingson's (2009) writing about crystallization, I utilized various forms of data collection and data analysis to increase the importance of triangulation and place a greater focus on the verification of participants' experiences with the phenomenon. My data collection included three different sources, which extrapolated personal stories, meaning, and understanding of the phenomenon from the participants. Given my first-hand experience with the phenomenon, I believe I brought to this study a deep, rich context that was of great assistance during the interpretation and analysis stages.

Member checking is a process that provides participants with the opportunity to offer credibility to a study's findings or interpretations. Member checking is said to be "the most critical technique for establishing credibility" (Lincoln & Guba, 1985, p. 314). During the semi-interviews, I restated and summarized key points by participants to ensure what I heard was correct. After participants' interviews concluded, each participant received a copy of the

interview transcript and was given an opportunity to review it for errors. Additionally, participants were provided with preliminary findings at the conclusion of the data analysis stage, so they could review the findings and make recommendations and give feedback. Other than providing a written acknowledgement, no participants offered any critique or recommendation for alterations.

Merriam (2002) suggested that researchers immerse themselves in a study's data in order to understand a phenomenon. Given this study's use of hermeneutic interpretive phenomenological analysis, saturation of the data occurred after I interpreted participants' data and analyzed my memos. In total, I dedicated nearly two months to reflecting, analyzing, and interpreting data from my participants and my analytical memos.

The final strategy used in this study to increase internal validity was reflexivity. Patton (2002) defined reflexivity as a researcher's role in self-reflecting and self-questioning his/her biases and experiences brought to the study. As noted earlier in this chapter, I discussed the importance of my role as a key instrument in this study. By administering IPA methods and grounding the study in hermeneutics, I believe I was best able to capture the overall essence of the phenomenon as experienced by the participants. And through the analytic memoing, my notation of personal reactions, perceptions, and my initial interpretations as they developed showcased higher reflexivity. It was through my memoing that I was able to express my personal biases, previous experiences, and previous attitudes toward my experiences with the phenomenon.

External Validity

External validity is primarily centered on generalizability (Merriam, 2002). Creswell (2005) stated that generalizability is "often not a crucial issue for qualitative studies" (p.

115). Through the presentation of thick, rich data researchers provide readers with the ability to transfer the information to their respective context. Creswell (2007) encouraged the incorporation of thick, ample data to help readers "transfer information to other settings and to determine whether the findings can be transferred" (p. 209). In Chapter 4, my findings include descriptive quotations and statements from participants along with my interpretation.

Reliability

A study's findings must be trustworthy and consistent with data collection: both important tenets of reliability (Merriam, 2002). Qualitative researchers can promote reliability by drawing upon others to gauge if data and "the results make sense, they are consistent and dependable" (p. 27). To ensure my study's findings are reliable, I drew upon the assistance of a "critical friend." During the data collection and analysis process, I frequently contacted my academic advisor Dr. Loyce Caruthers, Associate Professor at the University of Missouri-Kansas City.

Ethics

According to Creswell (2003), it is the role of a researcher to plan for potential ethical situations that may evolve when the researcher must gain "entry to the field site of the research; involve participants in our study; gather personal, emotional data that reveal the details of life; and ask participants to give considerable time to our projects" (p. 44). If human subjects are incorporated into a research study, "the well-being of research participants must be our top priority" (Mack et al., 2005, p. 8). The researcher is in a position of power or privilege that necessitates maintaining a strict control to "avoid hurting or embarrassing people who have been trusting partners in the research endeavor" (Angrosino, 2005, p. 736).

It is my contention that qualitative researchers must protect the interests, safety, well-being, and confidentiality of their participants at all times. Capron (1989) provided guidance to researchers with regard to protecting human participants, including: (1) informing participants of the purpose of the study; (2) providing the option for participants to willfully participate in a study; and (3) giving the participants the power to withdraw from a study at any time. The Belmont Report (1979) outlined three key principles that must guide researchers' ethical considerations, including: (1) respect for persons – dedication by the researcher to protect the rights of participants, as well as demonstrating maximum transparency about the study's purpose and outcomes; (2) beneficence – assurance from the researcher that a commitment has been made to minimize risks associated with the study; and (3) justice – the opportunity for the study's outcomes to directly benefit participants (pp. 2-5).

Researchers must gain informed consent from all human subjects that elect to participate in the study. According to Mack et al. (2005), informed consent is the most critical process of the researcher's ethical considerations. Through informed consent, participants should be notified of the intricacies of the study so that they are empowered to make an informed decision regarding their participation. Informed consent can be obtained in writing or verbally. The following characteristics were included in my consent forms to all prospective participants: (1) the purpose of the research; (2) what was expected of the participant, including the time involved; (3) an emphasis on the fact that participation was entirely voluntary; (4) steps to maintain confidentiality; (5) the name and contact information of the lead researcher; and (6) the name and contact information of a local ethics committee chairperson, should participants have any questions regarding the ethics of the study (p. 10).

Prior to the study, I gained written proper consent from participants, which is available for review in Appendix A. The letter included my university affiliation; an introduction of the problem; the research question I sought to illuminate; the specific expectations of the participants' role; a confidentiality statement; and clear guidelines informing participants of their right to withdraw from the study at any time.

The sampling population of this research study included only participants over the age of eighteen, thus eliminating necessary safeguards to protect the rights of minors.

Since this study drew upon school administrators' participation in a PLN while managing their privacy, it was important that I protected and maintained full confidentiality of all participants. In this study, pseudonyms were used for all participants as well as references to any individual's names provided and/or from various documents and artifacts. Additionally, I decided to not disclose the name of the online learning community that served as the original setting of this study in order to maximize confidentiality for all participants, particularly given the ease of conducting search engine queries for keywords, names, and phrases to identify and retrieve information. Furthermore, specific Twitter posts were used as a part of a document analysis. Because such Twitter posts could easily be traced back to the creator, thereby revealing the study's participants, the wording of Twitter posts were modified.

Another concern researchers must be prepared to handle is if participants share too much information, or sensitive information, that may not be directly related to the study (Alderson, 2004). In such cases, this data remains confidential but is discarded from data analysis purposes. In addition to researchers' ethical responsibility to maintain

confidentiality, it is also a good tactic to build trust and strengthen the overall researcher-participant relationship.

Lastly, the University of Missouri-Kansas City Institutional Research Board has assumed the responsibility of reviewing research proposals that are designed to work with volunteer human subjects to ensure all ethical considerations have been designed to maintain their protection (UMKC, 2011). To fulfill this responsibility, the IRB is guided by three overriding principles:

> (1) Protecting the autonomy of the subjects (i.e., subjects must be informed about the nature of the study, the details of their participation must be voluntary); (2) ensuring beneficence (i.e., the benefits of the research must outweigh the risks); and (3) promoting fair procedures in the selection of subjects (i.e., the risks and benefits of research should be evenly distributed among the possible subject populations) (UMKC, 2011).

Prior to having collected data and interacted with human participants, this research proposal was submitted to, reviewed, and approved by the UMKC IRB. Once consent from the UMKC IRB was authorized, fieldwork and data collection began.

Summary

In this chapter, I provided an overview of the research design methods. The chapter opened with a rationale for qualitative research methods and the corresponding research traditions. A discussion of the study's design included details about the setting; sampling technique and procedures; and a description of the setting and participants. Furthermore, data collection and analysis procedures were highlighted. Lastly, a discussion concerning validity, reliability, limitations, and ethical considerations to the study were considered.

In Chapter 4, a review of the data collection methods are provided in addition to the qualitative findings. The chapter includes a thorough description of the emergent themes that derived from a four-part Interpretive Phenomenological Analysis (IPA) as well as the

findings of a written document analysis from participants' written samples and Tweets. The

chapter includes thick, rich statements from participants' data to support the findings.

CHAPTER 4

FINDINGS

This qualitative study was designed with the purpose of understanding how school administrators made sense of their experience utilizing social networking tools as they participated in a personal learning network (PLN) while regulating boundaries and maintaining privacy. For the purpose of this study, the phenomenon identified was privacy, defined as the "ongoing self-regulation of setting boundaries toward others with whom we interact" (Palen & Dourish, 2003, p. 1). This interpretative phenomenological analysis (IPA) study focused on what commonalities existed amongst the school administrator participants' understanding and experience of privacy and their use of social networking tools within their PLN.

The IPA research method and design was appropriate for this study as it enabled participants to verbalize how they made sense of their understanding of the phenomenon through a semi-structured interview; it also permitted them to elaborate on their insights in a written document. Additionally, using social networking tools to participate in a PLN served as an opportunity to use my experiences as a stable foundation from which to interpret and analyze participants' experiences with and understanding of the phenomenon. Because I wanted to better understand how participants' came to understand their privacy, I tapped into qualitative research methods that would yield thick, rich descriptions that would not have been produced had I used a quantitative research study methodology.

As I analyzed the data, I continually referred back to the central question and subquestions that guided my study:

Central question:

- How do school administrators make meaning of their experience utilizing social

  networking tools to participate in a personal learning network and understand

  privacy?

Subquestions:

- How do school administrators describe their experiences with personal learning

  networks and privacy?

- What themes are identified for the group from their experiences?

The overall design and research methods employed in this research study were done according to a specific framework that is detailed in Chapter 3. The setting of this study was not a physical site but rather a digital online learning community or digital personal learning network centered on a Twitter chat session group. The digital setting was extremely applicable to this research study as I was seeking school administrators actively engaged in a PLN using Twitter. The specific digital PLN I used was a Midwestern state-specific Twitter chat session that met once a week. There was no set membership or formal organization to this chat session. Members communicated with others within this PLN using a specific hashtag that incorporated a state abbreviation and the words "edchat." Examples included "ILedchat"; "IAedchat"; "CAedchat"; and "NYedchat." To maximize participants' confidentiality, I opted not to identify the specific Twitter chat session group as data can be easily linked to participants by a simple search engine query.

Using a purposeful sampling technique, I recruited six school administrators for this study. The participants were invited to participate based upon active engagement using Twitter to participate in an education-related PLN; professional job assignment as a district- or school-level administrator; and agreement to participate in the research study. As seen in

Fig. 2.1, I invited participants via several methods, including personal Tweets; Twitter direct message; and email. Each Tweet contained a brief message and a hyperlink to a webpage that I created that provided prospective participants with additional information concerning the purpose and logistics of the study. A three minute video that I had recorded was embedded on the website and contained information concerning the study's purpose and context. All participants successfully communicated their interest and provided signed consent forms within thirty-six hours. Prior to the study, I did not know any of the participants personally although I may have previously participated in state-specific Twitter chat sessions that they also attended and in which they participated. There was a noticeable difference in male and female participants, with only one female participant communicating interest in participating before the close of the recruitment phase compared to several males sending messages of interest.

In an effort to preserve the confidentiality of the participants, I assigned a pseudonym to each individual: Amy, Bob, Charles, David, Edward, and Frank.

Following interpretive phenomenological analysis research methods, the primary data collection procedure I used was a semi-structured interview. The interviews yielded thick, rich statements from participants, who described their experiences with and sense of understanding of the phenomenon. I specifically chose an IPA approach for this study so that my experiences and understanding of social networking, PLN, and privacy could be incorporated into the study. Unlike other phenomenological studies, which call for researchers to abandon their preconceived notions and understanding of a phenomenon, IPA enabled me to use my experiences to interpret the data drawn from participants.

Table 1

School administrator participants' job titles and geographical regions

Participant Pseudonym	Job Title	Geographic Region
Amy	Principal (grades K-12)	South
Bob	Director of Instructional Technology	West
Charles	Assistant Superintendent for Teaching & Learning	Midwest
David	Dean of Students (grades 9-12)	Midwest
Edward	Principal (grades 9-12)	Midwest
Frank	Director of Instruction and Technology	Midwest

Each participant engaged in a semi-structured interview comprised of approximately nineteen questions. The interview questions were divided into three separate categories: (1) social networking; (2) personal learning networks; and (3) privacy. Each semi-structured interview was conducted over a phone conference line and recorded by a third-party program, NoNotes.com. The recorded interviews were transcribed and used for data analysis. Using an IPA four-part analytic process, I analyzed participants' interview transcripts using descriptive and linguistic interpretive codes. These codes formulated conceptual units or emergent themes. These conceptual units were then analyzed to reveal commonalities and shared themes.

Each participant was asked to create a document that shared their insight or experience with social networking and PLN. I did not impose any requirements regarding length or subject upon participants; they were allowed to write as much and as freely as they wished. Each participant submitted a written document; these varied in size. The shortest document was a half-page and the longest was approximately a full page-and-a-half. To analyze the documents, I used a coding process comprised of enumerative and thematic codes.

Additionally, I collected fifty Tweets from each participant. The individual Tweets were recorded in a spreadsheet for data analysis and were then coded and analyzed, again using an enumerative and thematic coding process.

The data collection and interpretation phase was completed over a timeline of two months, beginning in December 2013. Because the setting of this study was a digital learning community with open access through a hashtag on Twitter, I had extremely easy access to participants. Aware of the holiday season's potential to create scheduling conflicts with participants, I sought to complete all semi-structured interviews before Christmas Eve. All interviews were completed within a five day window; each lasted approximately fifty-five to sixty minutes. Participants were asked to submit their written documents prior to the interviews, but not all participants did so. This required additional follow-up email communication with these participants. Specifically, Amy was the last participant to electronically submit her written document. Amy submitted her document on December 31, following three email reminders. Participants' Tweets were collected in mid-January 2014, but this did not require direct communication with or involvement from the participants.

Because none of the participants had restricted Twitter accounts, all of their Tweets were publicly accessible.

I maintained close communication with all participants during the data collection and analysis process. With the exception of the actual interview, all communication was done exclusively through email.

At the outset of designing this research study, my goal was to focus an entire study on a topic that was of great passion and relevance to me, personally and professionally. I understood that through my research I would have the opportunity to contribute findings to a sector of limited educational research that additionally would help me. Given my current professional assignment as a school administrator, employed by a for-profit company, my social media activity is routinely monitored and subject to criticism by colleagues and supervisors. As such, I have been required to dramatically minimize my social media activity, as well as take care not to disclose certain information that might be deemed sensitive or negative to others. Aware that I could not be the only professional with similar experiences, I sought to understand how other school administrators made sense of their experiences sharing and disclosing information while maintaining or ignoring their own privacy. As a qualitative researcher I was able to gain invaluable data from the participants that can benefit and be applied not only to the education community, but to me as well.

As I listened to each participant during the interviews, I recognized just how passionate and eager the participants were to collaborate, share, and help improve others. It was a truly refreshing experience to gain insights about participants' social media activity and privacy. It reaffirmed my own behaviors and actions as a social media enthusiast; my digital collaboration is critical to improving the field of education. I found myself wanting to

speak candidly with each participant. At times I engaged in brief discourse with the participants and invited each to engage in digital collaboration in the future. I believe the approach I took when facilitating the semi-structured interview helped to put the participants at their ease. Overall, the interviews did not feel formal and rigid but rather authentic, organic, and synergetic. I believe I will collaborate and communicate with the participants in the near future. Having learned more about their educational philosophies, frameworks, and beliefs, I also believe some could eventually be called friend.

To maintain validity and reliability, I employed several strategies, including crystallization; document coding; member checking; and participant feedback. Data sources were comprised of lengthy interview transcripts, written documents, and Tweets from participants, all of which supported and crystallized the emergent themes from the sources. The primary data analysis method used in this study was through IPA. The IPA procedures allowed my interpretation of participants' data to be crystallized and confirmed through emergent findings from the documents' analyses and coding.

I also believed it was important to communicate my preliminary findings to participants. All participants received a copy of the raw interview transcript for their review as well as copies of my preliminary findings of the data analysis from interviews and written documents. Each participant was encouraged to review the data and preliminary findings; provide suggestions for data to revise or delete; and share feedback on the early results. However, other than acknowledging receipt of the sources, no participants requested changes or provided feedback on the preliminary findings.

Several times during and after the data analysis process, I consulted with a "critical friend" to confirm ideas, findings, and procedures. Dr. Loyce Caruthers, University of

Missouri-Kansas City Associate Professor and my committee chair, provided large amounts of time via phone and email to provide feedback and assistance.

In this chapter I share the findings of the study. But my role as researcher, particularly embedded in IPA procedures, was that my experience and understanding of the phenomenon is just as important as those of the participants'. As such, I was comforted knowing that the findings would be reported in a formal structure, but with insertions of my voice and commentary. As previously mentioned, the study's findings not only contribute to a limited field of research and literature on this topic, but also directly impact my personal and professional practices.

Qualitative Findings

Interpretative Phenomenological Analysis (IPA) of Interviews

As described in Chapter 3, I utilized the four-step analytic procedures of IPA to interpret the interview data of all six participants. My analysis concluded with two to three emergent themes from each of the participants' transcripts, as shown in Table 2.

To provide a strategic, reader-friendly format for the IPA findings, this section is structured by the "superordinate themes." Each of the superordinate themes detail the corresponding emergent themes of each participant, supplemented with data from the participant's interview transcript. The superordinate and emergent themes, categorized by each participant, have been illustrated in Table 3.

Superordinate one – Must share and exchange resources; Help others grow. As I reviewed each of the participants' conceptual units and emergent themes, I was able to categorize them into a superordinate that was based on the necessity of sharing and exchanging resources. From the data, there were ample details and a wide variety of why

each of the participants felt compelled to share resources with colleagues. Amy emphatically

stated that her work as an educator was "simply not good enough" unless an educator was

sharing their work. She emphasized that the sharing of work was the work of a "true"

educator. A true educator must share and exchange resources all the time, not only seeking

information to professionally improve but also to help others grow.

Table 2

Emergent themes from analysis of participants' interview transcripts

Participant	Emergent Theme 1	Emergent Theme 2	Emergent Theme 3
Amy	Superstars and Experts	Not Good Enough Unless Sharing	Privacy is Not a Necessity
Bob	Bypass Gatekeepers of People and Info via PLN	Grandma Rule to Guide Sharing	Can't Count on Privacy
Charles	From Professional to Personal	Giving, Taking, Stealing, Sharing	Doesn't Worry About Privacy
David		Share, Share, Share	Privacy Might Equal Hiding
Edward	Surrounded by Awesome People	Building a Community	To Grow Online, Cannot be Hidden
Frank	Prevented the Plateau		Privacy Less Than One Percent of the Time

Bob stressed the importance for one's PLN members to know their personal side, extending the idea that one must share information and resources. However, Bob stressed that the sharing and disclosure of information should not be exclusively professional; personal sharing is necessary as well. Bob believed that a PLN must also know some facts about the real life persona of others. Ultimately, his PLN information and sharing was ruled by his "Grandma Rule": his guiding principle to say nothing that he would not repeat in front of his grandmother.

Table 3

Superordinate themes from analysis of emergent themes

	Superordinate 1: Must Share and Exchange Resources; Help Others Grow	Superordinate 2: Personal and Professional Benefits Powered by PLN	Superordinate 3: Privacy Should Not be the Priority
Amy	Not Good Enough Unless Sharing	Superstars and Experts	Privacy is Not a Necessity
Bob	Grandma Rule	Bypass Gatekeepers of People and Info via PLN	Can't Count on Privacy
Charles	Giving, Taking, Stealing, Sharing	From Professional to Personal	Doesn't Worry About Privacy
David	Share, Share, Share		Privacy Might Equal Hiding
Edward	Building a Community	Surrounded by Awesome People	To Grow Online, Cannot be Hidden
Frank		Prevented the Plateau	Privacy Less Than One Percent of the Time

This superordinate theme also stemmed from the conceptual units that were interpreted from Charles, who stressed the notions of giving; taking; stealing; and sharing. Charles engaged in these activities on a daily basis for the benefit of himself and those within his school district. Charles' activity was based on what I dubbed "The Newspaper Rule." This rule guided his decision-making process of what would, or would not, be shared through social networking tools. Because of this newspaper rule, Charles stood by everything that he shared online, explaining that if it had been printed in the next day's newspaper he would have no regrets.

The conceptual unit of "share, share, share" was also a significant aspect of this superordinate theme. David defined his personal learning network as a group of inter-sharing and said that the real value of the PLN was attributed to the information being shared amongst its members. I drew upon very rich, thick statements from David that helped me gain a better understanding of how he came to make meaning of the use of social networking tools while participating in a PLN and its effects on privacy. Similar to Charles, he understood that one must consider a guiding principle, such as the newspaper rule, to guide one's social networking posts. He knew he couldn't control the perceptions of how others would view his online contributions, but believed that they were all appropriate as he only made digital posts that were intended to help others grow.

Sharing information and resources did not seem to be enough for Edward. It was evident through the conceptual units that Edward actually sought to build a community so that he might share resources and information with a larger audience. He fundamentally believed that he must contribute to others by sharing and giving back. Overall, his purpose was to serve others.

The conceptual units of these five participants comprised this overall superordinate theme. The following emerging themes provided more detail about the participants' statements from the interviews.

Emergent theme: Not good enough unless sharing – Amy. During my interview with Amy, she was asked to expound on how social networking tools might have changed the way she viewed her connections and communication with others. She cited positive effects of social networking and PLN tools on digital collaboration and in particular noted the way they fueled her passion for sharing content, resources, and information with others online. The notion of sharing and digital collaboration was more than just an expectation; it was almost a requirement in order to do good work as a teacher. Amy emphatically stated that "It is not enough to do great work anymore. If we are not out there and sharing what we are doing with other people, then we are not doing our kids justice, ourselves, or education as a whole."

She credited social media for offering educators a vast, powerful tool that should be used to share knowledge. The value afforded to PLN users as they share resources was maximized by the social networking tools. Amy commented, "I think that is what social media really gives us, having access to people that say amazing things and have amazing conversations. I think that social media gives educators those great ideas that we can share with everyone."

As Amy reflected on her use of social networking tools to participate in a PLN, she indicated that a stark change unfolded in how she viewed her digital collaboration. She recognized that she was once reserved in her public sharing of content with others. She assumed her contributions were not as effective or as high-quality as others. However, over time this changed and she began to embrace the opportunity to share her contributions online,

ultimately validating the work she was doing within the education field as valuable. The

following excerpt supports this notion:

> I think it has made me much more open to sharing. I am much more willing to
> put myself out there. A year ago I would have never written a blog, I wouldn't
> even have a website and put myself out there because I probably wouldn't have
> thought what I did was good enough. And what I am doing may not be good
> enough but it still needs to be shared because, going back to what Chris Lehman
> said, "If you are doing great work and you are not sharing it, then it is not great
> work" (Amy).

Amy was asked to speak about her intended audience when sharing information. To

Amy, it was not important if the recipient of her information was a strong tie or a person she

had never previously interacted with online. Amy believed it was important to collaborate with

everybody and did not prioritize one subsection of her PLN over the greater masses. "I try my

very best not to deviate between those who might be my favorite per se versus new people that

are just getting into the fold, because it was less than a year ago that I was just jumping into

this new social media," Amy said.

Amy noted repeatedly the way in which the online education community of

collaborators was comprised of positive, eager-to-help individuals. "The community of

educators online is for the most part ninety-five percent to ninety-eight percent so open and so

positive and so willing to share" (Amy).

To Amy, sharing knowledge and resources was not about her popularity, amplification,

or online identity as an expert. But this mindset did not always exist. Amy was once frustrated

by the fact that her online posts were not highly regarded, sought after, or shared with others.

She said "It used to bother me how I would blog something and I would not get a million

Retweets or a million people reposting my blog. That really used to be something that would

bother me. But I am over that." Amy indicated that she felt all right knowing that not all people

would take value in her online contributions. As she observed, "I am not a professional writer. I am just sharing."

Just as Amy did not expect everybody within her PLN to find all her online contributions of high value or relevance, she was equally careful to not be disingenuous with others' online posts. Amy claimed "I am very conscious whenever somebody does something that I don't think is great. I don't tell them it is great, but I also don't give them fake compliments."

Amy did not fear that she jeopardized relationships by not sharing PLN members' content. Amy noted that "I think that it is an ego thing for some people and you just have to get over it. It is not about having a million followers…I love it when more people follow me, it makes me feel good."

Amy had a high regard for her PLN, particularly because of the members' various job positions and willingness to share.

> I have a group of experts that are educators that are experts in every field. I have elementary teachers…elementary principals… high school principals…high school teachers… superintendents…special education supervisors… parents that are PTA presidents… people from different countries. And they will all share and that is what the most important thing is. Your personal learning network has to be willing sharers that can't just be takers, they have to be givers. That is what I think is most important. If you are going to be in the professional learning network, 90% of what you do has to be giving and 10% can be taking (Amy).

Amy described her PLN as "people of truth." Her PLN was comprised of those wanting others to succeed, to share feedback, and to be honest with other PLN members. She described her PLN as "…a group of supporters, cheerleaders, and people that basically are there for you. They tell you when you are doing great work, when you are doing work that is not so good, when you are doing stuff that needs to be applauded."

Amy also insisted that a vital function of her PLN was to provide high quality and meaningful content.

> I want people that are going to provide really good content. They are going to give great blogs, they are going to give outstanding comments, they are going to give you feedback and it is not always necessarily going to be positive (Amy).

Amy felt confident in the content she chose to share with those within her PLN, based upon whether or not she felt comfortable with it posted in a physical public domain. Amy explained, "I have the same rule for myself that I have for all of my students; I am not ever going to write anything that I would not write on the wall at the bathroom here at the high school."

Overall, Amy had confidence and pride in her online posts, despite some expressing divergent viewpoints. She was aware that divergent opinions existed, but she was comfortable with potential criticism. She observed that "There is nothing that I am going to put out there that I am not going to be proud of. I am a high school principal. You know how many people criticize me every day?"

Despite knowing that she could not control how others chose to judge or perceive her online identity, Amy believed that she portrayed herself accurately and honestly online. She stated, "I think on my Twitter feed I am really open and honest. I am not Retweeting things I don't believe in. I am not just posting things that I have not read."

Amy shared a negative experience she encountered through her digital collaboration with a PLN member. Staying true to her personal mission of sharing information, feedback, and resources with others, Amy commented on a PLN members' blog and was not immediately prepared for a challenging discourse that ensued.

> I think it is important to get feedback on blogs. So I commented on it, and what I thought was a great comment and give feedback – he ripped me a new one.

Just absolutely tore me apart and it devastated me. I mean it just devastated me because it was so embarrassing to me. I think that was my turning point where I just had to learn this isn't about you, and who likes you or whatever, this is about learning and we are all here to learn and we are all here to share. It is okay to have different perspectives (Amy).

Amy found herself in another negative experience while facilitating a state-specific education-themed Twitter chat session. During a session she interacted with a participant that expressed differing views. Amy described how she felt the participant was negative and not willing to listen; this caused her to avoid the participant and choose not to seek them out for future collaboration.

This idiot came on and was saying all these things about how student voice was not important and how kids could not be trusted with student voice. And I engaged with the person and I told them I disagreed with them and I gave them a few reasons why. And they wanted to keep on and on and I just finally cut off the conversation because they obviously were not going to listen. I think that at some point you just have to say, yes we are done (Amy).

The sharing of information with PLN members was not to be restricted to only educational resources and information, according to Amy. She also believed that it was important to share and disclose personal information with PLN members so they could learn more about her personal side. Facebook served as a great venue for this type of information disclosure. Amy described how some of her online boundaries became blurred. She shared that "A lot of my close professional network is now on my Facebook. I work hard to try to maintain things professionally on Twitter and not blur that line much, although I will put a few personal things out there."

Amy did disclose personal information, but generally only information that could already be accessed through the public domain. One such example Amy cited was "If I win an award and my family is with me, I am going to put my picture of my family on there, something along those lines."

Emergent theme: Grandma rule – Bob. The second emergent theme within this superordinate centered on Bob's verbal description of the "Grandma Rule." It was the foundation of this rule that guided Bob's decisions to disclose and share information with colleagues online. Bob understood that digital collaboration with weak and strong ties meant that any content he generated online would likely become permanent. However, if he was proud enough to repeat this information to his grandmother, then he believed it was worthy of publishing online.

The following excerpt details this rule:

> If you are not comfortable saying it to your grandma, don't say it to anyone else. And not everyone lives by a rule like that. The lesson that I learned was kind of underscoring the importance of maintaining a professional outlook while you are online (Bob).

Adherence to the "Grandmother Rule" guided Bob's social networking actions. He described this further, saying "When I started on Facebook a few years ago… don't say anything you wouldn't say in front of your grandmother. And I do that in real life and I live that way online as well."

Bob believed that social networking tools should be used in a professional, productive manner. Social networking channels such as Twitter and Facebook were not viewed as appropriate channels through which to publically complain and be negative. By avoiding such actions, he believed it maximized the potential that his digital contributions would be appropriate.

> I think that keeps it pretty clean for me, so I know that anything online I can stand behind. Social networking is not a place that I should vent or share my frustrations in a way that would speak foully of myself or any of the people I work with (Bob).

Extending from the "Grandma Rule," Bob was overly aware that the information he shared and disclosed with colleagues should also be appropriate to say to others' faces. He was quite cognizant of online identity and how he wished to be viewed by others within his PLN. During the interview Bob stated, "I treat my online behavior the way I do my face to face behavior; I would not put anything online that I would not say to someone's face."

Bob was asked to think about how others viewed his online identity and how this made him feel. Overall, Bob felt very confident because of his guiding "Grandmother Rule," something that could not be said of all his colleagues. Bob compared himself to others as being positive, citing educators who misused online resources and were negative online, as indicated in this excerpt:

> I have found that teachers I work with or colleagues don't have that same rule. Sometimes they use online as a way to blow off steam or share frustration and I think that just makes them look maybe worse than they really are. They have to be aware of their footprint and what they put online. I guess once they put it there, it is there. It is never gone (Bob).

Bob's willingness to digitally collaborate and share information with colleagues was high. What he shared with others online was influenced by and rooted in the ethical responsibility of maintaining a positive online identity. He was very careful not to say or post something that he might later regret since he believed privacy might no longer be possible.

> Privacy is kind of gone and because people put so much online, you can't expect that not to be seen. Your Facebook page, even though you have got a locked Facebook page, there is no way to really restrict things you say or do from getting out there. So the ethical requirements I think are higher when you are online than when you are face-to-face, because there are more opportunities to do or say something that you will regret (Bob).

However, Bob also felt responsible for disclosing enough private information to people within his PLN so they knew more about his real persona. He felt that it was important for others to actually get to know the "real" him in order to build rapport and trust. Ultimately, he

believed that collaboration could be enhanced with a personal connection based on comfort and trust. The disclosure of personal information through social networking tools was believed to benefit his participation in a PLN, as stated in this excerpt:

> Once in a while on Twitter, I would share when I checked-in at a restaurant. I don't want my Twitter feed to only be teaching and learning. People have to know that I am human and that I have to make these connections with other people. If I feel like sharing an absurdly cute picture of my kid doing something, or speaking along those lines, that helps. I think that helps create a more real persona…rather than just someone who is asking questions or just talking about technology (Bob).

Emergent theme: Giving, taking, stealing, sharing – Charles. For this emergent theme, I organized the data from my interview with Charles into a grouping with a strong presence and recurrence of statements regarding using social networking tools to collaborate with PLN members. Charles described his social networking as being predominately conducted on Twitter for the purpose of "interacting giving and taking, sharing, stealing ideas," which was where the title of this emergent theme originated. During the interview, Charles was asked to reflect on the implication of his PLN and how it might have changed how he learned or collaborated. Charles credited his professional development and collaboration to his PLN. As highlighted in the following excerpt, his PLN was a source of professional synergy:

> I would define my personal learning network as a circle of colleagues who I interact with on regular basis to exchange ideas, to support, and to seek support in return. My PLN is a source of professional development for me; it is [a] group of people who challenge me and help me grow and that I try to do the same in return (Charles).

In thinking about how his collaboration and learning has changed since participating in a PLN, Charles described how PLN enables "sharing across great distance." He believed that social networking platforms like Twitter could ease the transfer and sharing of resources

amongst teachers. Utilizing Twitter, teachers no longer operated as independent silos of

knowledge and were instead interconnected, as Charles shared in this excerpt:

> My PLN is an anti-silo device because you are trying to break down this silo
> approach to all that we do as an organization. I think that my PLN is binding
> all of those silos together because I have got people with all kinds of different
> expertise and we are all working together. It's an image of giving-and-taking,
> back-and-forth kind of an image…almost like ping-pong or badminton or
> tennis (Charles).

Charles placed tremendous value in his PLN and rarely purged it of sources of

information or people unless they brought little value or benefit to others within the PLN.

Adding resources was based on its potential to help others. Charles stated that something worth

adding to the PLN might be "an article on a topic that I think we are discussing," with the

intent that it would "lead to…encouragement and…connecting some people in my PLN to

each other."

Charles considered eliminating resources if there were minimal digital interactions

from a person or they had little potential value:

> I do go through my PLN once in a while and look at the people that I'm
> following. If I do ever eliminate somebody from that PLN it is probably
> because I realize that that person I haven't really connected [to] at all and it
> doesn't seem that either one of us are gaining anything from the mutual
> membership (Charles).

Ultimately, Charles had extremely high regard for educators that digitally collaborated

with others. He viewed educators within his Twitter PLN as being of high value because they

collaborated and contributed to the field of education while still performing their daily work

responsibilities and expectations. To Charles, this supported his notion that digital educational

collaborators were "the best educators" within an organization, as referenced in this statement:

> My opinion is that the educators that are on Twitter…they tend to be the best
> teachers. And so Twitter educators out there tend to be a collection of the best
> educators for the school or school district. I'm not trying to rank people, but…

it is usually people who are working like crazy…and being able to support others. (Charles).

Throughout the interview, Charles analyzed his own use of social networking tools and reported how instrumental they were to performing his professional duties. Charles had basically created a non-negotiable daily routine or ritual to ensure that he was professionally collaborating with colleagues. His notion of collaboration was rooted in sharing resources, not just the sole acquisition of information or resources. He noted that "I try to…find at least 30 minutes, every night, to get online and to network with educators around [the] world. I try to balance that 50/50 between giving and taking…of resources and experiences and knowledge."

In addition to giving and taking information for his personal and professional growth, Charles believed his digital collaboration also benefited his school district colleagues:

> I like to share stuff that either I have found or are good resources for stuff that we are doing for in our district. I like to steal, or return, things that I see that people are doing or if I have a need for some kind of professional area of growth or things that we are looking at here and I kind of reach out and look for resources that people are sharing (Charles).

Charles inspected his digital collaboration habits and motives. He suggested that while he would begin to work through professional matters "in-house," he ultimately relied on those within his PLN for additional support, as explained by Charles in this statement:

> It starts in-house always when we talk to people where I work, when we are tackling any kind of an issue…I start the debating and the problem-solving and the brainstorming here with the colleagues that I work with. When there is no right answer and we need somebody from outside the district to give some input…we will get in one room and we will call somebody. That has happened several times this year where I have called different people that I know through my PLN with some colleagues here on a conference call. I reach out as we need people that are in the country or around the world (Charles).

Charles insisted that he stood behind any and all of the information that he disclosed and posted online, based upon his own rule – if he was comfortable reading his online posts in

the next days' newspapers without feeling uncomfortable, then it was worth publishing.

Charles stated, "I'm kind of committed to everything that I tweet out being 100% something

that I wouldn't mind if it is in the newspaper, nothing embarrassing or ridiculous or

improper."

Charles also published Twitter posts that were personal and fun. His confidence in such

posts was validated by his self-generated "Newspaper Rule."

> I try to say that Twitter is 100% for professional purposes, but then that is not
> quite true anymore. I use it 100% professionally, but probably 90%, because
> 10% of my tweets are just kind of fun stuff now that I have got a lot of
> "friends" on Twitter. But I always do maintain that 100% that I do on Twitter,
> anything I do Tweet out, I wouldn't mind seeing on the newspaper the next
> day; if it had to be the worst that I would be accused of was saying something
> silly, but nothing inappropriate (Charles).

Despite Charles' high perception of enhanced learning through his PLN, he was not

entirely comfortable with specific aspects of collaboration and communication. Charles

reported a general unease with presenting divergent viewpoints to others for fear of

contributing posts that might be different from this Twitter PLN's status quo. Charles

commented, "It sort of challenges me to kind of put myself out there and maybe take a

different point of view and disagree with people in a respectful, professional way."

An analysis of my interpretative meaning units found that Charles exhibited anxiety

and frustration with certain topics about which he would strategically not post. During the

interview, he began to realize that certain topics might make others within his PLN upset,

perhaps due to differences in politics or professional practices, or in fear that his post(s) would

be misconstrued or misunderstood.

> I am kind of not completely comfortable with…always…speaking my mind. I
> disagree with somebody who is also has a lot of powers, or maybe even way
> more than me. Do I really want to throw it out there that I disagree
> vehemently with that person's stand? So I guess if I [were] totally honest, I

would say that I worry maybe a little bit if I were to disagree with somebody and I was going to take a politically incorrect stand on some issue maybe (Charles).

One such example that was discussed in the interview is highlighted in this excerpt:

I found a good math website that really was a lot of worksheets. Not like crummy worksheets, but I ended up not sharing it because I didn't want to be perceived to [be] sharing a website dedicated to math worksheets… but I thought my PLN would think that this is a bogus share and that I'm sharing a site with a bunch of math worksheets on them (Charles).

Charles also shared an example of a political topic that he avoided, believing his views might be different than those within his PLN. Charles shared, "I have a little bit of a different take on some union issues than my colleagues. I don't really agree with a lot of my Twitter friends on some of these issues."

I was able to sense that while Charles might feel comfortable engaging in discourse with colleagues face-to-face, Twitter was not an appropriate platform since it caps posts at 140 characters. Speaking about communicating with traditional-minded colleagues through Twitter, Charles noted, "If I think they are too traditional and won't be well received without being able to explain why I think it is a good resource," he would not do so.

Additionally, Charles did not want to potentially upset colleagues, create instability, or create confrontation with others from his PLN. Thus he preferred to avoid controversial topics and stick to positive statements.

I sometimes share, and I sometimes don't share my true feelings…about certain educators who I don't agree with, because I would rather keep it positive I guess (Charles).

Emergent theme: Share, share, share – David. Within this emergent theme, I analyzed David's statements centering on digital sharing as being of high importance. During the interview, David reflected on and inspected his overall PLN. He described the members

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as a group of interconnected educators with the sole purpose of sharing information, resources, and knowledge. David shared how his PLN members generally were "working together, sharing information, sharing ideas…without remorse." He summed up his PLN activity as being not much more than "share, share, share."

To David, the power of a PLN stemmed from its members' willingness and commitment to collaborate and share resources.

> PLN is driven by so many people willing to share, grow, and learn. What is so essential about it is…there are so many people out there and so many people who are willing to share. It has really taken our ability to grow and learn and made it limitless, for lack of a better word I guess (David).

At the heart of a PLN's collaboration was the shared knowledge and resources. David believed that all information was worth the attention of the PLN, so long as it was valuable and could help people and organizations improve. David described effective resources as those that were:

> Going to make you better…and…you share that resource with your colleagues…it improves your entire school but it changes mindsets. … Social media has really given us the ability to…work outside of the walls you are confined in and it really gets you really rich and creative ideas from schools around the country, around the world (David).

During the interview, David reflected on why he chose to add certain people to his PLN over others. Through his reflection, he said that he chose to collaborate with those that intend to help others improve.

> I chose to associate with people that are…going to get the best out of each other or I'm going to bring the best out of them and they are going to get the best out of me. I do the same thing when I look at people to follow on Twitter…if you are high school administrator; I'm going to follow you because you have something that I believe I can benefit (David).

David attempted to follow all work colleagues, including those that did not follow back, engage, or sustain an online collaborative relationship. This was done primarily in an

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effort to avoid appearing discriminatory or inequitable to co-workers. David stated, "Most likely they are not going to follow me because of all the Twitter chats and all the posts. They are going to be like this guy is kind of annoying."

Not all resources were beneficial to a PLN. David came to understand that if a resource did not possess the potential to lead to improvement, it was worth eliminating. David stated, "You can either get better or get worse; you are really never going to stay the same. To me anything that I use as a platform or tool is that that's not allowing me to get better for my students or for my staff…then I cut it."

David utilized similar mindset when determining if a person should be eliminated from this PLN.

> I don't think I really unfollow that many people. I don't ever unfollow a whole lot of people unless they don't post anything that I would deem educationally beneficial or it is useless information just blogging on my feed (David).

David was very comfortable knowing that individuals within his PLN had different mindsets. He encouraged this diversity to generate better ideas and outcomes.

> If I can inspire one or two people versus the 5000 people…that is all that matters. If you are only following people or conversing with people that have the same mindset as you, I don't think you're going to see much at all. I think that is how Twitter has helped me so tremendously; seeing different perceptions, seeing different perspectives and having those important conversations, questioning your ideas. I think that is what has helped me grow so much (David).

To David, the overall purpose of utilizing social networking tools and engaging with members of his PLN was based upon knowledge sharing, improvement, and growth. He was not concerned if others did not wish to follow him on social media tools. As David stated, "if they don't want me to be part of their network…they don't have to follow me. I think that is their choice." David's PLN was for improvement. But without sharing, the PLN could not

function and be effective. Fortunately, social networking tools enabled sharing to be done in

a speedy manner, thereby eliminating isolation and alienation, as noted in this excerpt:

> Our ability to share information is instantaneous now. With social media, I can put out a question…and have thousands of responses and answers. Whether I agree with them or disagree with them, I have the ability to collaborate with the world instantaneously. We are not on an island anymore and if you are on an island you choose that. You are never really alone in making any decision or if you need help (David).

While David was an advocate for online collaboration, he did share his previous

apprehension of utilizing social networking tools and collaborating with colleagues. During

the interview process, David drew connections to his family history and its impact on social

networking behaviors. He stated, "I was very apprehensive; I really didn't want to share my

things with other people. I think I was afraid of ridicule. Being the youngest of the three

boys…I was always up for judgment."

David also shared his early apprehension of openly sharing professional experiences

and ideas when he was a math teacher.

> I was pretty apprehensive about joining the online community. I had some conversations with a home school here about some of the materials I would use as a classroom teacher. He had a conversation with me…why not share it? I don't want people judging my material and then me getting offended by it. He was like why would you have that perception that we are going to rip it apart? Now, I look at…how involved I am in Twitter and what I do share and how I started a blog and I'm sharing personal things that I never thought I'd share to the world and professional things for that matter (David).

In determining what kind of information and resources to share, David began to think

about how it might be perceived by others. During the interview, David shared how he

carefully considered that his online postings might not be received by the audience in the

manner it was intended. He said, "I think about that consistently. I tell my students…when

you're posting you have to realize that other people may not perceive what you are posting

the same way as you did."

To guide his online postings and further validate their appropriateness, David created

his own "Newspaper Rule." He described it, saying, "I always ask myself this question every

time before I post: 'would I want this with my picture on the front page of our paper? Am I

posting something that is appropriate, something that somebody may deem inappropriate

personally, professionally?'"

Ultimately, David knew he could not control the perceptions of others and was

reaffirmed by his commitment only to generate digital contributions that he knew were

intended for their improvement and growth.

> You do think about that especially in my role now as an administrator, you get
> a lot more critics in the administrative role. It all boils down to – they are
> going to perceive me how they want to perceive me. As long as I know what
> I'm posting is appropriate…what I'm sharing is meant to help other people…I
> can whole-heartedly…hold that intention (David).

Through the interview process, it was also determined that David felt it necessary to

share information with those on his PLN on a more personal level. David reported a

commitment to allow his PLN to know him personally, not just professionally, in order to

strengthen the relationship. On the topic of personal information disclosure, David said, "I

still think a lot of personal things need to be shared so you can have a professional

connection. Most of the people I professionally connect with, I feel like I should personally

connect with them." David spoke of how he perceived himself as being personally private,

but in a professional context "I'm not trying to hide anything."

As I asked questions about how he believed others perceived his privacy and

openness to sharing online, David recognized that it was probably minimal. He described

how he did not believe others would perceive a high sense of privacy as he was so active

within his Twitter PLN. David stated, "I think people view that I don't value my sense of privacy; I share everything. I share information that I believe can improve others and myself and everyone that comes across my feed."

In several cases, the professional sharing and collaboration enabled personal relationships to forge. David shared how his online collaborative relationships led to sharing personal information. David co-facilitated a weekly state-specific education-themed Twitter chat session, through which he met colleagues that became personal friends. He referenced three female participants he had never met but with whom he was in contact by phone regularly. David shared that "now we all have each other's phone numbers, we call each other, we tell each other happy birthday and it's an entirely different level relationship."

The cultivation of personal relationships was also evident in the following excerpt, in which David described the positive experience of meeting PLN members during face-to-face events:

> I went to the ISTE conference at Texas and we finally get to meet people that you have done all these conferences with, all these Twitter chats with. You finally get to sit and talk with them and you shared all these things, you get phone conversations with them, you've done all this stuff but you have not actually really been able to meet them the connection is so much quick, I mean you go from "hi" one second to where you are giving each other hugs and "hi-fives" and it's almost like your family member; it is a long lost brother or something like that (David).

Emergent theme: Building a community – Edward. Within this superordinate theme was the emergent theme of building a community. This seemed summarized by Edward's conceptual understanding and meaning of using social networking tools within his PLN. From my interpretation of the data, it was clear that Edward was strongly invested in helping others learn and improve. Edward said, "I'm here to serve a greater purpose and that is what I want to do." He hoped that others would ultimately "pay it forward" and enhance the

learning community through ongoing collaboration and dialogue.

Edward's key drive for establishing a PLN was to connect and "give back" to the educational community, while his primary motive for connecting with people was to give back to the community and society at large. Edward's professional philosophy was closely aligned to servant leadership, as he observed: "It is my way of giving back to a world. I know the purpose of me being here is not for me." The following excerpt provided further evidence of his service to others:

> My purpose to be here is to do something with my life and hopefully the best way to do that is to give myself to others and hopefully through that, there is something that they hopefully can learn, or something hopefully that I will learn that will continue to help me have that service mindset (Edward).

Edward credited social networking tools with enabling him to engage in sharing with others. He stated, "I know it not only helps the people that I work with but it also… gives me an opportunity to give back to a profession that I care greatly about."

Edward had a solid fundamental conviction that his overall purpose was to serve and lead others to improvement. To Edward, this was his ethical responsibility. He indicated, "It is my responsibility to make them better than they ever thought they could [be]." Edward went on to say:

> It is my responsibility to make them be better than they were yesterday. My responsibility inspires them to want to be a greater leader, a greater person, a greater educator whatever happens to be the case. And it is not different for me when I get on a chat, it is not different for me when somebody tweets me and asks for say my help. I look at that as my responsibility, as my duty (Edward).

Edward believed that he could help others improve by openly sharing his weaknesses and vulnerabilities online and modeling how all educators should strive for continuous improvement. According to Edward, "In order to help other people I have got to model them,

put myself out there, and prove to be a little bit vulnerable."

To help others, Edward believed in tapping the powers of social networking, which came naturally to him. Long before social networking tools evolved, Edward had leveraged his social networking skills for collaboration with colleagues. Edward stated, "Before the era of Twitter I used to do a lot of social work networking online mainly through email…personal phone calls and just visiting people." He defined socially networking with individuals as being much more than just confined to social networking platforms. Edward posited, "Social networking is actually bigger than just what is happening today…it is on Twitter…on Facebook…on Pinterest, or whatever happens to be the case."

Edward came to understand his social networking and participation in a PLN as a way to build a conversation and a community, as referenced in this excerpt:

> That is why I think for me when I got heavy into the social media, specifically with Twitter two years ago, it was a natural fit and it allowed me to expand to a greater…global perspective because now it is just not within my space or maybe within my region, it is truly worldwide now. So what it has done for me is allows me to not only be a part of that, but it allows me be a part of something that is bigger than me, which to me in my opinion is what makes it awesome; it is just an awesome experience (Edward).

Edward clearly wanted others to become better by way of his shared knowledge, information, and resources. Edward wanted to not just build a PLN, but a community to serve others. It was through online posts and a Twitter PLN that he believed a sustainable digital community could be forged. He was excited and motivated to build a community of educators hungry for knowledge and resources that did not even exist. Edward proclaimed, "To me that is what I love about social media…it allows us to build communities that right now today do not exist. But because of it, will exist tomorrow…a week…a month…a year from now."

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During the interview, Edward reflected on a state-specific Twitter chat session he co-founded. The Twitter chat session was an example of what Edward sought to achieve: a sustainable community of learners helping each other. He described this in this statement:

> We feel that chat [state-specific Twitter chat session]…people learn from that chat. It is cool watching how people will become connected from all parts of the country that never knew each other. So we tried to cultivate those relationships by connecting people when we hear things "hey, why don't you ask so and so or so and so has…" I have learned enough about them that I can help connect to other people to those things and that has made us obviously really proud because that is how we can give back to a profession and feel like we make an impact somewhere greater than ourselves (Edward).

Superordinate two: Personal and professional benefits powered by PLN. As I reviewed the conceptual units from participants, it was appropriate to establish a superordinate theme that focused on the personal and professional benefits of PLN collaboration that was bestowed upon the participants. My interpretation of participants' data suggested a heavy reliance on their ability to connect and collaborate with others within their PLN in order to satisfy or enhance personal and professional experiences.

I titled the conceptual unit for Amy "superstars and experts" based on her comments that highlighted the importance of connecting with superstars through social networking tools. Amy viewed most of those within her PLN as being far wiser and smarter than herself, which inspired her to connect with them. She also spoke of how she developed strong relationships with many individuals, some of which blossomed into healthy friendships.

I sensed similar commonalities during my interview with Bob, who also seemed to believe that if not for being able to connect with experts through social networking tools, he would not be able to function as effectively in his job. He also attributed social networking to being the root of healthy relationships with long-distance family and friends that could not exist if not for social networking tools.

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Similar context was noticeable in my interpretation of data from Charles, who felt that his personal learning network was deepened by way of communicating and collaborating with individuals through Twitter. It was through his PLN activity that he ultimately built personal relationships. Charles stated he had a solid relationship with about one hundred colleagues and a very close relationship with about fifty. I was able to sense that Charles' perception of his social life was actually enhanced by his Twitter PLN. He was very happy and proud to share that he often met and socialized with some members of his Twitter PLN.

I had little doubt that Edward was entirely motivated by and driven to surround himself with amazing, awesome people. It was through the addition of educators and colleagues into his PLN that he gained the additional installation of energy and motivation in addition to satisfying his need for validation. Throughout my interview with Edward, it became clear how vital it was that Edward be in an environment where he could teach and help others improve. I began to sense that Edward would not feel adequate or fulfilled unless he believed he was helping others, personally and professionally.

Lastly, Frank benefited from his PLN significantly, personally and professionally. I detected that Frank had genuinely experienced a plateau, or temporary stagnation, through his previous learning experiences. Throughout the interview, Frank reflected on his plateau and expressed how social networking tools permanently modified how he learned and interacted with others in a positive sense. Social networking tools and PLN participation seemed to have provided him with the rejuvenation and renaissance learning experience he needed. He vividly described the positive sensations he experienced once he began to learn collaboratively with others while utilizing social networking tools to enhance his learning experiences. His

acquisition of knowledge changed after he streamlined his sources of information through social networking and microblogging platforms.

The experiences and understanding of the participants revealed how social networking and PLN participation permanently changed and benefited facets of their personal and professional lives.

The following emergent themes provide further descriptions of how participants made sense of their understanding and experiences by way of their vivid statements.

Emergent theme: Superstars and experts – Amy. I titled this emergent theme "Superstars and Experts" after interpretation of the meaning units applied to Amy's interview transcript. Several meaning units emphasized the necessity and importance of social networking tools and/or participation within a PLN, since they provided Amy access to "amazing educational experts." The notion of being surrounded by mentors, "amazing superstars, and great writers" really inspired Amy. As she explored what her PLN meant to her, she visualized herself surrounded by people of equal or greater value. She explained that "I automatically think of just really supportive people, people that inspire me, people that cheer me on, people that give me great ideas, people that are amazing writers." Amy expressed a sense of humility regarding her PLN colleagues. In describing her PLN members, she stated, "I think 99% of them are more amazing than I am. I think that it is really important; that you don't think that you are the biggest person in the crowd." She went on to say, "I think I have got amazing superstars in my network and I think that's what's amazing, to be surrounded by so many superstars."

Amy perceived social media as being the connector or bridge to experts. She explained, "I think that having access to people that say amazing things…educators that give us those

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great ideas that we can share with everyone."

Due to geographical constraints, social media provided Amy with professional opportunities to collaborate with colleagues from around the world. This was an important feature for her; she spoke negatively about digital practices within her respective geographical region. According to Amy, "I am much more active with people that are not within my circle, per se geographically. Social media hasn't caught on like they have everywhere else. We are really not very forward thinking or very progressive."

A statement describing Amy's understanding of the impact of social networking as improving her geographic constraints can be seen here:

> I mean, professionally it has made me so much better as an administrator because I am exposed to so many more amazing educators, I have learned so many new things that I would have never been exposed to here in the middle of nowhere Arkansas. So many great people, there are so many amazing professional practices that I just would have never been able to share with my teachers or my kids, just great ideas (Amy).

Leveraging the ability to connect and collaborate with global experts through social networking tools, Amy created daily routines to check in with her PLN resources. By doing so, she could see the posts of the people she followed on Twitter and continue her sharing of ideas, information, and resources. First thing in the morning, Amy checked her Twitter feed to peruse the activity and events of those published by Twitter PLN members. She spoke about how she no longer relies on traditional methods to follow blog posts via RSS feeds. Now, she solely uses Twitter. As Amy described, "I just look at my favorite bloggers and follow them on Twitter so I see who has blogged something new. I am always checking throughout the day, I am always Tweeting. My friends are Tweeting."

Amy understood her experience of digital collaboration as having profound impacts on her personal and professional life. If social networking tools were unavailable, she stated

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she would have a difficult time imagining what collaboration would be like. However, she believed she forged positive relationships with certain PLN members. In these cases, she claimed the bonds are strong enough that collaboration would easily translate into telephone, email, or postal service communications. Amy described what the impact on her life would be without social networking tools in the following statement:

> I think I will be really depressed. I mean, I really do I think my professional learning network is such a positive thing in my life and it really lifts me up and it gives so many good things. I think as an educator, especially as an administrator, we are so isolated. I am a really positive person and I really try to always be glass half full and I think that it would be really depressing for me not be able to connect with all those people just with the touch of a finger (Amy).

Amy continued by describing the connections forged with PLN members on a more personal, intimate level. She stated, "I have probably twenty amazing, close friends now that I didn't have a year ago. I feel like I probably talk to them every other week on the phone with a deep conversation." The commonalities shared amongst Amy and her PLN colleagues Amy enhanced the personal connection and friendship that was forged. She said, "I have connected with them…because we have so many things in common and we can talk-the-talk of education… it has been a real win-win, to me, my school, and myself personally."

Once Amy developed personal relationships with individuals that were once only professional colleagues, her digital boundaries became blurred. Amy confirmed, "That line has kind of gotten blurred, so a lot of people around my Twitter network are also in my Facebook network, but that is just because they are part of my personal network now." She indicated that she separated social networking platform uses based on personal and professional purposes. Amy stated:

> Primarily I use social networking through Twitter; that is my biggest way of networking with my professional peers. I love Twitter that is where my

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professional learning network was formed. I do Facebook and that is my personal network. So, I am very big about the line between Facebook is my personal, and Twitter is my professional (Amy).

Emergent theme: Bypass gatekeepers of people and info via PLN – Bob. Within this superordinate, the data were categorized into an emergent theme that I titled "Bypass Gatekeepers of People and Info via PLN." The meaning units I assigned to portions of Bob's interview transcript emphasized his use of social networking tools for the benefit of accessing info while bypassing restrictors or gatekeepers. Bob attributed the ability to effectively perform his job to social networking and web-based technological tools. According to Bob, "I don't think I would be able to do my job as well. I don't think I would be able to have the excitement…to seek out answers. I would be so limited if I only had Google to find answers."

Bob perceived social networking and his PLN as providing access to resources he would not otherwise been able to access. He shared, "It allows me to see things and read things that otherwise I wouldn't have access to."

Social networking tools minimized the negative effects geographical constraints imposed on personal and professional connections. Bob spoke about how Twitter helped him connect with others digitally. He said, "You know Twitter allows me to connect with people who may never cross paths with physically or ever known that they existed, much less know their ideas or their thoughts on particular technology or instructional strategy." Bob knew that he would be unlikely to penetrate social or professional circles of those not within a proximal distance or context. An appealing component of microblogging tools was that experts, entertainers, athletes, and other public figures had increasingly begun engaging with fans and followers. This excitement also resonated with Bob. He said, "I think everyone gets

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excited knowing that we are on Twitter and they mention some renowned researcher or speaker and they get a response back and they end up having a discussion."

Bob spoke about his recent digital collaborative experience with a "renowned researcher," Robert Marzano. In describing his experience, he stated:

> That is the kind of thing that I would never have been able to interact with, say, Robert Marzano. But, I was on Twitter and I was discussing an idea and I tagged him on a Tweet and I got a response and that would never happen. To be able to speak to some of the foremost minds in education and technology and that would not happen unless you are on some kind of social media (Bob).

Bob described how Twitter allowed him to bypass the gatekeepers of information and knowledge and get directly to the source. He stated, "My personal kind of mode of operation is that if I can get to the ultimate source then I will try to get there." Bob shared an experience of using Twitter to engage with a presenter at a conference.

> I was at a conference where a state superintendent spoke, so I tweeted at him to see if I could ask some questions at some point during the conference. I did not get a hold of him, but one of his aides who was also on Twitter sent me a direct message and said, "Hey, send me your questions and I will make sure that they get to him and that you get a response" (Bob).

Accessing resources and information in a speedy manner also paid dividends in Bob's career. Though he could draw resources from those within his department, he could also directly benefit from those within his PLN who resided around the world. Bob spoke about his work department as being limited in size, with only eight total staff members. As the department researched answers and resolutions, Bob's global Twitter PLN could be of assistance instantaneously. He said, "I can turn to my computer screen and have access to thousands of people…world renowned experts, and get their feedback or their thoughts. That's pretty impactful and I think positive."

Just as social networking powered his ability to access experts and gurus around the

globe, it enabled him to establish an ever-growing personal learning network of strong and weak ties and strengthen relationships with family and friends from different geographical regions. "Personally, it is great because I can connect with family and friends. I can keep in touch with dozens of friends from college in a way that I otherwise wouldn't be able to," Bob said. Without social networking tools, he did not believe this would be as feasible. Overall, social networking tools were vital to how Bob cultivated long-distance relationships. He said, "I have a job that takes up ten twelve hours a day and four kids at home, so my time is limited in what I can use for socialization or keeping in touch with people."

During the interview, Bob reflected on how he viewed his PLN and its impact on his learning. Visually, Bob began to describe his PLN as a large room, full of interesting ideas generated by individuals coming and going.

> I would have to think of it like a big room, you know you think of it like a huge auditorium, lecture hall or something like that and you can turn to that room and you can have a big group of people to interact with and you can go in and out of that room as you please as often and as rarely as you pick (Bob).

To Bob, this room provided access to countless experts ready to help him grow, personally and professionally. He stated, "It connects me to potentially millions of other educators, in reality I am connected to hundreds or thousands."

Digital collaboration using social networking tools was not a guarantee that Bob was going to communicate or collaborate with everybody within his network. However, by using such tools the potential of engaging in two-way dialogue was greatly increased. Bob spoke about how Twitter posts often had links to blog articles; over time such communication could become a two-way discussion. He said, "I don't interact with everyone who is in my personal learning network, but there is at least some kind of node-to-node communication and Twitter allows that one direction communication that then leads to two direction communication."

Throughout the interview, Bob drew meaning from his experiences with social networking tools and the impact on his digital collaboration with others from within his PLN. He had a firm conceptualization that social networking and a PLN enabled one to connect with people and ideas. According to Bob, "I think it is the way to connect to people and also ideas, just as much ideas as it is to connect with people."

Emergent theme: From professional to personal – Charles. Within this superordinate, I identified meaning units for Charles that strongly detailed how his social networking and PLN spurred the transformation of relationships with others from professional in nature to personal. Charles' PLN was comprised of those that he sought for professional assistance and resource as well as their strong sense of humor, compassion, and mutual respect for digital collaborators. Charles shared, "I always try to think of them as fun, the laughter and the fun. They all seem to have a very healthy sense of humor. It's always a lot of fun going online."

Charles viewed his interactions with PLN members as more than just focusing on professional topics. He believed it was entirely acceptable to integrate humor and fun into the collaborative efforts. Charles stated, "Sometimes I think it worthwhile to share some good humor and fun with my PLN and to cheer them up or keep them motivated."

Charles' collaboration with colleagues transformed into relationships and friendships with PLN members. Charles described how many "strong ties" developed from within his Twitter PLN.

> I think that I follow maybe about 1800 people and maybe I have about 3200 followers. If any of those ask me a question on Twitter, I feel like I would respond and I would feel gratified that they asked and I would feel happy to answer if I could. Of those 3200, I would say about 100 of them I would almost consider strong ties. About 100 of them I think that I would pick up the phone right now and call if I need to. About 50 of those I have met in person.

But those people are the people who, not only do I contact them via Twitter, but I probably have a lot of their cell phone numbers and I follow their blogs. I know where they work and I could email them if I had to and probably a lot of those probably half that 100 I know in-person and met at this point (Charles).

During the interview, Charles reflected on his interaction with others within his PLN and understood his experience of collaborating with others as leading to stronger relationships, particularly with those he met at conferences and educational events. Charles stated, "There has been a number of people who I have 'met' on Twitter…met in person. It's always been rewarding to do that because they are great people and you kind of validate how great these people seem...in real life too."

Charles admitted that some PLN members generated a greater bond than others. In such cases, these individuals became a "strong tie" and grew into a stronger relationship than others. "I meet a lot of people…but it is kind of the strong ties…that for one reason or another, you connect with a little bit more and you feel a bond with," Charles said.

Charles shared insight on how his family members poked fun at him for interacting and physically engaging with members from his Twitter PLN, as referenced in the following excerpt:

My wife and daughter kind of make fun of me. My daughter would say…who are you going to the game with? I went to the Bears [Chicago Bears] game about a month ago…and I told her I was going to the game and she said, "who with?" My answer always seems to be Twitter friends, people that I have met on Twitter.

During the interview, I was able to detect high satisfaction and tremendous pride in the relationships forged with certain PLN members. Charles shared a story of how he traveled to attend an awards ceremony honoring a PLN member, entirely paid on his own. During the trip, he had a chance to meet several other PLN members he had not previously

met. Experiences like this served as powerful examples of how Charles benefited from the acquisition and development of personal relationships through social networking and PLN participation.

Charles told a story about how a member of his PLN was willing to provide assistance for his daughter, who at the time was a college freshman attending college in Philadelphia.

> One of them I met, he is about 30 minutes from my daughter's college in Pennsylvania and I'm 1,000 miles away. And her freshman year in college she was struggling a little bit. I met him later, in-person… he gave me a cell phone number and said, "if she ever has any problem at all, I'm a dad too and I'm available 24/7 give her my cell phone number, she can call me anytime for any reason and I will be there in a minute to help her out" (Charles).

Emergent theme: Surrounded by awesome people – Edward. Analysis of my meaning units assigned to Edward's interview transcript found a noticeable emphasis on Edward's desire to be surrounded by awesome people, which became the title of this emergent theme. While Edward predominately spoke of his quest to improve others, he also indicated his interest in surrounding himself with "really good people." He stated, "I just try to surround myself with really good people, but I also really surround myself with people that are really talented, which is what I do in my own school." Edward explained further, "So what I try to do is surround myself…[with] people that I can take home and my mother would be really proud of and say, 'this young man is really awesome, this young lady is really awesome.'"

Edward explained what he considered to be of importance when building and growing his PLN. Ideally, he wanted to build a "professional team, surround myself with people who have the same qualities…same values, the same attributes." Furthermore,

individuals that were "very good at what they do, or are much better at what they do than I do" made for prime targets with whom he would surround himself.

During the interview, I asked questions that pushed Edward to consider how a PLN changed how he viewed himself learning with others. Edward shared how he came to understand how vital it was for him to be surrounded with people of divergent viewpoints and beliefs. Ultimately, Edward believed "It is not about me; it is greater than me. It is about connecting others with other people because the more you can do that…in our profession…it is a really positive thing."

Edward admitted to understanding his experience with a PLN as energizing and motivating him with great content by great educators.

> I would say that at this point [PLN] is actually a part of my life on a daily basis. It is something that I typically start my day with because for me again it kind of puts me in a mind frame and a mindset that it gets me ready to go through the day. It actually energizes me a little, it gives me quick opportunities. So when I say that it is like for me it begins my day of quickly maybe going through and I depends if it is a weekday like a school day like right now it just means just quickly going through a thread maybe I'm pulling up sites or I'm pulling up some sort of resource so to just kind of give me a little bit of motivation to start my day (Edward).

The connections that Edward created with members of his PLN provided him with the energy and fuel to remain motivated within the profession. Edward admitted to being easily inspired by those full of optimism and fervor. He shared, "I can go to a keynote and I can just walk out there just all jerked up. I'm very easily inspired by people who are doing really great things."

I asked Edward several questions about what he considered an effective resource for his PLN or what he would consider eliminating. This seemed to create some unease, as I did not believe that Edward was comfortable or had much experience with eliminating people

from his PLN. After discourse on this topic, Edward seemed to derive meaning from the reasons he would consider eliminating a resource. Edward did not merely rid people from his PLN, although he would minimize their overall connection. He would also be willing to continue the line of assistance, as he described in the following statement:

> So I don't…say it is something I'm going to get rid of; I don't mean it that way. It is more about ...you don't necessarily feel connected with somebody and it is not that I'm removing them from my PLN, I'm just not as active with them like maybe I am with others. You are not going to connect with every individual you come across; you are not going to have this great feeling of connectedness. However, it does not mean that they are not good people; it does not mean you would support and help them (Edward).

Edward also stated he would not eliminate a person from his PLN for not contributing effective content at a moment in time, knowing their future contributions might be highly beneficial to him and others. Edward believed that most people had something to offer. He stated, "I also don't try to exclude too many people because I just believe that everybody has something really good to offer." He believed that while a PLN member might not contribute to his overall informal learning at a single moment in time, the prospect of future value was worth holding onto that member.

After further reflection during the interview, Edward indicated a lack of comfort with those that seemed to "stir the pot" and create confrontation for others. "There are also some people who put stuff on social media that make me a little nervous. I'm not sure if they know what the venue is, or that it isn't very professional," Edward said. Ultimately, he was not interested in engaging with PLN members for the purpose of debate or arguing ideas.

Ultimately, those that created a negative and disrespectful atmosphere within a PLN would be considered for elimination or withdrawal, because "they don't match up with the ideal that meets my standard."

Emergent theme: Prevented the plateau – Frank. After analysis of my meaning units assigned to portions of Frank's interview transcript, I recognized several interpretations that indicated social networking and participation in a PLN might have prevented a learning plateau or "cognitive letdown" that he previously experienced. Only a few years ago, Frank spoke of being jaded with learning and was not pleased with where his learning journey had taken him.

Frank attributed social networking and his PLN for avoiding a potential plateau and instilling new found optimism for learning. According to Frank, "I have benefited tremendously from the people that I have met, that have motivated me, and resources that I have found. I cannot imagine being in any other profession because of the way that social media has shaped education." After discovering social networking tools and building his personal learning network, Frank began to recognize the positive impact on his informal learning and professional development. "So it has positively impacted my effectiveness and my ability to grow as a professional without a doubt," Frank said.

Social networking tools also changed how Frank acquired information. During our interview, Frank explained how he understood himself now seeking information. In regard to how he retrieved news, Frank shared, "I really don't go out to news websites anymore. I just subscribe to their Twitter feeds. The local channel nine news station…I just read their stories that they tweet out." Frank described how his PLN changed how he retrieved information, saying, "Now I am able to more quickly access things that I was able to find before, and more efficiently find it, and find more of it."

Frank came to view his learning and collaboration with others as being in the middle of a personal learning network, with extensions of his knowledge and collaboration

branching out to all those surrounding him. Frank stated, "Like a mind mapping tool, I see myself in the middle different people in different medium mapping out. That would describe my personal learning network as the people, places, and the things that help me grow as a professional."

Frank's understanding of a PLN was that it could help bring information and resources to him effectively and efficiently. He described how he once used social networking tools inefficiently, but came to rely on his PLN for more effective dissemination of information. When Frank first began using Twitter, he described it feeling very "intimate" since he followed a small, select number of people. During such times, he ardently followed his Twitter feed and strove not to miss a single Twitter post. With time, Frank spoke of how items became easily accessible since others were likely to republish and repost digital content. He explained, "Things end up boomeranging back when someone else just says it, or someone else brings it up I can find out in another medium or in another way." Additionally, Frank was no longer restricted to only retrieving news through a desktop or laptop computer. "Now I have more devices to read. Back in 2009, I don't think I had a smart phone. But now it is on the phone, iPad, tablet, smartphone, and laptop. All the same information, just different ways of reading it," Frank stated.

Frank was attempting to strengthen his professional relationships via social networking tools. Frank spoke of how he was attempting to transition online relationships into more personal connections. "Whether it is me at a conference, 'hey you know I have chatted with you on Twitter, I have seen you,' I have tried not to shy away from introducing myself to someone and vice versa," Frank said. As the education field has harnessed Twitter for educational chat purposes, Frank perceived less "awkwardness" in online communication

with others. He explained, "For whatever reason because there is an educational spin on it and kind of a professional and personal interest there, which tends to become a face to face relationship."

Frank stated that he was trying to make his professional connections more personal by leveraging social networking tools.

> Here in Iowa I know that there is a strong presence on Twitter for education folks and I have tried to keep track of as many people as I can. Because there is a strong Iowa context in my mind, it has helped to make this qualified, anonymous, ambiguous chatting online more personal because there is a chance that I will see or connect with that person at some conference or at some experience as a fellow Iowa educator (Frank).

I asked Frank to reflect on who he sought resources from at his work site including co-workers; PLN members with whom he might not have direct contact; or weak ties. Frank drew meaning from his collaborative experiences as demonstrating a preference for weak ties over on-site colleagues and strong ties. Frank stated, "I would choose to work with people outside of my local context because I feel like they have many ideas. I think in our district, I get stuck in a bubble doing, knowing, and talking about the same things."

This seemed to contradict his statement about building a strong relationship and having greater trust with strong, close ties over weak ties. Frank indicated he would prefer to communicate with "those people that are close and I sometimes shy away from deep… conversations with those that are far away because I feel like sometimes, often times I miss out on contact." He continued, "I guess the one comment that I would make is that someone that I would feel close to is someone that I have met or someone that I have had a longer relationship that I have not met."

Frank suggested that he would interact more with close ties since it might be too difficult to generate deep, meaningful conversations in only 140 character limitations.

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I would probably shy away from the conversations more for people that are far away. I'm probably more likely to ask questions, low level questions to those people where as more likely to be more direct and more in-depth questions with people that I feel closer to (Frank).

Frank was definitely open and willing to purge resources and people from his PLN. Ultimately, the decision to eliminate resources was based on relevancy, effectiveness, and duplication. Frank shared, "Sometime I stop following a resource a reader has sent me because the information is not relevant any more or because the information is not coming out of that source anymore."

Superordinate three: Privacy should not be the priority. While I did not come into this research study with an assumption or hypothesis of what participants would regard as their understanding and experience of digital privacy, I was slightly surprised by the findings. This superordinate was titled "Privacy Should Not be the Priority," which was derived from the vivid meaning themes and conceptual units that were assigned to participants' interview data.

All six participants emphatically declared that privacy was not necessarily a necessity at all. The experiences and understanding that participations expounded upon made this clear. Amy noted that her perception of privacy derived from her background of limited privacy and current school administrator position. She fundamentally did not believe administrators should expect privacy since it was a position that served the public. Additionally, Amy revealed that some PLN colleagues had become personal friends, blurring boundaries of personal and professional contacts.

I learned that Bob perceived privacy as a concept that one should not count on to exist. Based on his perception of privacy, privacy management strategies were left to the discloser or presenter. Believing that information could not be restricted from being amplified and circulated, privacy was left entirely to the presenter to negotiate. Such sentiments were similar

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to Charles, who only experienced positive outcomes through his meetings with PLN members at in-person events. Having never experienced negative encounters through digital collaboration or social networking, Charles admitted to having no privacy concerns.

Through the interviews, I began to feel as though David and Edward felt that the exploration of privacy by school administrators participating in a PLN was misguided. They were so passionate and insistent that administrators should be sharing information with others, making one slightly vulnerable and allowing others to learn collectively, that privacy should not be considered. Edward wanted people to know him and was not concerned with privacy.

Frank stated he thought about privacy less than one percent of the time, if at all. Furthermore, he believed that administrators engaging in PLN collaboration should not be private so others could learn about the role of school administration. Ultimately, Frank did not believe privacy exists and therefore that it should not even be considered.

As I analyzed my interpretations from the data of the participants, I felt very confident that this was a strong connection amongst the conceptual units and emerging themes. The following emerging themes provided further detail of this superordinate theme, as told through the participants' vivid statements and words.

Emergent theme: Privacy is not a necessity – Amy. This emergent, titled "Privacy is Not a Necessity," is based upon the various meaning themes I assigned to the interview transcripts. What I detected through my analysis was that Amy encountered very little privacy in her personal and professional life. This limited experience with privacy was likely the reason for her reservations regarding believing school administrators should instill privacy boundaries.

Amy defined privacy as being the things that one should not share. Amy explained, "Things you don't want to share the things that you want to keep close that you want to keep to yourself the things that you don't want to share."

Amy did not believe the public administrative role should be private; people had a right to know what she was doing as an administrator.

> I do think there is a professional and personal line. I don't believe that any of your professional life can be private if you are in a public school. And I don't believe that as a public school administrator that I have the right to keep my professional life private. The people that I serve here at the school – my community and my school board and the people that employ me, I think that they have the right to what I am doing as an administrator (Amy).

As the interview progressed, I encouraged Amy to reflect on what her philosophy of privacy was based upon. Amy understood her experience with privacy as being limited, perhaps due to a more public identity through collegiate athletics and her previous and current assignments as a school administrator. She stated, "I have not had very much of a private life so I don't really feel like privacy is something that I have experienced. To be really honest, that is not something that freaks me out."

Amy's participation with social networking tools and participation in a PLN did not change her perception of privacy. She adamantly believed her role was to be child-focused and that privacy should not be the priority.

> I don't think it has really changed a lot. I think that my perception, as far as how important privacy is, I don't think it is a necessity. I think that you can have your private life but you can also be a public figure and do what is best for kids by sharing with other people. I don't think that people need to be so worried about putting oneself out there. We are about all kids and I think that that is what is most important (Amy).

Amy indicated that boundaries became blurred. She did cautiously allow some personal information to be disclosed to professional contacts that became personal friends. She noted,

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"A lot of people notice that I did not share a lot of my private life through my Twitter and that is probably why so many people started requesting me to be their friend on Facebook." In an effort to cultivate these growing personal relationships, Amy indicated feeling compelled to disclose personal information and aspects of her private life. "People would probably see me as probably ninety-five to ninety-eight percent professional online, with a picture once every great while."

Emergent theme: Can't count on privacy – Bob. This emergent theme, titled "Can't Count on Privacy," is based upon Bob's perception and belief of privacy in today's society. Bob wholeheartedly believed that information posted online would be shared and copied repeatedly, leaving a content creator with little control or privacy over the information. To Bob, this left the burden of privacy to the creator. He said, "I think you have to be pretty purposeful on what you put online and accept that anything you say…will be shared. I think privacy is on the person speaking…whatever you are saying you are willing to have out there."

Bob shared how he discovered the opportunity to participate in this research study from others Tweeting and Retweeting information about the study. This proved his point about amplification of information, which lessened control from the content creator. "I wasn't actually following the hashtag. Your tweet was Retweeted by someone who is on my first list. I don't remember who it was…someone…had Retweeted your Tweet for participants and it got my attention," Bob explained.

As I asked Bob questions about his experiences and understanding of privacy with his own social networking activity, it became clear that Bob had almost conceded privacy. In the interview, he stated, "privacy…you can't count on it anymore." He continued, "Privacy is

kind of gone and because people put so much online, that you can't expect that not to be

seen. There is no way to really restrict things you say, or do, to stop from getting out there."

***Emergent theme: Doesn't worry about privacy – Charles*.** This particular emergent

theme lacked the breadth and vast details compared to other emerging themes. However,

enough data existed to formulate an emergent theme titled "Doesn't worry about privacy," as

supported by the following statements made by Charles.

Overall, Charles did not worry about privacy, nor did he take much time to think

about it. During the interview, Charles reflected on his perception of privacy and his

understanding and meaning of privacy. He defined privacy as being "All about trust and

trusting what you are sharing. You are sharing in good faith and what you are stealing or

taking from other people; you are stealing and taking in good faith." Specifically with regard

to social networking, Charles believed that professional social networking was a "Safe place

in which to share, knowing that the PLN members that you share with will respect your

professional presence and respect you as a person. So it just means…open sharing, with

mutual respect, and understanding of being appropriate."

Charles did not encounter any negative experiences with social networking, blurred

boundaries, or privacy regulation issues. As such, he had a very positive perception and

understanding of privacy.

> When I started doing Twitter I thought about it a little bit, and it kind of
> worries you, but then you got to know these people, and I don't know, I guess
> your experience drives that a little bit and my experience has been that
> nothing bad has ever happened to me via Twitter. The worst that has happened
> is that once in a while you get some sort of spam in your DM, right? I have
> never met a person who had any ill-will towards me on Twitter or intended
> any harm. So over time your experience just keeps telling you that these
> people are all in it for the same reason that you are, which is because they are
> good solid professionals who want to grow and connect in a professional way.
> I guess my experience leads me to believe that I don't have to worry about it

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as much as I used to. So, I don't think about it very much. If anything ever happened to me as a result of it then I would think about it a little bit more (Charles).

Emergent theme: Privacy might equal hiding – David. Similar to the emerging theme of Charles, the meaning theme for David was not as vast. But because of the poignant language regarding David's overall understanding and experience with privacy, it was important to highlight this as an emergent theme.

David defined privacy as "What you do and do not want to disclose about yourself." As a public school administrator, David believed that the role should be public. His perception of privacy for a public school administrator was summarized by stating that the more one kept private, perhaps the more one was trying to hide. "Professionally, privacy is almost nonexistent anymore. I mean, the more you keep private, to me at least, in education the more you are trying to hide something and I don't think that sends a positive or even appropriate message," David said.

David reflected on his notion of privacy and indicated there was a misconception concerning privacy in one's PLN. He stated that because individuals do not divulge personal identification, there is not a violation of privacy. Instead, they are merely connecting and sharing with others. David stated, "The biggest thing in privacy, I think it is a misconception in terms of the privacy thing. Anybody that I know in my PLN, they are not opening their world to everybody that wants to be in it."

David expanded his perception of privacy further:

> Whoever wants to join me on Twitter and ask me a question on Twitter, fire away. I am not going to share my kid's social security number, obviously. It is not that way. Open yourself up to connect with other educators and other people that share your similar beliefs. Connect with people that may challenge you. You are on an online world, so you got to be cognizant of people trying to hack into you and that kind of thing. So maintain privacy in terms of

password, and all of that stuff. Ask yourself the question every day, "Would you want your son on the front page of the paper with your name by it and our picture?" And, if you can attest to that and you will stand by that, then you are going to keep yourself in a straight path and clear of danger (David).

David did believe that privacy limitations should be set on one's personal life, but also believed that his obligation was to maintain open channels for communication and collaboration so others could benefit from information and content. David spoke about how he used to maintain tight security settings on his social networking accounts. He said, "When I first started Twitter I had my profile locked. I opened my Twitter account and it has been unbelievable, the connections." David continued to share resources and information, fueled by the "friends… or even random people that just come across your Twitter feed and comment on your article or blog post." Ultimately, he perceived sharing information with others, including strangers, as "doing a pretty good cause."

Emergent theme: To grow online, cannot be hidden – Edward. For this emergent theme, I focused on the combination of meaning units from my interpretation of Edward's perception toward privacy – if a person or community was to grow through online collaboration, it could not be hidden. Edward did not dwell on his digital footprint or seem concerned about privacy. Edward said, "I mean, do I think about my digital footprints? Yes, probably every now and then. But, it is not something I dwell over. I think subconsciously I already know that. I don't have to dwell or think about it."

Edward understood privacy as not being a fundamental part of his digital collaboration with others. Instead, Edward focused on establishing connections with others so they could access his resources and understand his full passion toward education. To foster connections, he wanted his passions and information to be known. According to Edward, "I have always been one who didn't get too worried about the privacy part of people

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knowing who I was or what I was all about." Edward believed that to help others within his

network learn, they must know personal facets of Edward's personal and professional life.

> In other words, I want people to know what my passions are, I want people to know what is important to me, what I value; I want people to know what my non-negotiables are. There are certain things that I want to share out with people because it does give people at least a little bit of an idea of what I represent and who I am and what I'm all about (Edward).

Edward came to understand his sense of online privacy as deliberately disclosing

information that showed his vulnerability to others. Ultimately, he believed that as others

detected his shortcomings and desires to learn, they would also develop personally and

professionally. "The way I kind of define the whole privacy…you have to make yourself a

little bit vulnerable sometimes because I think by making yourself vulnerable there is

potential for growth," Edward stated.

He minimized the importance of his online privacy for the potential of self-growth and

improvement, saying "At some point I saw a benefit and there was something that either

inspired me, something I enjoyed, something that brought happiness to me, something that

challenged me, something that helped me get better and help others get better."

Edward knew that by promoting a public identity and hiding little, the potential for trust

from others was increased.

> I also recognize that the whole idea of putting yourself out there publically is a good thing because it also protects me, because I know that what I put out there it is out there for everyone to see. So I'm also not here to hide anything; what you see is what you get (Edward).

>>> ***Emergent theme: Privacy less than one percent of the time – Frank*.** This emergent

theme highlights how Frank's perception of privacy altered over time. Through the reflection

and inspection process of the interview, Frank said that he basically did not think about

privacy at all, or if so, less than one percent of the time. He stated, "Initially, I didn't share

anything about my personal life… it was all professional. But now I have evolved. How much do I think about my own digital privacy? Less than one percent of the time."

During the interview, I asked questions to have Frank reflect on and understand his experiences with privacy. During our discourse, he defined privacy as the type of information a person would need to know to take advantage of him:

> My perception of privacy is…what information would someone need to know about me if they really wanted to take advantage of me? There are things like social security numbers and passwords and even sometimes birthdays, usernames, passwords, and other secret information that I might have that will show up in a password reset type situation. Some other secret information that they would need to steal my identity; so that is one aspect of privacy, making sure that your identity was intact (Frank).

But the concept of privacy shifted as Frank focused more on how the interactions, connections, and disclosure with others online could benefit the education profession. Frank believed that by being candid and sharing details of a school administrator's job, the public could gain a better understanding of the overall role.

> I think we have an opportunity to tell that story in a way that we want to. And I forget on my blog one day, this might have been a year ago or so, the entire day I would just use my smart phone every hour or 15 minutes I would just send like a 'video selfie' or a video of what I was doing and put that all together like a 5 minute video and blog post or something along the lines of what the heck does a central office administrator do all day. And so I just created a little documentary. I think that we have an opportunity to share through social media and not only the story of the positive things that keep going on but also, to keep to answer the unknown question of what do we do all day (Frank).

Because of this motive of disclosure and sharing information, he did not feel bad sharing information. He saw this public release of information as highly beneficial to help inform others. "So I don't feel bad and I try not to feel bad about sharing. We have to share…so that people know what we are doing but not so much that people know everything about us," Frank said.

The interview discussion transitioned into the potential limitations educators should

consider when sharing information online. Frank believed that all educators should have a code

of ethics to determine what should and should not be shared online. The following excerpt

describes his notion of this code of ethics, particularly as social networking posts could be

related to other stakeholders within the school:

> I read about a special education teacher on the national news a while back;
> that she posted something on her Facebook inappropriately that said
> something along the lines of "Heading to an IEP meeting, crazy parents, kids
> a mess but I love them" or something like that that. Somebody found out
> whatever happened…she was disciplined. But, how much should we share
> about what we are doing, and what we learn on the job, is a professional side
> of privacy that I struggle with. I see myself and others using social media top
> promote what is going on in their school. But there is also the privacy that we
> have to respect of those that are in the school (Frank).

Frank shared his understanding of a negative encounter he experienced utilizing

social networking tools. Ultimately, he became more aware of his disclosure and online

posting behaviors, which contradicted his early sentiments of thinking less than one percent

of the time about privacy. The following excerpt shares his negative experience:

> I would say that the times that I'm most conscientious about it, probably are
> now about how much personal things am I sharing between the hours of 8 and
> 4. So I try to share professional thing through all my social mediums between
> 8 and 4, even if I'm taking a half personal day or something like that (Frank).

Analysis of Participants' Written Documents

The second data collection method used in this study was a document analysis.

According to Patton (2002), "records, documents, artifacts, and archives…constitute a

particularly rich source of information about many organizations and programs" (p. 293).

Bodgan and Biklen (2003) described documents as artifacts collected by the researcher,

which might include those of which are personal, an organization's official documentation,

or cultural documents that intended to "entertain, persuade, and enlighten" a mass audience (p. 64).

For the purpose of data analysis with documents, I asked each participant to create a written document that explained their use of social networking tools as well as their experience having participated in a PLN. Creswell (2003) asserted that documents are important, in that individuals who have prepared documents purposely cited data representing the language of their participants. Through the written documents, I wanted the participants to have another avenue through which to share their experience and understanding of what it meant to use social networking tools as they participated in a PLN. Though the written documents' data were analyzed separately, it was used to link connections to other data sources from this study.

Originally, each participant was asked to create their respective written document prior to the semi-structured interview so that I could design questions around their responses. However, not all participants submitted their written documents in advance; some did not submit their document until approximately two weeks after the interview had concluded. Each participant did eventually submit a document, but these varied in length and purpose. Each participant freely wrote a document that shared a personal glimpse of their social networking within a PLN – either how, and why, they first started or to celebrate their accomplishments. The shortest was approximately a half-page, single-spaced. The longest document was approximately one-and-a-half pages, single-spaced.

Upon analyzing the participants' documents, several interesting patterns quickly emerged regarding their experience with social networking and PLN. Classifications of the participants' statements were easily separated into distinctive descriptions and themes.

Ultimately, the participants' statements were broken into four themes, as seen in Table 4 – (1) Methods of Participating in a PLN; (2) Past Challenges and Hurdles Experienced by Participants Prior to Participating in a PLN; (3) PLN Activity Influenced by Thought-Leaders, Colleagues, Epiphany Moments, and by Positive Early Experiences; and (4) Reasons for Participating in a PLN; Seek Resources for Improvement of Self and Others.

For the first theme – Methods of Participating in a PLN – participants' statements were designated three interpretive codes. Bogdan and Biklen (2007) cited several methods of coding and creating codes. According to the authors, "…after you have developed your coding categories, make a list and assign each one an abbreviation." The first interpretive code was "Blogging Experience." The second interpretive code was "Engage with PLN Members." The third interpretive code was "Twitter Activity."

As I read through participants' documents, I was able to identify statements that spoke of previous experiences with educational blogging and statements about how they hoped to extend their PLN activity to include more frequent blogging. Charles had aspirations of growing his PLN to carry on the sharing and taking. Charles stated, "I hope to grow my PLN, become more of a blogger and hope I can continue to both share my own learning while learning from those in my PLN." David was fueled by the realization that thousands of readers had found a blog entry he created. "I started a blog this past summer and have had almost 3,000 views from all over the world. I actually come across people that tell me they follow my blog and are inspired by my ideas and passion," David wrote.

Overall, participants dedicated their written documents to describing the many benefits and positive impacts their experience with social networking and PLN participation spawned. The topic of engagement and digital collaboration with others was recurring. Amy

shared, "I am constantly accessing the "Genius" of the crowd to help me and my students and faculty become better." David wrote about how his connections have extended beyond his workplace. According to David's document, "I have made many powerful connections and my resources and colleagues are no longer limited to the walls of the high school where I work." Edward shared a similar view of how social networking and PLN eliminated the sensation of alienation or working independently. He wrote, "It has allowed me to expand my circle outside our organization…in order to do the best work possible for our students, staff, and community and who understand the complexities of the principalship." Edward described how principalship was a "lonely profession" that often only principals seemed to understand.

Table 4

Document analysis with interpretive themes from participants' written documents

Methods of Participating in a PLN	Past Challenges and Hurdles Experienced by Participants Prior to Participating in a PLN	PLN Activity Influenced by Thought-Leaders, Colleagues, Epiphany Moments, and by Positive Early Experiences	Reasons for Participating in a PLN; Seek Resources for Improvement of Self and Others
Blogging Experience	Negative Personal Emotions	Colleagues' Influence	Help Faculty Grow and Improve
Engage with PLN Members	PLN Challenges	Positive Personal Experiences	Help Students Improve and Grow
Twitter Activity		Thought-Leaders' Positive Influence	Positive Educational Benefits
			Self-Improvement

Participants dedicated aspects of their written document to addressing their evolution with social networking tools or how they utilized Twitter within their PLN activity. Bob's PLN collaboration with other school administrators began with a Twitter chat session. Bob captured the roots of his PLN activity in his written document by sharing how he "…started connecting with other principals through things like #cpchat [connected principals chat]." David also started connecting with other educators through his Twitter connections. According to David, "I attended a conference in Texas with over 10,000 educators from across the country and I learned more from the impromptu 'tweet-ups,' (a meet up of twitter followers so you can put a face with a name) than I did in 3 days of attending sessions." Bob became further engaged after he "began to notice at conferences and meetings that others were tweeting and using the hashtag of the event to share what they were learning in real time." Frank gained satisfaction knowing that his PLN members wanted to know more from him than just information and knowledge. He liked the personal aspect of Twitter that allowed him to share personal aspects of his life with his PLN. Frank shared, "I could learn a lot about a person's thoughts on education through their 140 character comments...while at the same time not know much about them *as a person*."

The following excerpt provides more details about Frank's understanding of using Twitter to disclose personal information:

> There's obviously a fine line between sharing personal information online, but I am no longer as bashful about tweeting a picture of my son...knowing that some of my "education Twitter friends" care as much about my family as they do my thoughts on technology or grading (Frank's written document).

For the second theme – Past Challenges and Hurdles Experienced by Participants Prior to Participating in a PLN – participants' statements were designated two interpretive

codes. The first interpretive code was "Negative Personal Emotions." The second interpretive code was "PLN Challenges."

I created an interpretive code titled "Negative Personal Emotions" to classify data from written documents that address participants' negative sentiments about aspects of their social networking or PLN. Overall, there was not much negativity embedded in participants' documents. They all seemed to value and praise their experiences with social networking, PLN, and privacy. The few statements that were identified as negative seemed to focus on participants' early beginnings with social networking and PLN participation.

Some participants were not fully aware of what social networking and a PLN could do for them, how to begin, or the potential benefits. Bob wrote, "I didn't start out knowing what it would do for me." David was more concerned with publishing information to an audience he did not know. "I began with a lot of apprehension as I was worried about sharing my ideas with strangers," David stated. He also shared that he "was worried about their perceptions and possible ridicule of my thoughts/ideas." Amy captured in her written document that she knew her PLN was in its infant stages compared to so many other thought-leaders. "I was NOWHERE near where I needed to be as far as my #PLN (Professional Learning Network) through social media," Amy declared.

For the third theme – PLN Activity Influenced by Thought-Leaders, Colleagues, Epiphany Moments, and by Positive Early Experiences – participants' statements were designated three interpretive codes. The first interpretive code was "Colleagues' Influence." The second interpretive code was "Positive Personal Experiences." The third interpretive code was "Thought-Leaders' Positive Influence."

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Participants shared information about how they first became interested in, or introduced to, the idea of using social networking tools to engage in PLN activity. Charles and David were both influenced by colleagues, seeing first-hand the positive results it seemed to yield their colleagues. Charles described how a colleague seemed to be the point-person by colleagues, which he attributed to her social networking activity. He wrote, "She seemed to know more than the rest of us in the organization and had become a "go to" person for almost everyone in the organization when they had a question about some aspect of our profession." This inspired Charles to consider utilizing social networking and building a PLN.

David described how he viewed the positive impacts that his supervisors and colleagues have experienced. According to David, "I watched the phenomenal relationships develop between my bosses and those that participated in social media (namely Twitter)."

Since participating, Bob felt more comfortable using social networking tools and understood the potential positive outcomes for others. As a result, he felt it was "definitely easier for me as a principal to go to another principal and say hey you should try Twitter."

The continued use of social networking within one's PLN could be attributed to the success and positive benefits bestowed upon the participants. Several participants were not shy with sharing their successes. Amy felt instant success when she grew her Twitter followers from a meager number to over a hundred, instantly providing her with the inspiration needed to carry forward. "I challenged myself to jump on Twitter, get dedicated and had AT LEAST 100 followers before EduCon in January 2013.....and I did it! I was so proud of that 100 mark....and from EduCon on I never looked back," Amy wrote.

Other participants shared the successful outcomes they experienced through social networking and PLN participation. Charles reported that having a PLN had "transformed my life as an educator." Edward cited the value of his PLN participation in allowing him to teach again, which he said he missed as a practicing administrator. Edward shared, "I have learned to contribute beyond something that is greater than myself, provided an opportunity to teach again, and connect with others who understand my world. In short, it has given me hope and a renewed sense of purpose."

A large draw for participants' beginnings with social networking and PLN activity was based on their early admiration for other thought-leaders and industry experts. Through social networking tools, participants were able to penetrate these circles, establish relationships, and engage in digital collaboration. Amy was inspired to connect with several thought-leaders and attributed her persistence with PLN and social networking on their account. As evidenced in the following statements, participants believed their early following and connection with education leaders had a direct influence on their PLN roots:

> "NASSP #Ignite13 Conference in Washington, DC where I became connected with Jimmy Casas, Eric Sheninger, Patrick Larkin & Todd Whitaker; 4 of the most influential people in my educational journey. With their encouragement and positive "push" I have found myself doing things I would have never seen myself doing in 10 years, much less 9 months! (Amy's written document).

> I started following some of the big names like Gary S., George Couros, Eric Sheninger, and a few other nationally known educators and publications (Bob's written document).

For the fourth theme – Reasons for Participating in a PLN; Seek Resources for Improvement of Self and Others – participants' statements were designated four interpretive codes. The first interpretive code was "Help Faculty Grow and Improve." The second

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interpretive code was "Help Students Improve and Grow." The third interpretive code was "Positive Educational Benefits." The fourth interpretive code was "Self-Improvement."

As a main motive for engaging in PLN activity via social networking tools, participants like Amy and Edward wanted to enhance the skills of their students and staff. This is an example of the data representing the interpretive code "Help Faculty Grow and Improve." Amy stated, "I am constantly accessing the "Genius" of the crowd to help me and my students and faculty become better." Edward also perceived his participation in a PLN as an invaluable opportunity to repay the profession. He stated, "I feel like I have been able to give back to this profession, a profession which has been so good to me over the last twenty plus years."

Similar to the participants' interviews, I read many statements about the positive educational benefits social networking and PLN have had on their personal and professional lives. Amy shared, "This crazy journey has done nothing but MAKE ME BETTER, Challenge me, and renew my passion for Education [*sic*]." Bob had no regrets about starting up with Twitter, while Charles said, "I have no regrets at all except that wish I had time to devote more energy to my PLN and online professional growth." David viewed the benefit of PLN as allowing him to branch out beyond a school's walls. "I have made many powerful connections and my resources and colleagues are no longer limited to the walls of the high school where I work," he shared.

In addition to benefiting and bettering others, participants placed a high value on their PLN engagement to their own self-improvement. For some, it changed how they learned and managed. Amy wrote, "Learning from other on Twitter has made me a much better educator and passionate lead learner." Through the interview data collection and interview and

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document analysis processes, I detected that Edward was a "natural" teacher. He was not satisfied unless he was in a mode of being able to teach others, as he stated in his written document. The transition out of the classroom and into administration left a slight void. But through his social networking and PLN engagement, he felt as though he could contribute as an educator. Edward revealed, "It has given me the opportunity to expand my knowledge which I hope will lead to more opportunities to teach. In many ways, it has been the hardest transition for me because I have always seen myself as a teacher."

Table 5

Document analysis with interpretive theme frequency count

Theme & Interpretive Theme	Amy	Bob	Charles	David	Edward	Frank
PLN Participation Methods	5	8	8	10	3	5
PLN Challenges	1	2		2		
PLN Start Influenced by Others	5	10	6	8	1	7
PLN Started for Resource & Self-Help	8	3	3	2	8	

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According to the document analysis, participants wrote about two themes the most: (1) the methods of participating in a PLN and (2) PLN Activity Influenced by Thought-Leaders, Colleagues, Epiphany Moments, and by Positive Early Experiences. Within both these themes, Edward wrote the least. He dedicated his narrative to explaining how his motive of participating in a PLN was to improve himself and others, which was not of significance to most of the other participants. Edward's narrative theme of seeking self-improvement and helping others grow could be connected to the interpretive phenomenological analysis of his interview, which centered on building a community, surrounding himself with awesome people, and growing online.

Analysis of Participants' Tweets

The third data collection method used in this study was a document analysis of participants' Tweets. For the purpose of this study, I collected fifty Tweets from each participant, posted between November 15 and December 15, 2013. Each Tweet could only contain a total of 140 characters and might also contain hashtags (words or phrase written with the symbol "#" positioned at the front) or hyperlinks to internet sources. Each Tweet was then analyzed based upon the enumerative and thematic coding guide, available in the appendix. In this chapter's findings, examples of participants' Tweets have been provided; however, they have been modified in a manner to ensure participants' confidentiality can be maintained. If the Tweets were to be published verbatim, a search engine query could easily trace the originating source back to the participants' Twitter home pages. As I modified words, I made sure to maintain context for the reader to understand how it was coded and interpreted the way it was. Additionally, specific Twitter handles that used names were assigned pseudonyms, again to preserve confidentiality of participants.

The intent of analyzing participants' Tweets was to gain a better understanding of how they utilized a social networking tool such as Twitter. The data was then analyzed to detect connections to other themes from participants' written story documents and interview.

Upon document analysis of participants' Tweets, several themes quickly emerged. Participants' Tweets were easily separated into distinctive descriptions and themes. My analysis found four themes, as seen in Table 6: (1) PLN Participation; (2) Informal Conversations; (3) Formal Conversations; and (4) Personal Disclosure.

Table 6

Document analysis with interpretive themes from Tweets

PLN Participation	Informal Conversation Topic	Formal Conversation Topic	Personal Disclosure Topic
PLN Branding and Promoting	Food	Education	Career
PLN Collaboration	Humor	Organization	Family
PLN Participation Shoutout	News and Current Events	Promotion	Location
Sharing Blog or Article	Pop Culture	Work	Personal Info
Sharing Conference Update	Random		Photos
Sharing Media	Sports		School
Sharing Resources	Technology		
Twitter Chat Sessions	Informal Conversation Using Hashtags		
	Weather		

For the first theme – PLN Participation – participants' Tweets were assigned eight interpretive codes. These included: (1) PLN Branding and Promoting; (2) PLN Collaboration; (3) PLN Participation Shoutout; (4) Sharing Blog or Article; (5) Sharing Conference Updates; (6) Sharing Media; (7) Sharing Resources; and (8) Twitter Chat Sessions.

Participants' overwhelmingly used Twitter for the purpose of engaging with members within their PLN or to digitally collaborate with colleagues around the globe. Most of the Tweets seemed to be directed to another person or persons and generally contained a hyperlink to an article, website, or resource.

Some participants Tweeted messages that were intended to be a promotion for an upcoming Twitter chat session event. One such example of the use of promotion or branding an event is evidenced in this Tweet:

> Join us for #XXedchat Sunday at 8 CST and discuss "Improving Schools Through the Use of Surveys" @Twitteruser @Twitteruser #XXchat (Edward, Tweet)

In some cases, participants engaged in a two-way dialogue with others, assumed to be those within their PLN or with whom they regularly collaborated and interacted via Twitter, as evidenced in the following Tweet:

> @Twitteruser that we def do! Your insight & guidance this far have been essential to me and my progression as an admin. Thank you! (David Tweet)

Some participants wanted to help promote and market those within their PLN and did so through "shoutouts" and using hashtags intended to encourage others to follow their favorites, such as:

> Here's a shout out to awesomeness of @Twitteruser during #lccrc13 You need to follow Jack! #ff (Charles, Tweet)

Within the category of PLN Participation, the majority of Tweets included hyperlinks to cite one's source or to share a resource believed to be of value to others, as evidenced in this Tweet:

> Awesome post @Twitteruser! http://hyperlink Great rep. of power of connecting outside of the school day! @Twitteruser (David, Tweet)

Twitter made for a resourceful communication tool for the participants that attended national conferences. By Tweeting information to others within their PLN, they were able to share information, resources, and knowledge, as indicative in the following Tweet:

> Absolutely! RT @Twitteruser: @Twitteruser is making some great points #LCCRC13 http://hyperlink (Charles, Tweet)

In addition to sharing conference updates, some participants shared media and other resources with those in their PLN:

> Pretty cool video about a local middle school staff cares for its students: http://hyperlink (@Twitteruser) #TMScares (Frank, Tweet)

> @Twitteruser Completely! If you're not getting better you're getting worse! #XXedchat http://hyperlink (David, Tweet)

Many of the participants from this research study participated in weekly Twitter chat sessions, themed around education topics, and most intended for their state-specific audience of educators. Many of the Tweets analyzed indicated that the participant was utilizing Twitter for the purpose of facilitating a Twitter chat session or they were responding as a participant, such as:

> Question 4 If you're an educator, what is the most memorable or hilarious Holiday gift (Teacher's Gift) you have ever received? #XXEdChat (Amy, Tweet)

> Answer 4: Focus on the lrng first, but continue to expect nothing but the students' best! Meet with the student & seek to understand why work not completed. #XXage109 (Amy, Tweet)

For the second theme – Informal Conversations – participants' Tweets were assigned nine interpretive codes. The nine interpretive codes included (1) Food; (2) Humor; (3) News and Current Events; (4) Pop Culture; (5) Random; (6) Sports; (7) Technology; (8) Using Hashtags; and (9) Weather.

As I analyzed participants' Tweets, many were coded to reflect informal conversation. It was obvious that some participants utilized Twitter for more than solely professional collaboration or business purposes. The following is an example of a Tweet that focused informal conversation on food:

> This sauce is ridiculously awesome (@Twitteruser) on #Yelp http://hyperlink (Bob, Tweet)

Some Tweets were posted with a humorous angle, indicative of participants' statements that they utilized Twitter to engage with their PLN members and tried to forge more personal relationships, as represented in this Tweet:

> @Twitteruser @Twitteruser2 @Twitteruser3 @Twitteruser4 @Twitteruser5 We might be short but we are always reaching higher for the stars! #shortguyclubforlife (David, Tweet)

I also discovered some Tweets that were reporting news or current events, such as this Tweet:

> #sbac field testing will test out 21,000 items @Twitteruser #ccss #csbaaec (Bob, Tweet)

Other Tweets might have been commenting on various pop culture matters, such as television shows or music, as in this Tweet:

> Listening to O Holy Night by Group 1 Crew using #CloudPlayer http://hyperlink via @Twitteruser (Frank, Tweet)

A handful of the Tweets were too obscure for me to accurately code them. In such cases, I assigned an interpretive code "Random" to the Tweets. One such example includes:

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@Twitteruser That's really awesome! #XXEdChat (Amy, Tweet)

Other examples of analyzed Tweets that were coded for informational conversation

on various subtopics included:

@Twitteruser Such a downer about Jay Cutler. McCown WAY better! #XXedchat (Charles, Tweet)

There are 1 billion gamers around the world who play more than one hour a day gaming @Twitteruser #csbaaec (Bob, Tweet)

Why isn't the email working? #FiveWordEdTechScares (Bob, Tweet)

@Twitteruser Just had seven Snow Days @ my school! #crazy But by Tuesday it'll be close to 60! (Amy, Tweet)

For the third theme – Formal Conversations – participants' Tweets were assigned four

interpretive codes. The four interpretive codes included (1) Education; (2) Organization; (3)

Promotion; and (4) Work.

This category was comprised of Tweets that I found to be formal in nature. Some

examples of Tweets that were coded as such include:

"Education is the most powerful weapon you can use to change the world." - Mandela #XXedchat (Edward, Tweet)

Hey @Twitteruser this is ridiculous And becoming way common. What's up? http://hyperlink (Bob, Tweet)

Best of luck to all our teams today! #pride (David, Tweet)

@Twitteruser We're aware of the wireless situation. All sites affected; related to email outage. Hope to have it all fixed today (Bob, Tweet)

For the fourth theme – Personal Disclosure – participants' Tweets were assigned six

interpretive codes. The six interpretive codes included (1) Career; (2) Family; (3) Location;

(4) Personal Info; (5) Photos; and (6) School.

An example of the data representing the interpretive code "Career" includes:

Charles, Asst. Supt., [City name], [State name] #XXedchat (Charles, Tweet)

An example of the data representing the interpretive code "Family" includes:

My kid is getting tons of books, a chromebook, & the brother gets the ever educational-sports Helmet and Jersey #XXEdChat (Amy, Tweet)

An example of the data representing the interpretive code "Personal Info" includes:

Really happy today: 1) ran 6+ miles today in winter weather. 2) warm house & great fam. (Frank, Tweet)

The analysis of participants' Tweets indicated that nearly two-thirds of all Tweets had some involvement and engagement with members of their PLN, either citing or sharing resources. The second most frequently themed purpose of participants' Tweets was identified as conducting informal conversation with others. The least frequently coded use of Tweets was to disclose personal information.

Table 7

Document analysis with interpretive themes frequency count from Tweets

Tweet Theme	Amy	Bob	Charles	David	Edward	Frank	Total
Formal Comment or Conversation	1	7		6	15	2	31
Informal Conversation	22	24	14	9	7	24	80
Personal Disclosure	9	9	3	2	2	3	28
PLN Participation	25	26	43	46	30	26	196

Upon further analysis of specific words from the participants' Tweets, it was determined that the most frequently used words included "http" and hashtags that targeted state-specific Twitter chat sessions, such as #StateNameEdChat. Furthermore, the most frequently used words were education-based, such as "school" and "learning". Other

frequently used words were those with positive connotations, such as great; thanks; thank; good; and love. Lastly, the majority of words cited in participants Tweets' that did not comprise high individual word frequency, but overall frequency, were words that contained Twitter username handles and hashtags.

Table 8

Themes from All Three Data Sources

Interviews	Documents	Tweets
Educators must share resources and information	PLN participation comprised of sharing knowledge and resources	Sharing blog posts, websites, media; engaging in Twitter chat sessions
PLN yields great personal and professional benefits	PLN yields positive personal, professional experiences; PLN yields positive educational benefits for students and staff	
Privacy should not be the priority		
		Informal conversation about misc. topics; non-education related

Summary

In this chapter, I reviewed the data collection methods and the qualitative findings of the study. Semi-structured interviews were conducted with six school administrators who utilized Twitter as a part of their PLN practices. The interview data were analyzed through the use of a four-part Interpretive Phenomenological Analysis, which revealed three

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emergent themes: (1) Must share and exchange resources; help others grow; (2) Personal and professional benefits powered by PLN; and (3) Privacy should not be the priority. Data were also collected by means of a written document prepared by each participant, sharing their experience with personal learning networks and social networking. Data analysis using enumerative and thematic coding procedures revealed four emergent themes: (1) Methods of participating in a PLN; (2) Past challenges and hurdles experienced by participants, prior to participating in a PLN; (3) PLN activity influenced by thought-leaders, colleagues, epiphany moments, and positive early experiences; and (4) Reasons for participating in a PLN; seek resources for improvement of self and others. Lastly, data were collected by participants' Twitter posts over a thirty day period. Using enumerative and thematic data analysis procedures, the following themes emerged from participants' Twitter posts: (1) PLN participation; (2) Informal conversation topics; (3) Formal conversation topics; and (4) Personal disclosure topics.

The findings revealed the importance of using social networking tools to participate in PLN for the purpose of sharing information and resources as the only connection amongst all the data sources. The stated benefits of PLN on participants' personal and professional lives were evident from interview and personal written document data. Privacy issues were only acknowledged in interview data.

Data analysis of all three sources affirmed participants' understanding of utilizing social networking tools within a PLN as being solely motivated to share information and resources, with little to no regard of privacy issues.

In Chapter 5, a discussion of the findings and how they connect to the existing theoretical and empirical literature is provided. Additionally, implications of the study's findings and recommendations for future studies are shared.

CHAPTER 5

DISCUSSION

The purpose of this hermeneutic, interpretive phenomenological analysis study was to better understand how school administrators made meaning of their experience regulating boundaries and maintaining privacy as they utilized social networking tools to participate in an online personal learning network (PLN). Within this study, the phenomenon of privacy was defined as "ongoing self-regulation of setting boundaries toward others with whom we interact" (Palen & Dourish, 2003, p. 1). The following research questions framed the study:

- How do school administrators make meaning of their experience utilizing social networking tools to participate in a personal learning network and understand privacy?

- How do school administrators describe their experiences with personal learning networks and privacy?

- What themes are identified from their experiences for the group?

In this chapter, I review the results of the data findings stated in Chapter 4 and draw connections to the existing theoretical and empirical literature discussed in Chapter 2. I conclude this chapter by noting possible future directions for research.

Summary of Findings

As I sought to answer the guiding research questions of this study, I drew upon three distinct data sources. Following interpretive phenomenological analysis (IPA) studies, the dominant data source that guided the findings was based on semi-structured interviews with participants. Other data sources informing the findings included participants' written documents and Tweets.

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The study's participants were self-selected. As such, contradictory findings from this study might differ from previous or similar studies due to the different sampling techniques employed.

Based upon the IPA data analysis procedures of participants' interviews, the findings yielded three separate superordinate themes: (1) Must share and exchange resources; help others grow; (2) Personal and professional benefits powered by PLN; and (3) Privacy should not be the priority. The findings revealed the importance of using social networking tools to participate in PLN for sharing information and resources; this was the only connection amongst all the data sources from the study. The stated benefits of PLN on participants' personal and professional lives were evident from interview and personal written document data. Privacy issues were only acknowledged in interview data.

Analysis of all data sources affirmed participants' understanding of using social networking tools as they participated in their PLN as being solely motivated by sharing information and resources, with little to no regard for privacy issues.

Self-Reflection of Findings

Before I interpreted the findings, I felt obligated to analyze my own interpretation of the results. I understood that while this study's findings asserted that administrators did not prioritize online privacy during their PLN participation, the results derived from the specific sample of this study. Because demographic data was not collected at the onset of the participant recruitment stage, consideration for a balanced sample size of sex, gender, ethnicity, or race was not considered.

As a school administrator cognizant of equity and social justice, I questioned how this consideration had been overlooked. Just as I employed IPA procedures to analyze

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participants' data, I believed it was necessary that I reflected on and interpreted my own findings. I was reminded of a Peggy McIntosh (1988) essay on white privilege in which she posited that it was possible to be blinded by the differences of others because individuals viewed the world through their own lens. I began to recognize that I might have inadvertently designed a study that did not account for a more heterogeneous sample size comprised of sex, gender, racial, and ethnic differences because the implication of such differences were invisible to me.

Had I been more conscious of the implications of sex, gender, racial, and ethnic differences as they related to this study, I believe I would have established different parameters within my sampling technique to ensure greater balance and representation. A specific statement of this is provided in this chapter's recommendation for future studies.

Interpretation of the Findings

The primary research question that guided this study was "How do school administrators make meaning of their experience utilizing social networking tools to participate in a personal learning network and understand privacy?" Overall, the overpowering essence of their meaning as it applied to the research question was *Privacy Should Not Be the Priority.* In answering the second and third research questions, I analyzed participants' experiences and ultimately classified them into two additional themes: *Power of the People; Personal and Professional Benefits, Powered by PLN* and *Must Share and Exchange Resources; Help Others Grow*.

I recall early in the study, as I was conducting the semi-structured interviews, how reaffirming it felt to hear how participants' experiences and statements could be directly connected to existing research and empirical studies. In the following sections, I will draw

connections from the findings to existing literature while highlighting the salient findings that are not as rooted.

Must Share and Exchange Resources, Help Others Grow

This superordinate theme evolved after connecting participants' statements that strongly insisted that educators must participate in a PLN to share resources with colleagues. My interpretation of all the participants' interview and document data revealed a tremendous desire to participate in a PLN and utilize social networking tools to share and exchange resources with colleagues. The essence I gained from all participants indicated that knowledge sharing and digital collaboration was not just recommended, it was expected. Participants shared how the communities of educators that actively participated within a PLN tended to be passionate, committed, and dedicated to helping the entire field of education steadily improve. One participant, Amy, shared that a "true" educator was not doing enough if they were not sharing their work. I was also intrigued by Edward's commitment to utilizing social networking tools to build out his own personal learning network and develop an online community of learners.

Participants seemed to justify and validate their digital blogging content and other social networking posts as germane because they held to the "newspaper rule" or "grandma rule." They were not ashamed of, nor did they have any regrets about, any content they posted online, knowing that they would experience no embarrassment or shame if it were published in a newspaper or said in front of one's grandmother. The participants strongly believed that the content was published with the sole intent of improving others and therefore they had no limitations or considerations about curbing or not disclosing the posts.

The findings of this study further supported the existing literature that explained why educators wished to participate in a PLN. Specifically, the literature surrounding "communality" seemed to be furthered by this study's findings. Participants were greatly motivated to utilize social networking tools and actively participate with PLN members for the acquisition of information and resources; opportunities to collaborate with weak tie colleagues; reduce the perception and sensation of working in isolation; and the exploration of new ideas and information (Colibaba et al., 2012; Alderton et al., 2011; Bouchamma & Michaud, 2011; Tsai et al., 2010; Hur & Brush, 2009; Gray, 2009). The participants' belief in helping others created a common goal amongst the PLN that was likely to help its overall sustainability and longevity. Fang and Chiu (2010) found that online communities were more likely to succeed if participants were more willing to give and share, expecting little in return. Successful online communities were described as comprised of members that were altruistically-minded who were collective in their pursuit to create a community for everybody to learn, resulting in a community of value for all (Nikolaou & Tsolkadis, 2012; Wise et al., 2009; Carr & Chambers, 2006).

Hur and Brush (2009) found that personal experiences were a primary motive for educators wanting to share online. Forte et al. (2012) also determined that educators did not want to broadcast just information in a one-way communication stream; rather, they wanted to engage in a two-way dialogue. The findings of this study revealed that participants overwhelmingly wanted to engage in digital collaboration and two-way communication with members of their PLN, consistent with existing research (Forte et al., 2012; Kairam et al, 2012; Castaneda et al, 2011; Hur & Brush, 2009).

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However, the findings of this study suggested participants' perceptions of using microblogging tools like Twitter were unique from existing literature. Forte et al. (2012) and Casteneda et al. (2012) conducted studies that found educators were initially drawn to microblogging tools only to abandon them because they felt uncomfortable using them for professional purposes. Microblogging tools were prone to blurring users' personal and professional boundaries (Casteneda et al., 2012; Stutzman & Hartzog, 2012). The findings of this study differed from such studies significantly. Participants in this study insisted that PLN members know personal information about them. Additionally, they felt that microblogging tools were the most efficient at and effective for sharing information, both personal and professional. Participants of this study also were excited about growing their PLN to share resources and collaborate with even more people. This also differed from existing literature that found social networking users' disclosure of personal information to strangers had decreased over time (Stutzman et al., 2012; Boyd, 2011).

Power of the People; Personal and Professional Benefits Powered by PLN

Participants perceived overwhelmingly positive outcomes toward their personal and professional lives from PLN participation. My interpretation of the participants' beliefs was attributed to the people who made up the composition of the participants' PLNs. The findings revealed that participants were drawn to collaborate with others so that they might surround themselves by and immerse themselves within a community of perceived superstars, experts, and gurus. Amy stated that "99 percent of them are more amazing than I am." Participants made statements that indicated how Twitter's absence would greatly impact their ability to effectively do their job; gain access to experts; learn; remain motivated; and/or effectively collaborate with others. Additionally, the findings revealed that participants developed

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personal relationships with many they first met through their digital collaboration and, in many cases, physically interacted with these newly found friends through personal and professional means. The development of personal relationships and the strengthening of relationships with long-distance family and friends was attributed to the effects of PLN participation and use of social networking tools.

Findings also indicated that participants benefited from an online community of educators so they could regain their teaching roots by helping others. Edward uncovered a deep desire to teach others that was revealed once he transitioned from the role of classroom teacher to school administrator. In an effort to rejuvenate his thirst for educating others he turned to participating in a PLN; active participation and collaboration with colleagues within a PLN using social networking tools satisfied that need.

I found that the participants came to understand their experience with social networking and their PLN as truly life-changing. The participants believed their active participation, digital collaboration, and knowledge sharing with others within their PLN positively enhanced aspects of their personal and professional lives.

The findings of this study were consistent with existing literature that revealed how digital collaboration with PLN members enhanced the acquisition of resources and information (Forte et al., 2012; Alderton et al., 2011; Castaneda, Costa, & Kompen, 2011; Ivanova, Grosseck, & Holotescu, 2011); gain new professional and technical skills ((Bouchamma & Michaud, 2011; Castaneda & Soto, 2010; Tsai et al., 2010; Donavant, 2009; Hanewald & Gesthuizen, 2009; Gray, 2004; Ardichvili et al., 2003; Wenger & Snyder, 2000); and enhance one's professional identity and vision (Rajagopal et al., 2012; Tsai et al., 2010; Hur & Brush, 2009; Riverin & Stacey, 2008; Gray, 2004). Additionally, the findings of

this study further supported previous studies that identified PLN participation higher in PLNs with strong communal-oriented foundation.

Previous studies found that some PLN members developed a desire to professionally connect with others in physical, or blended, settings and opportunities (Badge et al., 2011; Fetter et al, 2011). The findings of this study expanded on this research. This study's school administrator participants forged and penetrated relationships – personal and professional – at more intense levels. Charles stated that he developed fifty to a hundred very close relationships with those within his Twitter PLN and regularly interacted with them through in person social activities. Other participants from this study, including Amy, David, and Edward, routinely interacted with others within their PLN, both personally and professionally.

Privacy Should Not Be the Priority

This superordinate emerged based upon data that revealed participants' overall disregard or recognition of maintaining privacy while utilizing social networking tools and participating in a PLN as a public school administrator. My interpretation of the participants' data suggested that privacy was not of concern nor should it be the concern of a school administrator engaging in digital collaboration with other educators. This was the essence of all school administrator participants of this study. The findings indicated that while it was understandable to maintain some privacy over one's personal life online, it was not to be maintained while performing duties in a professional role. Amy observed that because a public school administrator's professional role was to serve the public, they should not expect to practice techniques that maintain their privacy. Other participants made similar

statements. Bob indicated that school administrators should not be concerned by or worry about privacy since it was basically "non-existent."

The notion of privacy was difficult to conceptualize for some of the participants, who seemed uncertain as to why privacy was the subject of inquiry and inspection by school administrators using social networking tools to participate in a PLN. Participants such as David and Edward felt that to generate their own self-improvement, it was essential to disclose information and allow themselves to become vulnerable. Frank valued the ability of the communication channel of social networking tools to help educate and inform others of the duties and responsibilities of school administrators. Overall, the majority of participants believed that it was an ethical and professional responsibility to exercise maximum transparency of their professional duties, including digital collaboration with colleagues and other weak tie stakeholders via social networking tools.

The findings of this study were in concert with existing research, particularly with regard to how school administrators and educators utilize social networking tools. As was found in previous studies, the participants of this study primarily utilized social networking tools for participation within their PLN (Colibaba et al., 2012; Tsai et al., 2010; Hur & Brush, 2009; Gray, 2004). The findings revealed that school administrator participants established boundaries within their social networking tools to separate personal and professional activity, which is also consistent with existing literature (Forte et al., 2012; Kairam et al., 2012; Johnston et al., 2012). Participants of this study did use Facebook to disclose personal information with PLN members with whom they began to establish a stronger and closer personal relationship, which was congruent with previous literature on this topic (Stutzman et al., 2012; Nikolaou & Tsolakidis, 2012; Hur & Brush, 2009).

Not all of the findings were in perfect alignment with the existing literature, however. While the administrators did utilize social networking tools and engage in digital collaboration, the participants of this study were not at all concerned with privacy. This contradicted the findings of MMS Education (2012), which purported privacy concerns were the primary reason to deter prospective educators from engaging in PLN practices. This study's findings revealed that participants felt it necessary to divulge personal information to PLN members, believing others with whom they digitally collaborate deserved to know more information about the participant. Even though the study's participants were utilizing Twitter solely for professional purposes – as was cited by Forte et al. (2012), who found educators primarily using Twitter for professional reasons – this study's participants used Twitter to penetrate and establish closer personal relationships with some within their PLN. This study's participants disclosed and shared personal information and other relevant information to all PLN members because it was how they perceived digital collaboration with social networking tools to be; it was not in an effort to be perceived as more "likeable" or to attempt to expand their PLN, which contradicted the findings of previous studies (Johnson & Paine, 2007; Feng et al., 2004).

The findings also revealed that participants believed it was their ethical and professional duty to consistently and frequently share information to seek improvement for others through social networking posts. This contradicted research that suggested social network users' disclosure of information to "strangers" declined over time (Boyd, 2011). This study's participants digitally published content with full validation and confidence, without fearing that the disclosure of information or shared resources might become a potential threat to privacy or be wrongly perceived by stakeholder groups. This differed from

the results of previous studies (Shi et al., 2013; Johnson et al., 2012; Stutzman et al., 2012). Additionally, this study's participants had little regard for restricting or eliminating their PLN members, which contradicted the findings of previous empirical studies (Johnson et al., 2012; Kairam et al., 2012). The findings of this study suggested that participants published information for a mass audience and did not publish content only for specific groups of persons within their PLN. Because this study's participants did not designate selective information for selective groups within their PLN but instead believed in full transparency and digital collaboration from which all might benefit, there were no perceived weak tie violations of their interpersonal privacy management. This explained why they did not purge or restrict their PLN members, sharply contrasting with Karr-Wisniewski et al. (2011).

Implications of the Research

As educational reformers seek to improve outcomes of the public education system, groups like the United States Department of Education encourage educators to elicit technological tools to enhance their professional and informal learning, with the ultimate goal of transforming and bettering student learning and professional outcomes. Specially, technological tools can be used to participate in a PLN or digital community of practice (CoP), enabling opportunities to digitally connect, collaborate, and share resources amongst professionals. Through the use of PLN and CoP, educators are no longer confined to working within isolated "silos" or "islands," and can "collaborate with their peers and leverage with world-class experts to improve student learning" (U.S. Department of Education, 2010, p. 42).

However, to participate in a PLN, an educator must disclose personal and professional information as they engage and collaborate with others, leaving a permanent

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digital footprint. Additionally, as educators seek others to add to their informal learning network or enhance professional relationships with those already a part of a PLN, trust and relationships must be cultivated. To grow or strengthen one's learning network, varying levels of personal and professional information must be shared and disclosed within public and private modes of social networking tools. Failure to disclose certain amounts of information have the potential to negatively impact trust and relationships. Ultimately, privacy management decisions are a critical element of the experiences of school administrators utilizing social networking tools within their PLN. Therefore, PLN and privacy have direct implications on school administrators and digital community facilitators.

The interpretation of the participants' data from this study showcased three themes: Must Share and Exchange Resources, Help Others Grow; Power of the People; Personal and Professional Benefits Powered by PLN; and Privacy Should Not Be the Priority. These findings have implications for two populations – educational organizations and school leaders and digital community facilitators.

Through the review of literature referenced in this study, as well as this study's findings, PLN and other digital learning networks were found to generate high appeal and allure for school administrators seeking informal learning options and channels of digital collaboration with colleagues. However, the overall practice of social networking tools within a PLN over the greater school administrative profession remained small. As was detected in this study's findings, those currently participating in a digital PLN were extremely passionate individuals who were hungry to increase their overall network of learners. There remains a large untapped audience of school administrators and other professional educators that may greatly benefit from the participation in a PLN.

The potential positive impact of PLN participation on educators and learning organizations greatly hinges on how school district leaders and school administrators incorporate opportunities for digital collaboration into their professional practices. For PLN practices to evolve and become more mainstream, school district leaders need to learn how to effectively create a networked learning organization that maximizes informal and formal learning and collaboration with internal and external stakeholders. School administrators need to learn how to expand the collaborative culture of a school from professional learning communities to include personal learning networks that enable a school's faculty to collaborate with experts from around the world.

Implications for Educational Organizations and School Leaders

A key method for continuous improvement and transformational educational practices for school districts has been that of professional learning communities (PLC). This localized manner of educator collaboration requires a communal culture of learning that focuses on student learning and results. PLCs operate as networks of educators, organized vertically or horizontally, around a common purpose. Though different in purpose and logistics, PLCs are closely related to other networked learning options such as PLN and CoP. All three structures enable teachers to work in conjunction with others and avoid working in isolation, of yielding greater professional and student learning outcomes (Darling-Hammon, Wei, Andree, Richardson, & Orphanos, 2009, p. 1). When PLC, PLN, and CoP are combined, they create what Nussbaum-Beach and Hall (2012) defined as a "connected learning model."

Establish a connected learning model that promotes digital collaboration. In an effort to modernize a school district's catalog of professional development opportunities,

districts should immediately consider establishing connected learning communities. Through connected learning communities, all staff members have an opportunity to engage in professional discourse and collaborate with colleagues throughout the district as well as experts and colleagues globally. Participation in connected learning communities enables members to focus their efforts on system-wide initiatives and their own personal and professional learning goals. It is through a networked learning community that educators can "learn by interacting, sharing, understanding, accepting, commenting, and creating" (Nussbaum-Beach & Hall, 2012, p. 38). Educators digitally collaborating in a connected learning community can position their own views and opinions against others, while reflecting on their professional practices before, during, and after their traditional work schedule (Aceto, Dondi, & Marzotto, 2010). Connected learning with peers also yields greater power and control over one's agency. Foucault (1971) critiqued the public education system for creating a one-sided delivery of instruction, with a teacher having a pulpit that other learners did not. The traditional model of teaching and learning instills practices that appear as though the teacher is the lone arbiter of knowledge, information, and authority. This could easily hinder motivation and capacity-building amongst professional educators.

Connected learning opportunities for educators infuse personal and professional experiences and learning that "increases knowledge acquisition for educational practice and personal growth among individuals who feel seamlessly interwoven" as they "learn [not just] how to be better educators but more tuned-in and effective people" (Nussbaum-Beach & Hall, 2012, p. 39).

School districts and learning organizations must understand that publicly sharing one's perceptions of performance, professional practices, opinions, and strategies can be

daunting and uncomfortable for those with limited experience in PLN participation or connected learning communities. However, this should not be a stumbling block for educational organizations. The collective commitment and dedication to the organization's mission can be fostered within a digitally collaborative environment, prompting improvements to student learning outcomes. Trust and comfort can be established as connected learning community members observe colleagues' transparency as they share the positives and negatives of their professional journey, giving confidence to others as they detect that risk-taking is acceptable and condoned (Nussbaum-Beach & Hall, 2012).

School districts and educational organizations must determine if they should develop and grow their own digital learning network or CoP for its staff members, or if they ought to partner with an organization that already has a fully-functioning community. The decision to create a proprietary, or private, learning network, requires careful attention to several logistics. The school district must establish clear policies and expectations for how members should participate in the learning network. Additionally, a culture of trust, security, professionalism, and respect are necessary. Lastly, the planning of face-to-face collaborative opportunities is encouraged since many members may also wish to develop more personal relationships with those within the learning network.

Utilize PLN for educational system transformation. PLNs can become an effective tool to create a transformative culture within a learning organization. By tapping into the power of social networking tools and PLN members, school district faculty and staff can forge collaborative relationships with global thought-leaders. By following and/or engaging with these weak tie PLN members, the information can be brought back to one's school or organization for full consideration by all members. Kilgore and Reynolds (2011) insisted that

the benefit of this practice was based on teams of educators not only benefiting from the "knowledge of its own professional learning teams but would use connectivity to gather global expertise to inform ideas, projects, and problems" (p. 129). To organize the digital collaborations of members that would be collaborating with different PLN members through various social networking channels, a school district should establish a knowledge sharing portal, or enterprise learning network, so information can be shared.

The role of school administrators is critical to furthering educational transformation. School principals should be actively engaged in digital collaboration and always looking to increase their overall PLN. School administrators' participation in a PLN is closely related to the practices of a transformational school leader in that they rely on collaborative relationships to make decisions and collectively learn, gradually relinquishing control and autocratic practices (Harris, 2003). Principals must build capacity in its faculty by empowering them to explore personal and professional development aligned with their respective interests and positions rather than by creating a top-down approach. To develop a transformational school, principals must understand that "strong leadership in schools results from the participation of many people, each leading his or her own way" (Donaldson, 2007, p. 29). This includes not only school faculty and staff members but also external stakeholders such as parents; business owners; philanthropic organizations; media; and policy makers. As principals model how to effectively communicate and collaborate using social networking tools, internal and external stakeholders are likely to increase their engagement and participation.

PLN participation and privacy trade-off. While social networking tools and PLN participation yield many benefits to users, it is important to understand the overall

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compromise of one's privacy during the process. The decision to participate in a PLN and digitally collaborate with others requires attention to one's overall boundary and privacy management.

Essentially, there are three boundaries that impact privacy management: (1) disclosure – decisions about what information is to be shared and disclosed; (2) identity – information about one's professional affiliation and/or personal background; and (3) temporality – decisions influenced by past, present, or future implications on information disclosed and shared by a user (Palen & Dourish, 2003).

Effective participation and engagement in a PLN or networked community is based on a user's knowledge sharing with others. School administrators must determine what information to share, and how much, in order to develop cohesive collaborative relationships with members of their PLN or learning network. Additionally, trust is contingent on the personal information disclosed; this causes school administrators to strategically identify what information to share. Lastly, identity is formulated based upon information shared and disclosed online, leaving it to the perception and subjectivity of a mass audience. School administrators must determine what public posts to make on social networking tools, knowing it may be misperceived by an audience unfamiliar with the context or subject matter about which he/she is posting.

Findings of this study revealed that school administrators did give privacy a place of priority, indicating their role as a school administrator engaging in social networking was to maintain a public, transparent role of their professional work. This suggests that PLN members might compromise their own boundary management rules as they develop more personal relationships with others within their network. As relationships are cultivated, users

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may begin blurring lines by inviting PLN members from professional social networking channels into personal ones. By blurring lines, a school administrator may experience difficulty separating personal and professional information over time.

Adopt and update "acceptable use" and social networking policies. As school district leaders seek opportunities to utilize social networking tools to bolster communication and collaboration efforts with stakeholders, it is important that updated "acceptable use" and social networking policies are established. The adoption and implementation of such policies is consistent with technological standards expected of school administrators (ISTE, 2009). Additionally, the potential legal ramifications of and liability for behaviors using social networking tools outside of professional duties must be fully weighed (Bathon & Brady, 2010; *Garcetti v. Ceballos*, 2006).

Unfortunately, school district leaders have little guidance from state and federal laws and standards, thereby requiring districts to formulate policies under local control (Bosco, 2011; Goldfarb, Pregibon, Shrem, & Zyko, 2011). Acceptable use and social networking policies vary across school districts (Miami-Dade County Public Schools, 2012). These policy differences increase the need for school leaders to effectively communicate and inform their stakeholders about appropriate practices and expectations. Adequate training for educators is essential, particularly with regard to the following: federal laws governing student internet activity (Willard, 2012; Bosco, 2011; Goldfarb et al., 2011; Davis, 2010); opportunities to use and gain familiarity with social networking platforms (Brady, 2010); professional development to effectively integrate social networking into instructional activities (Goldfarb et al., 2011; Foulger, Ewbank, Kay, Popp & Carter, 2011; Willard 2006); and awareness of legality, responsibility, and ethics concerning teacher-student digital

communication (Brindley, 2012; Willard, 2012; Goldfarb et al., 2011; Saunders, 2011; Downing & Shannon, 2010).

Implications for Digital Community Facilitators

The positive benefits of PLN, CoP, and digital learning networks were cited throughout this study. However, launching an online learning network requires adherence to important elements and logistics so that it may operate effectively. An online community must be fueled and sustained by active engagement with the intended audience. Additionally, the learning network must ensure members feel connected and that information is relevant, interesting, and/or applicable. Failure to meet these conditions may result in disengagement with or withdrawal from the learning network.

Effectively create a digital learning network. Nussbaum-Beach and Hall (2012) posited that "the best connected learning communities have strong visions and clarity of purpose – and often begin organically" (p. 40). Such organic and grassroots foundations are what prompted multiple Twitter-based PLNs to develop over the past few years. These Twitter-based PLNs engaged audiences on subject-specific topics and organized members based on professional responsibilities and assignments; companies or organizations; or by state and geographical regions. Wenger, White, and Smith (2009) reported that it was through a common identity that PLN members collaborated, engaged, and shared resources or information with others. PLN facilitators or creators should routinely communicate how the digital learning network meets others' needs, as well as continuously call others to action in order to maintain sustainability for the network.

The overall success or failure of a digital learning network relies on the overall moderation and facilitation of its leaders (Gray, 2004). Digital learning networks require

active facilitators that can generate discussion amongst and contributions from its members; maximize knowledge sharing; link members to internal and external resources; and ensure growth for the network. Strong facilitators are those that develop a digital learning network rich with expertise of its members, as well as promote to non-members how they may access the collective expertise of its members (Coburn, Choi, & Mata, 2010). The vitality of a digital learning community or network is also contingent upon the opportunities for its members to share knowledge, collaborate, and network with community members (Wenger et al., 2009). For Twitter-based PLNs, it is advisable to maintain a structured conversation on a specific topic of great relevance to the intended audience. The Twitter-based conversations should also encourage the sharing of electronic resources, documents, and links that are popular features to share amongst online communities (Booth, 2011).

Online learning community facilitators should also pay heed to cultivating a community that is diverse and representative of society. In this study, five of the six participants were males. Before the participant recruiting phase closed, only a single female had communicated interest in participating in the study. This left questions unanswered such as: Is there an underrepresentation of females utilizing technology? Are digital PLNs more frequented by males than females? If so, what are the reasons fewer females participate? All of these answers should be examined by online learning community facilitators to ensure a diverse community of learners and participants.

Facilitators of digital learning networks must also impose proper mechanisms for membership, netiquette, privacy and other informal behavior norms (Wu, Chen, & Chung, 2009). It is imperative that facilitators pay careful attention to determining what information can be accessed the public and what is kept private, if any. Privacy is a concern for many

educators and is one of the primary motives for not actively participating in PLN or digital collaboration (MMS Education, 2012). School administrators that participate in digital learning networks may share information that increases their vulnerability in an effort to seek continuous improvement. However, if the disclosed information is believed to be private or semi-private, significant personal or professional damage could ensue.

Recommendations for Future Research

Through this study, I aimed to better understand the experience of school administrators' utilization of social networking tools while participating in a PLN as they maintained privacy. Ultimately, the findings provided me with a very succinct result – the school administrators that participated in this study were not concerned with their online privacy, nor did they feel that it was a priority. The thick, rich data detailed in Chapter 4 supported these findings and helped justify my overall interpretation in this study. However, I believe this study can be a catalyst for future research.

As I conclude Chapter 5, I wish to provide the following recommendations based upon the findings, limitations, and significance of this study. Ultimately, these recommendations will only benefit educational researchers and school administrators.

Conduct the Study at Different Settings

In an effort to further validate my interpretation of this study's data, it would be interesting to see if similar findings would result if the very same study – methodology and sampling techniques – were employed. At the present time, there are several state-specific Twitter-based PLNs that engage in weekly collaborative sessions. Any of these state- or subject-specific Twitter PLNs could serve as a great setting through which to compare findings.

It is possible that the original setting used in this study could have produced data from participants that was subject to "group-think" or homogenous viewpoints. Because the findings of this study were overwhelmingly consistent amongst participants, a qualitative researcher would be interested in comparing the findings of a different setting to see if the results were also homogenous or divergent.

Conduct the Study Using Different Methodology

I opted to utilize an interpretive phenomenological analysis because of my experience and knowledge with personal learning networks, social networking tools, and online communities of practice. Ultimately, I believed my experience could be directly applied to the data and aid in the analysis of data. It would be interesting to see if similar findings would arise if a future study were performed with school administrators, but through the analysis of separate case studies or as a narrative analysis.

Additionally, if a quantitative research study could be implemented analyzing a mass quantity of Tweets by a select sample size, a content analysis could be conducted and conclusions could be drawn that supported or challenged the findings of this study.

Repeat the Study in Several Years

As referenced earlier in this Chapter, research indicated that educators' preference for disclosing information online to "strangers" declines over time (Boyd, 2011). Since the findings of this study revealed that participants were not concerned with privacy and felt it was their professional duty to remain transparent and open through their digital collaborations, in a future study of these same participants it would be worth noting differences in perceptions of privacy, disclosure, and boundaries.

Conduct the Study with a More Diverse Population

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This study did not collect racial or ethnic demographic data during the participant recruitment process. It is thus possible that findings represent a homogenous sample size not representative of the entire PLN or society. Additionally, the participants were predominately male with only a single female actually participating. Additional studies are recommended to determine if there exists an underrepresentation of administrators participating in PLN by gender, sex, ethnicity, or race. Additionally, future studies could focus on potential factors or barriers that prohibit, exclude, or alienate PLN participants by gender, sex, ethnicity, or race.

Conduct the Study with a Focus on Teachers

This study focused exclusively on school administrators. A similar study that explored how the phenomenon was perceived by or affected teachers would be interesting to see if there are any similarities or differences. School administrators are not subject to the same evaluation techniques as teachers, which may empower administrators to feel "freer" or at liberty to engage in digital collaboration. Teachers may fear retaliation from their supervisors, colleagues, or parents, causing a difference in perception with the phenomenon of privacy and PLN participation.

Summary

The purpose of this hermeneutic phenomenological study was to understand how school administrators made sense of their experience participating in personal learning networks (PLN) and while using social networking tools as they managed privacy.

To digitally collaborate and engage with PLN colleagues, it was essential that an online identity be established as relationships were developed and cultivated. Additionally, decisions concerning information disclosure and regulation of online privacy needed to be determined by a PLN user using social networking tools (Johnson, Egelman, & Bellovin,

2012; Kairam, Brzozowski, Huffaker, & Chi, 2012; Shi, Xu, & Zhang, 2012; Stutzman & Hartzog, 2012; Kramer-Duffield, 2010; Williams et al., 2009). The potential ramifications of disclosing too much information could result in unintended professional or personal harm against a PLN member using social networking tools (Das & Kramer, 2013; Sleeper et al., 2013; Johnson et al., 2012; Shi et al., 2012). However, failure to disclose information to PLN members could negatively impact relationships and compromise others' perception of trust (Nikolaou & Tsolakidis, 2012; Fang & Chiu, 2010; Harrison & Thomas 2009).

For this study, interpretive phenomenological analysis (IPA) methods were used with educational administrators (N = 6). Data were collected through semi-structured interviews; written documents of participants' experience and perception of PLNs; and analysis of participants' Tweets over a thirty day timeframe. Interviews were analyzed using a four-part analytical process (Smith, Flowers, & Larkin, 2009). Written documents and Tweets were coded according to data analysis methods prescribed by Miles and Huberman (1994).

The findings of the study revealed three emergent themes that explained school administrators' understanding of PLN participation and privacy issues, titled: (1) Must Share and Exchange Resources; Help Others Grow; (2) Power of the People; Personal and Professional Benefits, Powered by PLN; and (3) Privacy Should Not Be the Priority. The findings affirmed school administrators' understanding of their participation in personal learning networks using social networking tools as being solely driven by the desire to share information and resources. Little to no regard of privacy issues were identified by the school administrators.

A discussion concerning the implications of the research was addressed. Educational leaders should consider the following: (1) establish a connected learning model that promotes

digital collaboration; (2) utilize PLN for educational system transformation; (3) PLN participation of users and their privacy trade-off; and (4) adopt and update "acceptable use" and social networking policies for stakeholders. Online learning community facilitators should consider the following: (1) create an effective digital learning network that promotes a common mission, vision, and purpose; and (2) implement and enforce social networking policies to maximize netiquette and privacy concerns.

Recommendations for future research include: (1) conduct the study at different settings; (2) conduct the study using different research methods; (3) repeat the study in several years; (4) conduct the study with a focus of teachers; and (5) conduct the study with more diverse population.

APPENDIX A. Consent for Participation in a Research Study

Project Title: Personal Learning Networks and Privacy

James Derek Brauer, B.S., M.S.Ed., M.S.Ed., Ed. Spec.

Request to Participate

You are being asked to take part in a research study. This study is being conducted with participants from the weekly Tweetchat session, #IAedchat.

The Primary Investigator of this study is Dr. Loyce Caruthers, Associate Professor at the University of Missouri-Kansas City. The researcher of this study is James Derek Brauer, a doctoral candidate in the School of Education at the University of Missouri-Kansas City.

The study team is asking you to take part in this research study because you have experience utilizing social media tools to participate in an online personal learning network. Research studies only include people who choose to take part. This document is called a consent form. Please read this consent form carefully and take your time making your decision. The researcher will go over this consent form with you. Ask him to explain anything that you do not understand. Think about it and talk it over with your family and friends before you decide if you want to take part in this research study. This consent form explains what to expect: the risks, discomforts, and benefits, if any, if you consent to be in the study.

Background

The study team is asking you to participate in this research study because you are a current school administrator that actively participates in a digital personal learning network. You have specifically been chosen for this study because:

- You currently hold the job assignment of public/private school administrator at the K-12 level; administrative positions may include superintendent, assistant superintendent, director, area education agency administrator, principal, assistant principal, dean of students, chief school business official, human resources director, and/or special education director.
- You are an active member that identifies him/herself with the PLN in this study.
- You are an active user with the microblogging tool Twitter; and
- You agree to participate in this study.

You will be one of six subjects in this research study.

Purpose

The purpose of this hermeneutic phenomenological study is to understand the phenomenon of public and private school administrators that participate in a PLN, use social media tools, and regulate boundaries to manage privacy. The phenomenon of privacy is traditionally defined as a "state of social withdrawal"; however, for this study privacy will be generally defined as "ongoing self-regulation of setting boundaries toward others with whom we interact" (Palen & Dourish, 2003, p. 1). This phenomenological study will focus on describing what all school administrators have in common as they experience the

phenomenon of maintaining online privacy while participating in an online personal learning network.

Source: Palen, L., & Dourish, P. (2003). *Unpacking "privacy" for a networked world*. Retrieved October 28, 2011, from http://www.cs.colorado.edu/~palen/Papers/palen-dourish.pdf

Procedures

If you choose to participate, you will be asked to write a brief narrative answering the following questions: *1) Describe why you became interested in using social media to participate in a personal learning network and 2) Describe the most memorable situation or experience, if any, you faced while using social media to participate in a personal learning network*. Your narrative should be a maximum of one (1) page in length.

Immediately following receipt of your brief narrative, the researcher will set up an interview that will take approximately 30 minutes to 1 hour to complete. The interview will be comprised of various questions that pertain to your experience using social media tools. The specific interview questions will be provided to you in advance of the actual interview.

The interview will be conducted through a third-party phone conferencing line and will be recorded, so it may be transcribed. Participation in this research study will require your consent to record the interview. Shortly after the interview, you will receive a copy of the interview transcription via email so you may review and confirm its contents. The audio recording and its transcription will be stored on a password-protected university email system and cloud-based data storage website for a total of seven years. Once the seven year time span has expired, all digital files of the audio recording and transcription will be permanently deleted and destroyed.

If you agree to take part in this study, you will be involved in this study for approximately 60-90 minutes – this includes the amount of time necessary to write the brief narrative and participate in the interview. Follow-up information from the researcher may be needed. If this is the case, follow-up information may be collected via email and will be done within four (4) weeks of the interview.

When you are done taking part in this study, you will still have access to contact the researcher, if need be.

Participation in this study is voluntary. Subjects may refuse to participate in certain activities or answer certain questions. If you choose not to participate in any part of the observation or interview, you can notify the researcher at that time. If any data was collected prior to your withdrawal from the study, all data will be destroyed, deleted, and not used in the final results of this study.

Risks

There are no risks involved in this study.

Benefits
There are no direct benefits afforded to you during the study; however, school administrators can indirectly benefit from this study. The results from this research study should contribute to the evolving body of knowledge concerning digital personal learning networks and privacy. By increasing awareness of how school administrators can effectively participate and collaborate with peers within a digital personal learning network while maintaining privacy and social boundaries, perhaps more school administrators will consider future participation

Fees and Expenses
Your participation in this research study will not cost you any money. Participation is entirely free.

Compensation
You will not receive compensation for taking part in this study.

Alternatives to Study Participation
The alternative is to not take part in the study.

Confidentiality
While we will do our best to keep the information you share with us confidential, it cannot be absolutely guaranteed. Individuals from the University of Missouri-Kansas City Institutional Review Board (a committee that reviews and approves research studies), Research Protections Program, and Federal regulatory agencies may look at records related to this study to make sure we are doing proper, safe research and protecting human subjects. The results of this research may be published or presented to others. You will not be named in any reports of the results.

Your privacy and confidentiality will be protected as the researcher will keep your narrative, interview audio recording, and interview transcriptions in a secure file located in the university email system and a third-party cloud-based website tool. The university email system and the cloud-based website are both password protected. Only the researcher will have access to all files.

If you choose to withdraw from the study, your data will not be stored or included in this research study.

Contacts for Questions about the Study
You should contact the Office of UMKC's Social Sciences Institutional Review Board at (816) 235-5927 if you have any questions, concerns or complaints about your rights as a research subject. You may call the Primary Investigator, Dr. Loyce Caruthers, at (816) 235-1044 or the researcher, James Derek Brauer, at (712) 249-9871 if you have any questions about this study. You may also call either researcher if any problems come up.

Voluntary Participation

Taking part in this research study is voluntary. If you choose to be in the study, you are free to stop participating at any time and for any reason. If you choose not to be in the study or decide to stop participating, your decision will not affect any care or benefits you are entitled to. If any data were collected prior to your withdrawal from the study, all data will be destroyed, deleted, and not used in the final results of this study.

You have read this Consent Form or it has been read to you. You have been told why this research is being done and what will happen if you take part in the study, including the risks and benefits. You have had the chance to ask questions, and you may ask questions at any time in the future by calling the Primary Investigator, Dr. Loyce Caruthers, at (816) 235-1044 or the researcher, James Derek Brauer, at (712) 249-9871. By signing this consent form, you volunteer and consent to take part in this research study. Study staff will give you a copy of this consent form.

_____   _____

Signature (Volunteer Subject)   **Date**

_____

Printed Name (Volunteer Subject)

_____   _____

Signature of Person Obtaining Consent   **Date**

_____

Printed Name of Person Obtaining Consent

APPENDIX B. Verbal Consent Script

I am James Derek Brauer, from the University of Missouri-Kansas City School of Education. I am currently completing the requirements for my doctorate of education degree in Education Administration. I am conducting a research study on public and private school administrators that utilize social media tools to participate in online personal learning networks while maintaining their privacy. The research will help me better understand the experiences of administrators that digitally collaborate and implement strategies to maintain their privacy.

Today you will be participating in an individual phone interview, which should take approximately 30-60 minutes. Your participation is voluntary. If you do not wish to participate, you may stop at any time. Data will remain confidential. All responses will be used with pseudonyms to maximize anonymity. Your name and affiliation will not appear in the final copy. There are minimal risks associated with this interview. Taking part in this interview is your agreement to participate.

This interview will be recorded and transcribed by a third-party service. You will be provided a copy of the transcript about a week following completion of the interview. The audio recording and interview transcript will be held by the researcher for a total of two years. They will be electronically stored in password-protected sites including the university's email system and a cloud-based data website service. Only the researcher will have access to data. After two years, all data will be permanently deleted and destroyed. If you would like a copy of this letter for your records, please let me know and I will email you a copy immediately following our interview. If you have any questions regarding the research, contact James Derek Brauer at (712) 249-9871. You may also contact the researcher's academic adviser, Dr. Loyce Caruthers, at (816) 235-1044. If you have any questions regarding your rights as a research subject, please contact the IRB Administrator of UMKC's Social Sciences Institutional Review Board at (816) 235-1764.

APPENDIX C. Interview Schedule of Questions

1. What is your current administrative assignment? How long have you been in this role?

Social networking

2. Social networking is different for each person; describe how you socially network with others online.

3. How does social networking affect your everyday life? Personally? Professionally?

4. How has social networking changed how you view yourself connecting and communicating with others?

5. How do you feel when you connect with people online? Those "close" to you? Those "distant" from you?

6. What if social networking tools no longer existed? Talk about its impact on you.

Personal learning networks

7. How do you define a "personal learning network?"

8. If you had to describe what your personal learning network means to you, what would you say?

9. When you think of your personal learning network, what images come to mind?

10. How has PLN changed how you see yourself learn?

11. What do you believe makes an effective resource within your personal learning network?

12. As you eliminate things from your personal learning network – tools, platforms, or people – what compels you to do so?

Online privacy

13. Talk about your perception of privacy. What does privacy mean to you?

14. How much do you think about your own digital privacy?

15. How do you feel about how others perceive you online?

16. How do you believe others perceive your sense of privacy online?

17. How has your perception of privacy changed since utilizing social networking tools?

18. How do you make sense of the information you choose to share and disclose online?

<u>Closing</u>

19. Before we end today, is there anything else you'd like to share that I did not ask?

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VITA

James Derek Brauer was born in Chicago, Illinois on February 26, 1980. He was educated in local public schools and graduated from East Leyden High School in 1998. Brauer is a three-time graduate of the University of Kansas, having earned a Bachelor of Science in Education degree with a concentration in social studies education (2002); a Master of Science in Education degree with a concentration in Curriculum and Instruction (2004); and a Master of Science in Education degree with a concentration in Adaptive Special Education (2006). He is also a two-time graduate of the University of Missouri-Kansas City, where he earned an Educational Specialist in Educational Administration degree (2008) and a Doctorate of Education in PK-12 Educational Administration in May 2014.

In April 2012, Brauer became the Principal at Iowa Connections Academy, a virtual public school serving grades K-12 for students throughout the state of Iowa. Prior to this, he served as an Assistant Principal at North Kansas City Schools, beginning in July 2008. Brauer began his teaching career in 2004 as a special education teacher in USD 500 Kansas City, Kansas. Over the course of his career Brauer has also assumed other educational positions, including substitute teacher, special education paraprofessional, and athletic coach.