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Online Doctoral Students and the Importance of Social Network Connections

Monica Herndon-Stallings
Walden University

Walden University

College of Education

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Monica Yvonne Herndon-Stallings

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Review Committee
Dr. Patricia Mc Gee, Committee Chairperson, Education Faculty
Dr. Christina Dawson, Committee Member, Education Faculty
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Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
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Abstract

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by

Monica Yvonne Herndon-Stallings

MA, Augusta University

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy in Education

Educational Technology

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Abstract

University personnel offering online doctoral degrees struggle to address high attrition of students in the dissertation phase; these students can feel isolated, disconnected, and unmotivated. The purpose of this study was to explore ways online doctoral students in the dissertation phase used social networking sites (SNS) to overcome isolation and to increase persistence. The conceptual framework was situated in communities of practice (CoP) and the theory on self-determination. Research questions explored participants' experiences with using SNS to remain connected and persistent. Data were collected from in-depth interviews with 7 online doctoral students, who met the criteria of being in the dissertation phase for a minimum of 2 quarters and using at least 1 social networking site; the participants were from 4 online institutions in the United States. An interpretative phenomenological analysis was used to examine themes and interpret the lived experiences of participants. Findings revealed that online doctoral students in the dissertation phase valued working with peers and with doctoral graduates from other institutions as a strategy to remain persistent in completing their dissertations. They focused on learning and on sharing with others for social and emotional support in a safe environment. Other elements included being held accountable and being challenged to keep moving. The results could influence instructional design for online doctoral candidates emphasizing the use of SNS for support from a CoP. Implications for positive social change include higher education personnel supporting unmonitored SNS interactions and increasing trust within school-created SNS spaces for students in the dissertation phase.

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Dedication

I am dedicating this paper to my husband, Tim, who has been my rock through this process, my parents, Clois and Mary Herndon, who encouraged me to complete my dream of getting my doctorate, to my son, Xavier, whose quiet temperament and gentle encouragement kept me focused on the task at hand.

To my granddaughters Leigh and Logan, and my goddaughter Lauren, I hope you will be inspired to follow a path which leads to intellectual growth, acquisition of knowledge, and future success.

Finally, to the memory of my brother, Antonio “Tony” Clois Herndon, 23 March 2006. I can still hear your voice calling out to me “Hello money.” I Love and Miss You!

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Lastly, I want to thank Dr. Patricia McGee for accepting the challenge, as my mentor, to help me complete the task of getting my dissertation done. Your leadership and support inspired me to want and help others reach their goals. To Dr. Christina Dawson, you have been with me from the beginning, and I want to thank you for not giving up on me and seeing in me the ability to complete my doctorate. Finally, I would like to say thank you to Njeri Pringle for your support and advice. Your contributions to this paper are appreciated.

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Chapter 1: Introduction to the Study

As participation in online and distance education courses continues to grow, institutions offering these courses must ensure that online and distance education environment provide resources needed by students to be successful (Myers, Jeffery, Nimmagadda, Wethman, & Jordan, 2015). Wendt and Rockinson-Szapkiw (2015) suggested that students need opportunities to learn through collaborative activities where they can share ideas and engage in collaboration. They indicated that technology could be used, supported, collaborative, and provide opportunities for students to engage in learning communities. One challenge for higher education in offering online and distance education courses has been how to maintain a sense of community often regarded as vital to retention and success (Berry, 2017). According to Berry, the experiences of learning online for doctoral students are different than the experiences of students in traditional, face-to-face doctoral programs who have multiple opportunities to engage and interact with their peers and faculty. Berry suggested that because of this, online doctoral students were sustained by the experiences they created with their peers.

Jantaa, Lugosi, and Brown's (2014) netnographic study of doctoral students suggested their diminished progress resulted from a lack of social interactions and unhappiness during early stages of the doctoral program. Wao and Onwuegbuzie (2011) noted the increased time it took doctoral students to complete their doctorate overshadowed the gratification of receiving the degree. Students suffered from stress, disconnection, isolation, motivation, and a desire to give up. Moreover, Koole and Stack (2016) suggested that doctoral student's success depended on their understanding of the demands as they relate to norms, ethics, and techniques in their individual fields. As such,

they suggested network learning could help develop relationships which could facilitate acquisition of knowledge and social support leading to feelings of confidence, acceptance, and belonging.

Tweedie, Clark, Johnson, and Kay (2013) indicated the doctoral path was an "insular and solitary journey" (p. 383). Their justification for this seemingly negative perception was that doctoral students, for the most part, felt cut-off from the world while pursuing their degree. Bawa (2016) noted because online learning was a self-driven environment, learners may become demotivated to the point of leaving. According to Bawa, students were left with determining how to manage their academic development. Bawa asserted self-learning was not easy as the learner would be responsible for taking initiative for their learning and that alone could be intimidating and uncomfortable for online learners.

On the other hand, Deshpande (2016) noted online doctoral students described the dissertation process as lacking human interaction. Continuous communication between instructors and students could enhance the learning experience of students, thus leading to satisfaction and success. Shea and Bidjerano (2014) associated student success and completion of college with having attained a sense of academic and social integration within their discipline. In comparison, Rockinson-Szapkiw, Heuvelman-Hutchinson, and Spaulding (2014) suggested a relationship existed between making connections within the community and student willingness to interact socially with peers and faculty members.

Successful students determined that social support was key to their success which assisted them with the required steps for degree completion. Additionally, Thomas,

Herbert, and Teras (2014) indicated when creating online programs, attention must be given to creating supportive environments that support the diversity of students' experiences and ensure constructive but respectful dialogues. Accordingly, Jairam and Kahl (2012) concluded social support was vital to decreasing or eliminating doctoral student attrition. They argued social support helped to reduce stress, but more importantly social support had a positive effect on the emotional stress doctoral students feel. Sung and Mayer (2012) supported the idea of social presence by indicating that social presence helped students feel they were interacting with real people.

Aargon (2003) noted the lack of social presence caused students along with instructors to become less motivated, unfulfilled, and unsuccessful. Some students lack the social ability to integrate themselves within their discipline in order to help themselves stay persistent and not drop out (Shea & Bidjerano, 2014). Wilcoxon (2011) suggested social presence was the foundation of a functional learning environment and helped to address students' basic needs related to security and belonging in online learning. Wilcoxon indicated social presence could increase learner satisfaction, as the perception of instruction was being received as more efficient, hence leading to greater achievement in course completion. Wilcoxon concluded that when social presence was missing in learning communities, it led to "high levels of frustration, disengagement, critical attitudes toward the instruction, and lower levels of learning" (p. 4). In this study, I focused the use of social network sites to improve the quality of support for doctoral students in the dissertation phase to ensure degree completion.

Background of the Problem

Blended learning, a combination of classroom and online instruction, is a fast-

growing instructional method used on college campuses because of its convenience, flexibility, variability, openness to self-pacing, reduced cost, increased course completion and retention rate, as well as its different approach to delivering instruction face-to-face and online (Rovai & Jordan, 2004). The blended learning format provides opportunities for students to interact with the instructor during the introduction of new information with the assistance of various Web 2.0 tools (Farkas, 2012). Despite the potential impact of blended learning on improving student learning, Jeffrey, Milne, Suddaby, and Higgins (2014) indicated that teacher resistance has negatively affected the benefits offered in a blended learning environment. They found that teacher overload was a major factor for resistance by teachers who had to find time to create online components for lessons. Jeffrey et al. concluded for student learning to improve in a blended environment, opportunities where individual and collaborative learners could engage through a wide range of multiple strategies were needed. However, the question remains what instructional technologies are required to help students construct knowledge while developing a sense of connectedness and persistence in an online learning environment.

Researchers have found that social media is not only a tool that facilitates private or personal interactions, it offers students a way to be connected. For example, Eid and Al-Jarbri (2016) indicated Web 2.0 tools such as Myspace, Facebook, LinkedIn, Twitter, Flicker, Instagram, and WhatsApp were designed to encourage open communication and sharing of personal information and experiences with others. Hamid, Waycott, Kurnia, and Chang (2015) noted with regard to higher education, social or Web 2.0 technologies included tools such as blogs, microblogs, and wikis. They suggested use of social technologies by higher education learners and teachers served as resource for

collaboration and discussion. Because social media is ubiquitous, Lin, Fan, and Chau (2014) indicated individuals could connect socially with others to disseminate information and express themselves in a connected environment. Trujillo and Tanner (2014) noted that this ubiquitous nature of social media supports a sense of belonging essential to student success in higher education. They concluded when students' experiences caused an increase in their self-efficacy, they could self-regulate their learning, and the result was persistence.

Social networking may increase persistence as online learners proceed through academic programs. Erwee, Albion, and van der Laan (2013) indicated that persistence of doctoral students was grounded in their ability to connect with peers, faculty, and members of their academic department. There is evidence that when students became disconnected from their peers, faculty, and academic programs due to a diminished sense of community or interactions, they were more likely to drop out (Rovai, 2002). Lin, Huang, and Chaung (2015) indicated one way to assist students in developing their social network awareness (SNA) was to use an e-learning environment, which provides a simulated social network. They contended the ability to increase peer interaction helped to influence online learner's self-regulated behavior. Additionally, Bollinger and Halupa (2012) indicated a consequence of online education, such as the lack of face-to-face social interactions and limited technical skills for some students, may contribute to doctoral students experiencing various levels of anxiety, during course work.

The impact of this adjustment focused higher education administrators' interest in exploring ways to increase social interactions and presence with the use of (SNS). Glazer, Breslin, and Wanstreet (2013) suggested institutions needed to build into their programs

academic learning communities to support students, as a means of increasing retention. They agreed that academic learning communities facilitated better communication between learners and faculty members because, they could share ideas and build knowledge. Sanchez, Cortijo, and Javed (2014) suggested students were in favor of using Facebook as a learning tool because they were able to communicate and learn from their classmates.

Bawa (2016) suggested that high attrition rates for students in online courses was not just a symptom of lack social interactions. Bawa asserted that attitude, aptitude, and motivation attributed to high attrition rates. As early as 2007, Angelino, Williams, and Natwig found that doctoral attrition rates were a cause for concern of students in online doctoral programs and the institutions that offered them. They indicated institutions needed to implement strategies that will decrease attrition rates and ensure the successful completion of online doctoral programs. Angelino et al. suggested strategies that included integration and engagement, learner-centered approaches, learning communities, and accessibility to online student services as ways for providing a quality online educational program while decreasing attrition.

In 2010, George-Walker and Keeffe suggested the emergence of innovative technologies had challenged higher education to deliver to all student's access to learning experiences that surpassed traditional on-campus instruction, to experiences that prepared students for real-world opportunities. In more recent developments, the open access to online learning indicates that much is still unknown about what best supports the online learner. Thomas, Herbert, and Teras (2014) asserted higher education’s open access to online programs underrepresented student’s actual growth and learning. Thus tools,

supports and services that are outside the purview of an institution may provide un-identified strategies for students to be engaged and motivated

Doctoral students in particular have benefitted from technology-mediated support strategies. Rockinson-Szapkiw (2012) noted that research on determining how technology tools could help online doctoral students in the dissertation phase stay connected was needed. According to Rockinson-Szapkiw, feelings of isolation and motivation were a consistent theme for students in the dissertation phase. Researchers who have studied social networks in online graduate programs have found additional outcomes: strengthening peer-to-peer connections (Bicen & Cavus, 2011); supporting adjustment to the academic environment (Gray, Vitak, Easton, & Ellison, 2013); enhancing social presence and CoP (Brady, Holcomb, & Smith, 2010); and, enhancing a sense of connectedness which increased low-self-efficacy and poor self-regulation (Ryan, Magro, & Sharp, 2011). Building on this body of knowledge, Fuller, Risner, Lowder, Hart, and Bachenheimer (2014) indicated that online doctoral programs should be built based on social, cognitive, and teaching presences, as specified in the Community of Inquiry (CoI) model. By doing so, Fuller et al. indicated that CoI could help meet the needs of online doctoral students by providing them with various ways to make connections, be reflective, and engage in instruction designed to support them at a distance. For example, within social presence, Fuller et al. suggested the use of Facebook could facilitate social interactions and build social presence. Rockinson-Szapkiw et al. found that the type of media used for supporting social interactions among students was essential when deciding on ways for increasing social presence. Additionally, they contended web-based social networking systems would benefit online doctoral students

in the dissertation phase better than communicating through a telephone or email. However, students need more than course-based presence. Evans, McFarland, Rios-Aguilar, and Deil-Amen (2016) noted students needed more than an email message or Facebook message from the school as a strategy for community connectedness. They indicated students would benefit from an ongoing marketing campaign which could help students remain active in the school community.

Research in the value of social media with regards to persistence and sense of belonging on retention has been limited. Merchant (2012) indicated that students live in an era of *technologised sociability* where social interactions were synonymous with the technologies being used by human beings daily (p. 5). Meyer (2010) found that when doctoral students were allowed to select among various Web 2.0 tools, they preferred peer-to-peer community-based tools that promoted social interaction. Thus, much of the research on social media has focused on how students used technology, resulting in a gap on how SNS could be used in online education to increase social interactions and persistence leading to greater retention of students.

Researchers have examined and explored the impact of SNS on various aspects of student well-being (Bollinger & Halupa, 2012; Gray et al., 2013; Smith, Morgan, & Monks, 2017; Strayhorn, 2012). Brady et al. (2010) explored the effects of SNS, on building CoP that fostered a sense of belonging among distance education students finding that communication and collaboration among students and their peers were high. Strayhorn (2012) indicated that when examining the effect of SNS on the frequency of use by race/ethnicity, gender, transfer status, international students or first-year students, unintended results showed that students of color found that SNS helped them escape

feelings of isolation. Students of color reported they had a stronger sense of belonging because of being able to connect with other students thus increasing peer-to-peer presence and individual self-preservation. The authenticity of interactions has been found of benefit to the psychological well-being of online learners.

Reinecke and Trepte (2014) examined the impact of SNSs on self-presentation and well-being and found that authenticity fostered by SNSs not only had a positive effect on the psychological well-being, but also that users with low levels of well-being benefited from the authenticity of SNS environments. Bennett and Folley (2014) noted that SNS supported student identity and development while pursuing a Ph.D. by providing motivation for studying and reducing isolation. Bennett and Folley asserted SNS promoted an international community for sharing and obtaining information from other doctoral students as they transitioned from student to scholars. However, Buglass, Binder, Betts, and Underwood (2017) found that although frequent use of SNS did not affect the psychological well-being of online use of SNS, the fear of missing out (FOMO) increased the vulnerability of online as a result of their continuance friending and self-disclosure. They suggested online users FOMO could lead to feelings of social inadequacy and increased vulnerability, in an online social environment.

Various researchers have linked SNSs to social capital, dual identity, and interactionism as theories that enable students to maintain connections while lessening feelings of isolation or alienation (Bennett & Folley, 2014; Gray et al., 2013; Ostok, Zingaro, & Makos, 2013; Riedl, Kobler, Goswami, & Kremar, 2013; Strayhorn, 2012). Accordingly, these findings suggested that SNSs have the propensity to increase persistence in students. However, it is not clear if persistence leads to retention. More

research was needed to explore whether there was a relationship between the frequency of use of SNS and persistence. Trepte and Reinecke (2013) indicated that users of SNSs for social interaction see online self-disclosure as a means to increase their social capital, which Putnam (as cited by Trepte & Reinecke, 2013) defined as "… positive outcomes and resources that individuals derive from interpersonal contacts" (p. 1103). In other words, gains in the social capital of users who were willing to engage fully in self-disclosure while using SNSs for social interactions could lead to an increase in knowledge building and persistence.

Gunuc and Kuzu (2015) in using the Campus-Class-Technology theory (CCT) found that students who used technology for engagement had a better emotional and behavioral outcome than students with low levels of technology use. Gunuc and Kuzu used Campus-Class-Technology Theory to examine whether there was a relationship between student engagement and technology in the class. They found that student engagement increased in students who valued life on campus, and the education they gained from being on campus as well as when there was a high sense of belonging. Based on the relationship between student engagement and technology for in-class and out-of-class use, Gunuc and Kuzu concluded there was a positive relationship between the two with regards to emotional and behavioral engagement. Vaughan (2014) focused on collaborative learning applications (i.e. Facebook, Blackboard, wiki, blogs, etc.) and a blended approach to assessing the impact on student engagement, success, and satisfaction. Vaughan found that students preferred collaborative learning applications because they received "…more frequent assessment feedback, and that clearer explanation and examples of the required assignments" (p. 256). Vaughan indicated that

students believed blended courses provided them with the least amount of feedback and with a higher workload. Kivunja (2012) found that postgraduate students used SNS to help alleviate feelings of loneliness in an online environment. He indicated that SNS created an exciting way for students to engage with one another while learning. Kivunja suggested that postgraduate students could gain a deeper understanding of course content through their engagement with others by using SNS.

There is a gap in the research about online graduate student's need for social interactions with their peers as a strategy for motivation, persistence, and degree completion. My study has the potential to help members of higher education find strategies which could help to decrease attrition of online doctoral students, particularly those who were in the dissertation phase, where feeling alienated from others in the process could be overwhelming and potentially lead to attrition.

Problem Statement

Higher education personnel need to understand more about how online doctoral students use social networking to overcome isolation and to enhance persistence. Then they could incorporate some of these understandings into their programs to help reduce attrition of online doctoral students in the dissertation phase. If higher education fails to find a sustainable solution for increasing attrition rates, a disruption of funding doctoral degrees could occur. The impact could have an adverse impact on education, businesses, and other stakeholders as each organization would have fewer doctoral experts to rely on for specialized skills and knowledge.

Researchers have shown that factors such as feelings of alienation, low sense of community, a community of practice, and social presence may play a vital role in

persistence and completion of graduate studies in online programs (Jairam & Kahl, 2012; Trujillo & Tanner, 2014). Other research indicated that student success hinges on making connections and interacting with peers in settings comparable to the traditional classroom (Liao, Huang, Chen, & Huang, 2015). Other documented benefits of CoI have included: increased engagement (Wao & Onwuegbuzie, 2011); receipt of timely feedback (Hou, 2015); encouragement (Hou, 2015); increased teacher presence (Hou, 2015); diminished sense of isolation (Thomas, Herbert, & Terras, 2014); and, a wide array of resources, experts, and learners (Koole & Stack, 2015). Bhagat, Wu, and Chang (2016) found online students have an increased capacity to connect, collaborate, and engage with others on a worldwide platform. Epp, Phirangee, and Hewitt (2017) reported that students' sense of community was less effected by the facilitation method of the course and more about length of the course. Findings from online graduate students in Epp, Phirangee, and Hewitt's study indicated courses which last 6-12 weeks did not provide enough time for online students to interact with the instructor or their peers resulting in a weak sense of community. They suggested a strong sense of community is better supported by designing longer courses which provide opportunities for peer and instructor interactions essential to the learning experience.

While online learning is not new there is evidence progress in supporting the learner is un-even. In 2011 Rutshow and Schneider indicated that the emergence of newer innovations for delivering and supporting improved performance in students provided a rationale for why policymakers, educators, and external stakeholders needed to create reforms which employed technologies that foster a sense of community between instructors and students. In 2014 Rockinson-Szapkiw et al. found that frequency of

doctoral student interactions using web-based social networking systems did not influence connectedness. However, they suggested that students preferred interacting through web-based technology systems rather than telephone or email. Gaytan (2015) stressed that the number of students wanting to take online courses created a major challenge for educational stakeholders. The critical issue for this study was whether the use of social network sites, as an integral part of online doctoral studies at the dissertation phase, provided the experience of connectedness that was vital to student retention and success.

Purpose of the Study

The purpose of this qualitative study was to explore ways online doctoral students in the dissertation phase were using social networking tools to overcome isolation and increase persistence. Common themes like feeling isolated, disconnected, and unmotivated have been examined or explored by various researchers seeking to understand how detrimental these factors were to the success of students in online programs (Brady et al., 2010; Rockinson-Szapkiw et al., 2014; Shea & Bidjerano 2014; Trepte & Reinecke 2013). In this study, in-depth interviews and interpretative phenomenological analysis explored how online doctoral students made sense of their experiences using social network sites to overcome feelings of isolation, disconnection, and low motivation to stay connected and persistent, during the dissertation phase. In this study, I focused on using SNS for support in online environments to help address growing concerns of higher education trustees, policymakers, instructors, and external stakeholders about reducing high attrition rates among online and traditional doctoral students.

Research Questions

In this study, I focused on how online doctoral students in the dissertation phase experience with using social network sites helped them remain persistent as a result of feeling a sense of connectedness and community with their peers. Creswell (2013) noted that phenomenological inquiries allow the researcher to get to the essence of the participants' experience with the phenomenon. The research questions I used to guide the study were:

1. How do online doctoral students in the dissertation phase use social networking tools to create connectedness with their peers?
2. How do they understand these tools as helping them overcome feelings of isolation?
3. How do online doctoral students describe connectedness and its importance to their persistence?

Conceptual Framework

The conceptual framework situated in communities of practice (CoP) guided this study. Wenger (1998) defined CoP as situated within a social dimension which framed learning as a relationship between individuals and the world. For this study, CoP was used to frame the assumption of learning as a social practice where network and communities existed together in sharing knowledge and learning within a clear structure (Wenger, 1998). Lahenius (2012) indicated the strength of online students learning was a result of having access and contact with other students for support, and an opportunity to learn from others. Lahenius concluded that CoP helped doctoral students connect and engage with peers on a scientific level.

Miles, Huberman, and Saldana (2014) indicated that a conceptual framework is the researcher's first analytical display for their study. Litalien and Guay's (2015) theory based on self-determination of online doctoral students' persistence and completion was used to explore factors significant to the psychological well-being of doctoral students. The self-determination theory (SDT) posited by Litalien and Guay declared that " . . . perceived competence decreases dropout intentions, and that perceived competence is explained by autonomous and controlled regulations . . ." (p. 218). In presenting this theory as a logical basis for this study, my contention was that online doctoral students' persistence and completion was grounded in whether supports were in place to help the online doctoral students, during the dissertation phase, to be successful within CoP. Wenger (1998) indicated central to CoP was its ability to help people with a common interest come together to collaborate and share information with one another within a learning community. Using essential elements depicted in Figure 1, I wanted to uncover how students perceive and understand the uses of SNS to stay connected and to persistent.

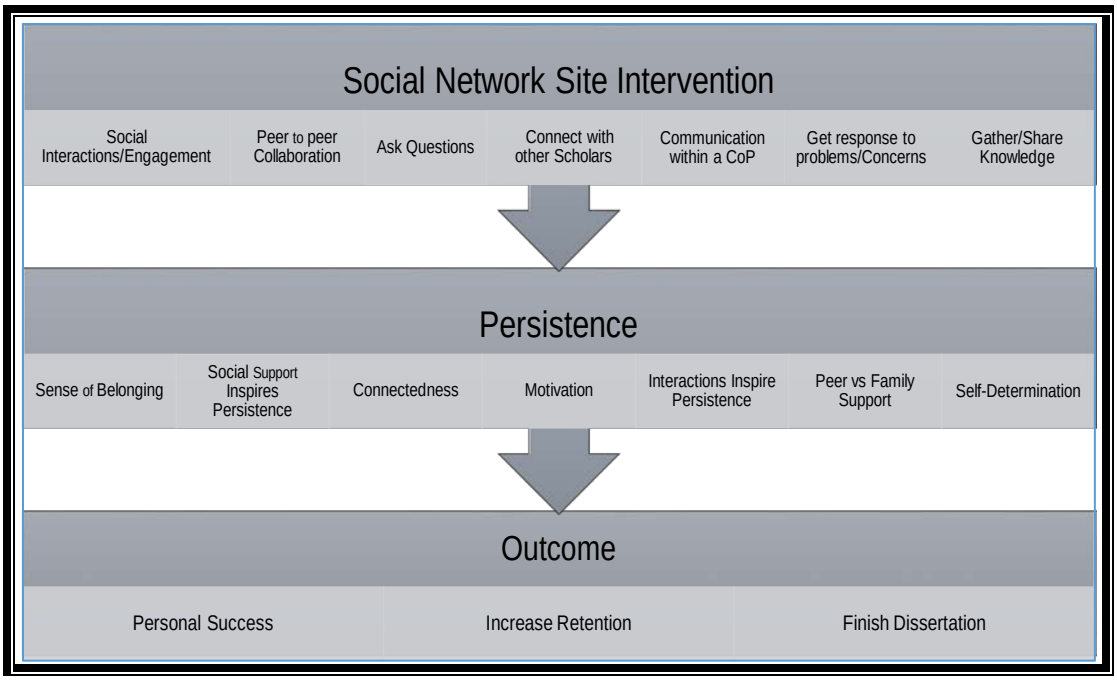

Figure 1. Framework for social network sites on dissertation completion.

Information on the map was a combination of factors gleaned from various articles including a personal perspective as a current online doctoral student in the dissertation phase. New concepts were added to the map as they emerge. New and emerging factors acted as a guide in helping me remain focused on the intent of the study, as well as serve as the foundation for data collection and analysis. The conceptual map (Figure 1) framed the aim of this study in teasing out factors that could support my focus on exploring how SNSs helped online doctoral students in the dissertation phase increase their sense of connectedness and persistence.

Nature of the study

A qualitative method was selected for the research method. Specifically, the research design followed an interpretative phenomenological analysis (IPA) (Smith, 2004). Moustakas (1994) described phenomenological research as exploring the *what*

with regards to the meaning of the lived experience of people with a phenomenon to uncover shared meaning. In contrast, IPA originated out of principles defined within phenomenology, hermeneutics, and idiography (Smith, 2004; Smith & Osborn, 2008). The difference as indicated by Smith (2004) was that IPA explores how individuals make sense of their personal and social world. The researcher's goal is to make sense of the participants' perspective and particularly appropriate for topics that may be complex and new (Smith & Osborn, 2008). Using IPA as a design method helped me understand how online doctoral students used SNS to decrease feelings of isolation and persistence as they completed their dissertation.

I used in-depth interviews and interpretative phenomenological analysis to explore the lived experiences and understandings of online doctoral students who were in the dissertation phase related to their use of SNS to stay connected and persistent while completing their dissertation. The use of SNS for sustaining interactions during the dissertation phase was not a mandatory part of the dissertation phase. Because social presence and engagement could be critical to the success of students in the dissertation phase, knowledge regarding the use of SNS in the dissertation phase by students could help to inform future studies.

I used purposeful sampling as the criteria for choosing participants (Pietkiewicz & Smith, 2012). My aim was to interview approximately six to eight online doctoral students who were in the dissertation phase. A small sample allowed me to stay focused on the topic and intent of the study as new concepts emerged (Smith & Osborn, 2008). I conducted two in-depth interviews to gather data from online doctoral students in the dissertation phase who used social network sites to stay connected and persistent. I

captured notes and used an audio recorder to capture the participant's narrative. Audio recordings were transcribed verbatim into text. I collected data, during a one-to-one interview session with each participant, in two one-hour or less interviews. The interview process began with interviewing one participant whose responses were analyzed to develop initial themes focused on the intent of the study. Next, I interviewed the remaining participants. Information gleaned from participants during the interview process formed the basis of this study's findings. I provided transcriptions of interviews to participants for transcript review in order to validate the accuracy of my interpretations through member checking. Participants were given the option of opting out of their transcript review. The transcript review took approximately 30 minutes. Participants requested a callback as opposed to an email for additional questions or concerns regarding their transcript. I called two participants to clarify a response given during the interview and documented their responses. I wanted to ensure I had accurately reported the participant's point of view, as well as to validate responses were trustworthy. At the conclusion of the study, collected data has been stored on my computer desktop in addition to an external thumb drive. All collected data and manually coded data were filed in a cabinet in my home office.

Definitions

The following are terms and definitions as I am using them in the study:

Cohorts: "Logical choice for adult learners ...cohort-based education is that small groups of students take courses with one another throughout the degree program" (Swayze & Jakeman, 2014, p. 102).

Communities of practice: “A group of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly” (Wenger, 1998, p. 1).

Dissertation phase: Stage of the doctorate where "students need more student-to-student and student-to-faculty interaction and support than any other, given the associated challenges with transitioning from an autonomous course-taker to a self-directed scholar" (Rockinson-Szapkiw et al., 2014, p. 3).

Doctoral student attrition: When students drop out of their doctoral program before completing their degrees (Ali & Kohun, 2006, p. 22).

Learning communities: “Serve to bridge the academic-social divide that typically plagues student life” (Tinto, 1998, p. 7).

Metacognition: An individual’s awareness of her or his thinking and a “required cognitive ability to achieve deep and meaningful learning that must be viewed from both an individual and social perspective” (Garrison & Akyol, 2015, p. 66).

Online learning: A technology-mediated delivery system that provides synchronous and asynchronous opportunities for students to complete post-secondary education that is cost-efficient and convenient (Sung & Mayer, 2012, p. 1738).

Persistence: A continued and enduring set of actions. “Persistence in doctoral candidates is the result of the individual and his or her interaction with the social and institutional environment” (Spaulding & Rockinson-Szapkiw, 2012, p. 204).

Personal learning networks: “Networks tailored to address the needs of individuals, for instance, to give learner-centric feedback or advice” (Sie et al., 2013, p. 61).

Retention enrollment: Completion of a pre-ordained course of study. “Related to the development of a connected relationship between the faculty and the student” (O'Brien et al., 2002, p. 4).

Self-Determination theory: “A regulation of individual choices that flourishes based upon interactions that support the psychological needs of the individual” (Litalien & Guay, 2015, p. 219).

Social connectedness: Describes the feeling of belonging to a social group and implies the creation of bonding relationships (Rield et al., 2013, p. 673).

*Social network sites (*SNS): “Online settings that allow users to register and connect to each other to communicate or share resources, with a primary focus on social, interpersonal communication” (Sanchez-Franco et al., 2011, p. 256).

Social presence: “Social presence relates to the need for users of technology-based communication to perceive each other as real people” (Kear et al., 2014, p. 1).

Assumptions

This study will be guided by two assumptions. The purpose of the study to understand the lived experiences of the online doctoral student in the dissertation phase who used SNS to remain connected and persistence. I used students from various universities to collect data. I assumed the information I learned may not reflect the opinion and beliefs of every online doctoral students that were in a100 percent online doctoral program. I also assumed participants would answer my open-ended interview questions honestly and completely while knowing that they could leave the study at any point.

Scope and Delimitations

The focus of this study was to understand whether using SNSs during the dissertation phase helped online doctoral students complete their dissertation and graduate. The scope of the study was limited to SNSs used by online doctoral students in the dissertation phase. In the study, I did not cover doctoral students who had already completed their degree through an online program. I did not seek insights from students who were completing their degree in a traditional face-to-face program. In using Wenger's (1998) CoP, I focused this research on understanding whether on-going social interactions were important in facilitating social presence and exchange of knowledge using SNSs, during the dissertation phase. I limited my research to online doctoral students to add to the body of knowledge on using SNSs to retain students in the dissertation phase in completing their degree.

Limitations

The primary limitation of this study was that it did not include external validity from individuals who completed their dissertation and degree through an online doctoral program. Another limitation was that the collection of flawed data for this study as some participants might have distorted the truth to make a statement about their experience. Limitations to this study may be attributable to timing because the participants were working on their dissertations with demands on their personal responsibilities. The time associated with other engagements or availability and duration of the study may have affected the results of the study. My use of purposeful sampling may have limited the number of participants needed to address the focus of my study. The limited data may have weakened descriptions and caused the result to be deemed unreliable. Lastly,

because I was an online doctoral student in the dissertation phase, researcher bias may have caused concerns related to misinterpretation or overstatement of the participant's response. In addressing these concerns, I used a peer debriefer to review analyzed data to ensure the participants' thoughts and words had not been altered or overstated by me. Spillett (2003) indicated that peer debriefers could help to ensure the credibility of a qualitative study by ensuring the researchers' collection and analysis of data were accurate and complete. My goal was to establish an open, honest, and transparent delivery of participants' responses, to limit researcher bias, and ensure the credibility of results.

Significance of Study

Higher education personnel understand the need to provide all students (i.e. traditional and online) a richly filled instructional design that was central to the success of students. Retention of online students was a major issue for higher education administrators; I hoped to add to the body of knowledge an understanding on whether SNSs helped online doctoral students in the dissertation phase stay connected and persistent. Rockinson-Szapkiw et al. (2014) suggested faculty members should be encouraged to use social networking technologies to increase connections, whereby fostering persistence and decreasing attrition. Asking instructional designers to develop curriculum plans that mandate weekly interactions using an SNS for students in the dissertation phase could potentially help or hinder student progress. The primary reason was that students must set aside time to engage in these interactions which may be helpful or a hindrance. However, it was worth noting that the inclusion of tools that encourage social presence and engagement with others could be the means to increasing

retention and completion of, in this case, the dissertation and doctoral degree.

Implications for social change was schools from K-12 to colleges/universities could use the knowledge to rethink course design for students taking online courses. The goal was always to provide students with skills that allowed them to be successful. Employing the use of SNSs to increase social interactions among students in online courses could hopefully ensure they did not leave the course or drop out of school before completing their educational program. Moreover, ensuring doctoral students complete their degree will lead to better opportunities in the workplace. For the graduate, a completed degree could potentially lead to increased income, which most doctoral students will agree can help provide a better life for their families, and the communities they live. As for workplaces, employees receiving higher degrees improves the workforce and provides society with a more educated workforce. Lastly, local businesses would have access to workers who acquired multiple skills related to research, analysis, conducting needs assessments, and more. It was possible these newly acquired skills could boost the economic growth and development of schools, businesses, and communities for the future.

Summary

Online doctoral programs were continuing to grow at a high rate of speed. Primary issues focused on a large number of students who started but never finished their degree. The high rate of attrition of online doctoral students was causing universities to find newer strategies to help students be more connected in an online environment. The use of social network sites as a necessary technology tool provided the support missing from online doctoral programs. Reviewed literature in Chapter 2 outlined the need to

create opportunities for students to interact with one another while studying in an online environment. In Chapter 3, I described the design approach that was used to explore this phenomenon.

Chapter 2: Literature Review

Online learning has increasingly become an attractive method for adult learners seeking undergraduate or graduate degrees. For this reason, administrators in higher education increased the number of online courses to meet the growing need for adult learners either in postsecondary programs or planning to return to school. Babson Survey Research Group and cosponsored by the Online Learning Consortium (OLC), Pearson, StudyPortals, WCET, and Tyton Partners for 2015, indicated enrollment in online courses increased 3.9% from the 3.7% reported in 2014 (Allen, Seaman, Poulin, & Straut, 2016). The report suggested that after 13 years of surveying online learners, distance education has become mainstream in higher education. In the final report, *Online Report Card: Tracking Online Education in the United States*, Allen et al. indicated that online education is critical to an institution, even though data suggested that students enrolled in distance education dropped from 434,236 from 2012 to 2013 to 390,815 from 2013 to 2014.

The need to for institutions to continue offering online education is crucial to their survival given that institutions continue to experience a decline in students enrolling in higher education (Allen et al., 2016). On the other hand, Allen et al. noted that even as online course registration increases, academic leaders who see online learning as a critical strategy for long-term growth realized that online learning fell from 70.8% in 2014 to 63.3% in 2015. Higher education personnel need a better understanding of how online doctoral students use social network sites to overcome feelings of isolation and to enhance persistence. Perhaps knowledge learned about social network sites can help higher education incorporate programs to help reduce attrition of online doctoral students

in the dissertation phase. In this study, I explored ways online doctoral students in the dissertation phase are using social networking tools to overcome isolation and increase persistence. Major literature reviewed for this section focused on *retention of online graduate students, learning within a community of peers, social presence in online courses, social network sites, connectedness, and persistence.*

Analysis of existing research indicated a need to understand how different social technologies are used to increase interactions and foster connectedness leading to persistence (Bennett & Folley, 2014; Gray et al., 2013; Lahenius, 2012; Rockinson-Szapkiw et al., 2014; Strayhorn, 2012; Sung & Mayer, 2012). In this literature review, I focused on the retention of doctoral students, social presence in online and face-to-face environments, communities of inquiry, and communities of practice, which can promote connectedness and persistence among doctoral students in online programs. The following research questions helped me to understand the impact of SNS on doctoral students in online doctoral programs: (a) how do online doctoral students in the dissertation phase use social networking tools to create connectedness with their peers; (b) how do they understand these tools as helping them overcome feelings of isolation; and (c) how do online doctoral students describe connectedness and its importance to their persistence?

Literature Search Strategy

To prepare for researching journal articles for this study, terms used in databanks focused on the doctoral student using SNS to stay connected and persistent, higher education rate of attrition for doctoral students, dissertation completion in and online environment, and social network sites for facilitating social interactions, learning

communities, and social presence. Several research databases were used to gain insights: ProQuest, Google Scholar, ERIC, Thoreau, Science Direct, and Walden Dissertation & Theses. Keywords included: online learning, doctoral students, dissertation, and graduate students, SNS, learning communities, communities of inquiry, and the community of practice, college, online programs and higher education. To increase understanding of the behavioral aspect of online learners, PsyINFO, Science Direct, Taylor & Francis Online, Babson Survey Research Group, Pew Research Center, and SAGE served as resources for exploring perceptions related to social interactions, connectedness, and sense of belonging, social presence, and persistence.

In addition to gathering information from databases, a search of books and publications used in this study were obtained from Augusta University's Reese Library and through online. Additional resources included articles/publications from ResearchGate and Association for Educational Communication & Technology. To ensure in-depth richness of sources, refereed and peer-reviewed articles operated as the primary source of information for this review. Cases where limited information regarding the topic was lacking, relatable sources were used to develop an understanding of how technology tools are used in undergraduate and graduate classrooms to enhance student engagement, interactions, and persistence. For example, due to the limited amount of research on online doctoral students in the dissertation phase, I explored literature focused on social presence and engagement from the perspective of undergraduate and graduate students. Finally, I explored the perspective of instructors and mentors who used social network sites to connect with students to share knowledge and encourage persistence.

Conceptual Framework

Patton (2015) noted that theories are central to studying science. Patton indicated that theories are part of a system that explains "how the world is the way it is" (p. 163). For example, in social science, theories help to explain the actions of human beings. Factors and variables found in a study helped researchers determine why things happen the way they do in the world. In my study, Wenger's (1998) CoP theory will be used to investigate whether students in online doctoral programs perceive an improvement in the sense of belonging to sustain connections and persistence. Wenger (1998) suggested networking in the form of making connections and engaging with others in a community help build relationships where learners can learn from each other. The concepts of learner problem solving, collaborating, and sharing knowledge with one another is the hallmark of adult learning. By using CoP, I hoped to illuminate how shared communities of online doctoral students in the dissertation phase using SNSs helped them cope with feelings of being disconnected. I chose interpretative phenomenological analysis (IPA) to focus on researching how participants understand their use of SNSs to counteract feelings of isolation, disconnection, and giving up while improving personal self-awareness.

Ryan and Deci (2000) introduced the concept of self-determination as a theory focused on *social-contextual conditions* which address the process of self-motivation and psychological well-being. Wenger (1998) described these social connections as doing "what it takes to keep going" (p. 276). In comparison, self-determination theory signifies studies on human motivation and personality and attempts to answer what or why people do things they do, from the standpoint of intrinsic and extrinsic motivation (Ryan & Deci, 2000). They noted that motivation whether intrinsic or extrinsic depended on how people

internalize the value of discourse, and how the integration of the task will help to increase their sense of self. Ryan and Deci indicated that people have psychological needs: competence, relatedness, and autonomy which need nurturing within their social environment. Dunn, Rakes & Rakes (2014) found that self-regulation in online learning requires continuous communication. They reported the result of continuous communication was motivating and caused online learners to think about their goals and what it takes to be successful. Lin et al. (2015) suggested that self-regulated behavior impacts online learning and learning achievement. They wrote that students with high levels of self-regulation, as opposed to central level students with low achievement, actively sought information from all available means and sources. Their findings suggest that online students with high levels of self-regulation have the skills necessary to connect with others and persist in an eLearning environment.

As a social learning system, Wenger (1998) indicated characteristics of CoP within social systems included relationships between the individuals and the world. Wenger purported the social context of meaningful learning requires the interplay of participation and reification. The presence of participation provides opportunities for active learning, conversations with other members of the community, reflection, and sharing of other social experiences. Reification, on the other hand, encourages the production and gathering of artifacts such as words, tools, concepts, methods, stories, and other resources which include sharing experiences within the community. Hence, the use of SDT for exploring student knowledge sharing and collaboration will help to inform the studies need to understand how SNS can help reinforce a sense of belonging in communities of practice.

Literature

Retention of Online Graduate Students

Academic leaders, as reported in the annual Babson Survey Research Group reports on tracking online learning, contended addressing barriers related to more discipline, and lower retention rates are critical issues to the success of online learning (Allen & Seaman, 2013, 2015; Allen, Seaman, Poulin, & Straut, 2016). Although these annual reports noted that institutions see the value in instituting online learning for long-term strategic growth for enrollment, academic leaders contend that online learning is not appropriate for all students. For example, Allen and Seaman (2013) pointed to the fact that from 2007 to 2012, the self-regulation of students in online courses contributed to growth patterns of 80 % to only 88.8 % by 2012. This moderate increase in student performance supports the notion that a student's self-discipline can have an adverse effect on student success. These findings suggest that students in online courses need discipline if they are to be successful while completing their degree in an online environment. Hart (2012) indicated the increase in online learning comes with a cost when factors such as persistence and sense of belonging are left unsupported; the result is low retention in many situations. Reidl, Kobler, Goswami, and Kremar (2013) noted that SNS could be designed to support the creation of social connections for online learners while contributing to the student's social capital. Lin et al. (2014) found that when learners were satisfied and felt a sense of belonging, they were more inclined to remain in their program. They offered the following as determining continuance: "... a strong relationship between pleasure, connectedness, system quality and satisfaction than between awareness and satisfaction (p. 601). Ratneswary and Rasiah (2014) contended

that SNS help to facilitate a team-based approach that could have a positive effect on a students' learning experience and motivation in online learning programs. The use of SNS for online learners can simulate being in a classroom by providing students with real-time connections with peers and instructors.

While student discipline is critical to success, academic institutions are continuously concerned with the retention of students in online courses. Angelino, Natwig, and Williams (2007) indicated that feelings of isolation are a key reason online student fail to complete their online course or degree. Bawa (2016) suggested that even though colleges are seeing an increase in online enrollment, retention of these students in online courses remains low. Bawa noted that factors such as family commitment, social obligations, motivation, and lack of socialization appear to contribute to high attrition rates in online classes. Bawa indicated students had several misconceptions regarding online learning which led to high attrition rates. He noted that central to student's misconceptions were "...workload, cognitive challenges, and general expectations" (p. 8). The result of his review found that student success and completion of online classes is dependent on providing social support. Gaytan (2015) interviewed fifteen online students to compare the perceptions of students and faculty to understand the factors which affect student retention. Gaytan found that student self-discipline was the number one factor which impacted student retention; whereas students indicated increased faculty instruction affected retention. Student's suggested there was not enough faculty instruction and the weekly homework assignments left them accountable for their own learning. Although Gaytan found four additional factors affected student retention, the students perceived faculty instruction was more important.

On the other hand, Fetzner (2013) surveyed students between the age of 20-24 years old and primarily males. Fetzner found there was a consensus among 47.6% of the students on the top three reasons why students were unsuccessful in online courses. Fetzner found that 19.7% of the 438 students who completed three surveys on why online students were not successful stated the number one reason was they "got behind and couldn't catch up" (p. 13). Also, students who took the three surveys indicated: they did not know what to expect, they did not know where to go for help, and they did not know the time commitment and organizational skills needed for online course. Fetzner concluded that institutions should spend more time helping online students develop soft skills. Fetzner contended the soft skills will not only help students be successful in an online environment but will cause them to remain in the course. By comparison, Duncan and Barczyk (2013) found the age of online learners within a community of practice had no effect on learners whether they were less than 25 or over 25 years of age. However, they discovered that in some areas age did matter when it came down to sense of learning in an online environment finding that learners 25 and over were more apt to ask questions and get help as they delve into learning the course content.

Results from an ongoing institutional research projects by the Babson Research Survey Group has indicated academic leaders agree that student retention is critical to a strategy for institution long-term success (Allen & Seaman, 2013, 2015; Allen, Seaman, Poulin, & Straut, 2016). Allen and Seaman (2013) stated retention rates for online learners continued to rise during 2008 to 2012. They reported that a sharp increase in data gathered from private for-profit institutions suggested that retention rates grew from 74.9% to almost 90% during 2008 to 2012. Allen et al. (2016) indicated that although

online learning remains a key strategy in institutions success, institutions saw a decline in students enrolling in online courses (71% to 63%). Also, Allen et al. noted that public and nonpublic institutions experiencing the same issue of increases in retention reported the increase is less in for-profit institutions. Moreover, academic leaders from both sectors suggest other barriers besides retention rates may be impeding the progress of online learning (Allen et al., 2016). For example, academic leaders suggested that faculty lacked the time and effort needed to create quality learning outcomes for online learning. Also, academic leaders contend that not all students are equipped with the necessary skills needed for online learning (Allen & Seaman, 2013; Allen et al., 2016). Lastly, Allen et al. (2016) reported that academic faculty suggested that learning online versus face-to-face has shrunk from 77% in 2014 to 71% in 2015 suggesting this decline might be due to lack of self-discipline with regards to the student.

Strategies that diminish feelings of isolation in online students in what is already a lonely environment has shown to reduce attrition as reported for some time. Strayhorn (2012) found that sense of belonging is critical to student persistence while studying in an online environment. He suggested student frequency of using social network sites like Facebook could have a positive effect on retention. Dunlap and Lowenthal (2009) found that persistent interactions using Twitter increased student interactions. Students did not have to log in and navigate through learning management systems (LMS), which were not in real-time, to participate in class discussions. In other words, Twitter, a social network site, created a social presence and caused online learners to feel connected to the course because they can tweet with their peers (Bennett & Folley, 2014; Dunlap & Lowenthal, 2009). While research continues to point to the importance of a sense of

community, Brady, Holcomb, and Smith (2010) noted that social presence is a significant factor in promoting a sense of community in online courses. To facilitate community building in an online environment, Brady et al. recommended that higher education administrators need to rethink the use and value of social network sites for supporting and enhancing online student learning. Gray et al. (2013) indicated that the success of students would depend on their integration into a college community whether online or face-to-face. For example, Bennett and Folley (2014) found that Twitter can help students, doctoral students, interact with a community of people undergoing the same experience as it relates to their respective programs. Shea and Bidjerano (2014) suggested interactive technologies and social practices created transactional space that nurtured an expectation of adaptation between the student and institution to the higher education environment. They indicated institutions have the opportunity of using online learning to provide an interactive and social environment, creating a more flexible space that is sensitive to the goals and needs of individual students, and promote greater success.

Retention in online programs has continued to be a persistent challenge for online course providers. Social networks have been associated with persistence, community building, and academic success.

Learning within a Community of Peers

Community building in the online learning environment has been enacted in various ways. The importance of building learning communities among online doctoral students was the focus of Berry's (2017) study. Berry conducted a case study to explore how interactions and experiences in a learning community affected the outcome of online doctoral student's success. Based on data collected from online doctoral students, she

found that degree-related goals were met as a result of sustained interactions and social support from networking with peers. Gokcearslan and Alper (2015) used Moodle, a web-based program, to examine the effect of locus of control on sense of community, and academic success of teacher candidates in a Programming Language II course. To test the effect, they used 32 students who received the same online learning activity designed based on whether they were assigned to an internal locus of control group, an external locus of control group, or a control group which received limited intervention from the instructor. Findings from Gokcearslan and Alper's study indicated the design of locus of control strategies for online problem based learning environments have no effect on online learning communities, final exam scores, and performance on the teacher candidates.

Some researchers have found that learning communities whether online or traditional face-to-face can reduce feelings of isolation by helping students feel connected (Aragon, 2003; Brady et al., 2010; Ratneswary & Rasiah, 2014; Strayhorn, 2012). Hammond, Bithell, Jones and Bidgood (2010) found that encouraging interactions within an online community helped students learn from each other and increase their knowledge of the content. Hou (2015) found his study of student teachers CoP indicated being connected in the CoP allowed them to be able to support, praise, and encouragement each other in the learning process. Additionally, Hou found that the student teachers' interaction led them to engage in higher levels of thinking and construction of knowledge as a result of feeling more confident and empowered to voice their opinions in a shared space. The result, according to Hou, is the student teachers moved from "... teacher-orchestrated learners to self-directed and peer supported learners" (p.14). Lin, Zhang, and

Li (2016) indicated social network sites grew in popularity as a result of the social support offered to users. In discussing social support, they placed social support in the context of a socio-technical theory with three dimensions as it relates to support provided through the use of social network sites. For example, they contended support through SNS include: (a) informational support, (b) emotional support, and (c) network maintenance. Deshpande (2016) indicated online doctoral students are faced with challenges such as lack of support, due to limited opportunities to socialize with others. According to Deshpande, online doctoral students indicated that their ability to engage with peers in action learning modules provided the encouragement and support they needed to succeed. Another form of engagement is that with faculty. Janta, Lugosi, and Brown (2014) pointed out online doctoral students can make progress with their dissertation simply by making sure to communicate with their supervisor. However, they noted the lack of social interaction with online doctoral students or peers can leave them feeling isolated and not belonging to a group. Myers et al. (2015) indicated the challenge in learning online and through distance education is how to maintain a sense of community. In order to maximize teaching-learning in an online and distance education program, they offer the following options:

- Online technologies that allow for synchronous (i.e., live, or real-time) contact between students and faculty and more traditional pedagogical methods used in a classroom setting, including capabilities of presentations, discussions, and more.

- Course management systems that allow for asynchronous (i.e., not real-time) contact between student and faculty through online assignment submissions, weblog (blog) postings, prerecorded lectures and more.
- Social media sites that allow for more informal socialization among students that would normally occur in the classroom learning environment (e.g., pictures from recent travel, discussion on recent accomplishments, family updates).

The need for social interaction was introduced by Chickering and Erhman (1996) who noted that learning environments should increase opportunities for collaboration and socialization among students to support learning; without these strategies within the learning environment, student learning may find themselves feeling isolated and unmotivated. Early work in this area provided the foundation for current applications. For example. Tinto (1998) indicated the focus of learning communities was that instruction was less about individualized learning and more about collaborative learning as a means for building peer support among students to ensure the success of all students. Riel and Fulton (2001) stated that societies demand workers who are quick thinkers, able to build an alliance to solve challenging problems. Riel and Fulton concluded that community learning nested in the information environment, and that students working in learning communities find greater success by their use of SNS to interact with others. Dede's research (2004) reaffirmed this notion when he found that a learning community was a strategy by which every member worked together to ensure that every member

understands the lesson taught. Zhoa and Kuh (2004) recommended that learning communities required the active and collaborative involvement of each member.

More recent research illustrates the potential impacts of learning through community and its nuances. Jang (2015), in her study of tech-savvy millennials, found these *digital natives* agreed that the convenience of being able to collaborate using social media, mobile computing, and other technological devices allowed them to connect, share, collaborate, respond, and get back responses when working on projects in teams. However, Jang cautioned that all millennials did not find the use of technology for collaborating to be beneficial for the way they learned. Additionally, Neier and Zayer (2015) found in their study on the perception of students' regarding the use of social media to enhance the learning experience, that millennials or *digital natives* did not totally embrace the concept of using social media as a platform for learning. Neier and Zayer reported students, who were perceived as *digital natives*, did not fully understand the various social media tools that were available, however, they were willing to try using familiar social media such as Facebook and LinkedIn to build connections and work in teams on projects. Swayze and Jakeman (2014) indicated students reported they used technologies such as Google, Facebook, Skype, and text to communicate within a cohort of their peers. According to Swayze and Jakeman, the students noted they were able to communicate with their peers about assignments, readings, and how much progress they were making towards reaching their goal. Kumar and Coe (2017) found that online doctoral students regarded peer support as a valuable resource because, they were able to bounce off ideas with their peers as well as have someone read and give feedback for their dissertation. Also, Kumar and Coe indicated that their peers encouraged and cheered

them on during the process. As student connectedness increased through interactions in learning communities, student retention increased, as evidenced in other research (Gray et al., 2013; Thomas & Kryilmaz, 2014).

Other facets of learning can be impacted by community-based learning. Borthwick-Wong and Jones (2012) found that learning communities could positively impact a student's academic and social development and help them acquire skills that they can use to make connections across coursework throughout their program of study. Garrison and Akyol (2015) found that recognizing metacognition as a socially situated and socially constructed model as opposed to an individualist model supports elements of both self-regulation and co-regulation. The strength of metacognition as a collaborative learning approach is its ability to support emerging communication technologies. Lastly, Garrison and Akyol concluded that females had higher co-regulation than males and subelements of self-regulation and co-regulation were not clear regarding monitoring and maintenance functions of collaborative learning environments.

From the perspective of constructivism, Thomas and Kryilmaz (2014) noted the learner, as the central focus of a learning community, can acquire knowledge through interactions with peers and with the use of technology. Ribchester, Wakefield, and Miller (2012) indicated the use of pre-induction social networking helped to facilitate the familiar with the unfamiliar for students transitioning to college. They noted that participation in pre-induction social networking allowed students entering a course to feel at ease. They could familiarize themselves with other students, the instructor, the tutor, and course material, before the course commenced. Ribchester et al. indicated that students who joined Ning network site reported they felt valued as if they were part of a

close-knit family focused on learning content as opposed to Facebook where interactions were more socially based. Ribchester et al. indicated the pre-induction of a social network meeting by way of Ning helped the students develop a sense of community and program identity. However, the researchers reported that results from their study primarily focused on students between the ages of 18-21 who were already using some form of social networking. They suggested more research on older students using pre-induction social networking upon entering college was needed. Abdelmalak (2015) indicated learning communities were critical to the success of students in online environments. Abdelmalak studied how Web 2.0 technologies enhanced learning communities for online learners. They wanted to understand the impact of technologies such as Twitter, Google Docs, Skype, blogs, and wikis on building communities of learning.

Abdelmalak found that students believed Google Docs enabled them to build learning communities through processes such as editing their peer's documents, sharing ideas and information, as well as providing feedback about ways to improve writing. Abdelmalak noted that students reported wiki, Twitter, and blogs helped their sense of community because they could learn from each other, share ideas, information, and comments. Abdelmalak indicated students in this study did not believe that Skype facilitated a sense of community. Abdelmalak discovered that the students preferred using their cell phone to stay connected with their peers.

Communities have been recognized as a useful strategy in the online environment to provide what typically occurs in the classroom environment. Wilcoxon (2011) found a consensus among numerous researchers that learning communities were established for

learners in a social environment to learn. Lahenius (2012) sought to enlighten the importance of CoP on helping doctoral students establish a support system through peer interactions and by networking with others. Lahenius found that CoP allow interrelated groups who share a common interest to share information and support one another, during the learning experience and outside of face-to-face interactions. Furthermore, Lahenius suggested that CoP operated like learning communities, which can serve as a beneficial tool for helping doctoral students enhance their learning. Myers et al. (2015) indicated a community of scholars (COS) was beneficial in that students are able to interact with other faculty, professionals, and other experts who can serve as mentors and provide information which can help them reach their goal of completing their degree. Myers et al. noted by providing opportunities for students to interact in these online sessions, doctoral students can get answers to questions related to being a PhD student.

On the other hand, Oztok, Zingaro, and Makos (2013) cautioned that one cannot assume that every interaction within a learning community means that all the participants have had the same experience. Kear et al. (2014) indicated that online communities could potentially cause the development of poor relationships that can lead to low participation by virtue of the degree of social presence which can be enhanced through personal profiles and visualization. Without adequate social presence, suggests Kear et al., students are less likely to have uniform experiences. The effectiveness of learning communities is its ability to help online students connect, interact, and exchange information in a supportive and non-judgmental environment.

Online learning communities offer a platform for sharing information that for some students can help them improve how they learn while fostering a sense of

connectedness, a feeling of community, and increasing motivation. Thus, by aligning the concept of learning communities with theories on social presence, online students may be able to overcome feelings related to lack of motivation and isolation, as they engage with their peers in real-time using social network sites. Research into the significance of social network sites helping to build learning communities with an on-going social presence among doctoral students in the dissertation phase is the focus of this study.

Social Presence in Online Courses

Researchers indicated that when students feel disconnected in an online environment, they are less likely to put forth energy needed to perform well, which can affect retention and completion of online degrees (Hart, 2012; Trujillo & Tanner, 2014). The theory of social presence conceived by Short, Williams, and Christie in 1976 when they defined it "… as the degree of salience (i.e., quality or state of being there) between two communicators using a communication medium" (as cited in Lowenthal, 2010, p. 125) continues to evolve. From Short, Williams, and Christie's initial investigation of the effect of social presence on online learning, Lowenthal (2010) concluded that social presence exists on a continuum where on one end an individual is *real*, and on the other end, the perception of an individual as *being there*. Lowenthal concluded that online learners could cause others to know they are present just by interjecting themselves into online interactions. Cui, Lockee, and Meng (2013) indicated that although online learning provided flexibility and options with regards to customization of programming, based on the needs of the student, social presence affects communication issues which may occur between instructors and students. They concluded that based on research from 1970 to 2013, the theoretical framework of researchers helped shaped the perceptions of social

presence. However, Cui et al. suggested further research should explore social presence as an instructional strategy for the development of online instruction that will ensure the satisfaction of student's in online environments.

Cho and Kim (2013) indicated online student's mastery of content was related to the perception of being socially connected with their peers. As a result, these students exhibited higher self-regulation towards interaction with peer. Dunlap and Lowenthal (2009) reported that factors such as social interactions and connecting with peers in online courses helped to increase student engagement. For instance, using Twitter, a social network site, caused students to feel personally connected to peers because of the real-time interaction. Rohr and Costello (2015) determined that students who were enrolled in a large online kinesiology and recreation course, found that Twitter helped foster their engagement and social presence in the online course. Additionally, Rohr and Costello (2015) reported that students felt the social presence created as a result of integrating Twitter in the course created a sense of connectedness with their classmates.

Kyei-Blankson, Ntuli, and Donnelly (2016) focused their study on whether student interaction and social presence had an effect on sense of community in an online learning environment. They found an overwhelming consensus by participants in their study suggested that Learner-Instructor interaction, Learner-Learner interaction, Learner-Content interaction, Social Presence, Cognitive Presence, and Teaching Presence were important to their online learning experience. However, they concluded the most important elements found to be significant to the participant's online learning success were Teaching Presence, Learner-Instructor, and Social Presence. Schroeder, Baker, Terras, Mahar, and Chiasson (2016) furthered these findings in their examination of

social presence of online graduate student's regarding connecting with peers. They found that attempts by instructor to increase connections among online graduate learners was unsuccessful. Online graduate students in this study indicated they preferred connecting with their academic advisor and instructors who were highly experienced and could provide them with the information they needed to be successful in their program.

Social presence offers an opportunity for learner to establish connections that can further learning. Oztok and Brett (2011) found that social presence supports the formation of relationships and exchange of information among online learners establishing an open and accepting exchange of ideas. Lim and Richardson (2016) found that there was no significant difference between the intensity of social networking use and perceived social presence. However, they did find that educational SNS that were built on non-existing relationships to conduct activities fostered community building when members were critiquing and relying on one another for support. Plante and Asselin (2014) indicated that social presence was enhanced when socialization and connectedness to a group were present. They found that online faculty could help create a sense of belonging and a sense of community by promoting an environment similar to traditional classrooms of caring and social presence. Kumar and Coe (2017) found that mentees in an online doctoral program indicated they needed more frequent and timely communications from the mentor. The mentees in this study agreed that mentors who used various communication tools such as email, Skype, telephone, Elluminate, Adobe Connect, and virtual cloud software provided them the opportunity to ask questions, discuss common problems, share progress with their peers, and the mentors.

Tu and McIsaac (2002) first articulated the notion that social presence is the

feeling one experiences within a community of online learners. Thus, the degree of social presence experienced by students online can be summed up as a product of three dimensions: social context, online communication, and interactivity. Sung and Mayer (2012) posited that the absence of social presence can leave online learners feeling isolated and lonely. They described factors that affect online social presence as social respect, social sharing, open mind, social identity, and intimacy. Accordingly, Sung and Mayer suggested these factors may impact online learner's emotions, feelings, beliefs, and values as they struggle to share personal stories and information in an online environment. In comparison, Oztok et al. (2013) indicated the role of social presence cannot guarantee that members interacting within a community will have similar experiences. The advantage gained was that the members of the community bridged social capital while benefitting from one another. The result was students got to know the personal side of other students in their classes while engaged in learning.

Thomas and Kryilmaz (2014) found that learners became engaged in the learning process when they saw that others were interacting and exchanging information with one another furthering social connectedness. Kear et al. (2014) noted that social presence exists because students in online courses felt that the technology used to enable them to interact with real people in real time. Phirangee and Malec (2017) explored the perception of students who felt *othered* as an online learner. They reported 3 themes were identified: professional other, academic other, and ethnic other (p. 165). They found that when students felt "*othered* in online courses, the potential for feeling disconnected and isolated is greater. The concluded that a strong social presence was critical to ensuring online students feeling welcomed and valued in an online course environment. Feelings

of isolation as students become increasingly engaged with one another are reduced through their interactions using social media.

Aargon (2003) wrote that the goal of social presence should be to create a level of comfort that helps students and instructors interact with one another whether they are in an online course or face-to-face. These interactions can improve motivation, which hamper feelings of isolation in an online environment. Sung and Mayer's (2012) study on social presence revealed that social presence described the feeling of connectedness individuals have with each other in an online learning community. They suggested that students in online courses may become frustrated when social presence is missing. Akyol and Garrison (2008) used CoI to understand the progression of online learner's satisfaction and learning. They found a significant relationship between perceived learning and satisfaction about teaching, cognitive, and social presence. Akyol and Garrison concluded that cognitive and teaching presence was important to student learning and satisfaction and that social presence had no effect on learning. However, they found social presence influenced student satisfaction. As one of the students from the study suggested, social presence allowed students to express themselves comfortably from the start of the courses and to the end of the course (Akyol and Garrison, 2008). In an effort to understand the influence social interaction and social presence on personal learning environments with the use of social media, Kozuh, Jeremic, Sarjas, Bele, Devedzic and Debevc (2015) furthered these findings by utilizing two strategies (social interactions and social presence) to examine the effect on improving the online presence for learning (OP4L) of students. They found the more students interacted with one another in discussion groups, the greater the quality of the social interactions, and the

greater academic success. With regards to social presence and academic success, they found there was no significant relationship even with an increase in social presence.

Armellini and Stefani (2016) suggested that social presence is an integral part of teaching and cognitive presence. They contend the original CoI framework described teaching, cognitive, and social presence as separate entities. However, the results of their study found that social presence may not necessarily encourage better online learning. They concluded social presence caused learners to become more expressive within teaching and cognitive presence.

From the literature reviewed, the existence of social presence intent is that students are less likely to suffer from feelings of isolation and loneliness in an online environment, although how social presence may be enacted, supported, and used to improve student academic success is not uniform

Social Network Sites

Social network sites were created with one goal in mind, and that is to connect and interact with others in a public or private domain (Boyd & Ellison, 2007; Maier, Laumer, Eckhardt, & Weitzel, 2015; Trepte & Reinecke, 2013). Initially, social network sites were described as the ideal tool for helping distance education students communicate with one another in an online environment (Brady et al., 2010). Sanchez-Franco, Villarejo-Ramos, and Martin-Velicia (2011) indicated that social network sites focused on interpersonal communications that bring users together by connecting them with one another and sharing of resources. Also, social network sites allow users to participate and connect with individual or groups based on the topic of interest or focus (Bicen & Cavus, 2011). Social network sites can be defined as a tool that creates a

platform for interacting, sharing, and connecting with others in a web-based social media outlet.

Luarn, Yang, and Chiu (2014) indicated as a public or private domain, SNSs provided users with a platform where they could send private messages, share photos and videos, send blogs, and instant message. In their study on the dissemination of information using Facebook, they found larger connections among people on Facebook led to higher transmission of information. The results established that in order for information to move across networks quickly, a high clustered network of users was needed, making the significance for both network degree and network cluster parallel to one another. Thus, larger networks are more likely to provide a satisfying experience.

SNS with learning environments are used in a variety of ways using a variety of tools. Eid and Al-Jabri (2016) noted that although students were using SNS to share information, collaborate with peers on homework assignments and projects, they wanted to understand the impact on the use of SNS on college students. They found a relationship existed between students' use of WhatsApp, YouTube, and Facebook when engaging in chats, discussions, and sharing file with their peers. In fact, they concluded the knowledge sharing caused the student's learning to improve. Lin, Zhang, and Li (2016) indicated traditions of top-down as the driving force for use of products by institutions as government, media outlets, retailers, and manufacturers has been replaced by bottom up internet users with regards to SNS. They suggested this reaction was a result of the spontaneous interaction in real-time which occurred among Internet users. The results revealed that social network sites are being used for different technological reasons beyond organization and businesses. Evans, McFarland, Rios-Aguilar, and Deil-

Amen (2016) found that the social media students use predicted their academic success. They reported that students who participated with the SchoolApps, a socio-academic exchange network, maintained a better grade point average then students who did not, and that students who maintained online friendships were more likely to complete all attempted coursework. Thus, social networking can have a direct impact on persistence and possible motivation.

Greenhow and Robelia (2009) noted that social network sites differ from other communication in that users can make their connections visible thus indicating the status of relationships between members. Brady et al. (2010) found that social network sites helped students engage in deeper levels of reflection as a result of being able to communicate and collaborate with other members of their academic community thus expanding presence to a larger community. Steinfield, Ellison, Lampe and Vitak (2013) found that SNS served as a form of social capital place wherein members expand their resources (referencing knowledge sources) not just as a referral but also establishing their place in the network as a valued member. Barczyk and Duncan (2013) noted with regards to social network sites as a resource for collaboration and interaction, 78% of students reported using Facebook to communicate with classmates, 74% used Facebook to share knowledge, 67% used it as a place where they could discuss topics of interest, 66% used it to conduct collaborative learning, and 66% used Facebook to find and share educational resources. Barczyk and Duncan found that Facebook facilitated course learning through CoP by encouraging knowledge sharing, collaboration, interaction, and learner-centered activities thus reinforcing the idea of member as social capital.

Although other research has provided various arguments for the value of social network sites, the essential finding is that social network sites were created to help users establish and maintain on-going communication with others, to offer a collective knowledge community (Greenhow & Robelia, 2009; Sant & Catania, 2014; Sosik & Bazarova, 2014). How SNS are used for communication among learners in a course within a CoI framework varies. Sanchez, Cortijo, and Javed (2014) wanted to determine the extent of Facebook use to increase communication, collaboration, and participation in the learning process and found that students' Facebook adoption as a resource for education was based on perceived usefulness, perceived ease of use, social influence, facilitating conditions, and community identity. Of these influences on Facebook adoption, social influence caused students to latch onto Facebook as they were able to connect with people which they shared common interests and values. However, Sanchez et al. were quick to note that faculty members were not eager to integrate Facebook into their teaching; even though Facebook could potentially enhance the student's learning experience. Maier, Laumer, Eckhardt, and Weitzel (2015) found in their exploration on the impact of SNS on social support theory (SST) that participants indicated that too much social support on SNS could cause exhaustion and lead to social overload. Symeonides and Childs (2015) found in their study on the experiences of learners with computer mediated communication (CMC) that the students were dissatisfied with having to engage in constant written communication. Findings in their study suggested online learners were frustrated with written communication which they believed did not allow them to establish relationships with their peers. These learners expressed discomfort learning in an entirely CMC environment because, they were not always sure who they

were interacting (Symeonides & Childs, 2015). Symeonides and Childs suggested instructors needed to establish themselves as "human" in order to cultivate a safe and interactive environment as well as encourage continuous online interactions.

The impact of SNS for learning may be related to the sustained use of a tool and the level of social presence conveyed. Trepte and Reinecke (2013) examined the long-term effect of continuous use of social network sites on self-disclosure and willingness to interact with others. They found a reciprocal effect on social network sites uses through self-disclosure. In the results, Trepte and Reinecke indicated a *psychological disposition for self-disclosure* moderated a selection effect and a socialization effect which increased social capital in participants who used social network sites more frequently. Lin, Zhang, and Li (2016) noted the value of using SNS is its effect on social support established over time by frequent use. They pointed out social network sites had provided means for students to overcome geographical and temporal boundaries as a result of learning online. Powell, Gray, and Reese (2013) examined the usage and effect of social network sites on the lives and experiences of participants and identified five themes conveyed by participants regarding their usage of social network sites. The five themes suggested that social network sites affected participants usage in relation to a) development and maintenance of communicative relationships with others, b) experience positive and negative emotive responses as a result of interacting with others through social network site, c) reports of compulsive and addictive use, d) preferred to engage in offline relationships, due to inappropriate behaviors which may develop, and e) using social network sites allowed easier access, less intrusiveness, and a more thoughtful means of communicating than offline methods. Lim and Richardson (2016) indicated that students

primarily use SNS to engage in social relationship. They found that 95.1% of participants in their study used Facebook, 84.4% used LinkedIn, and 46.3% used Twitter to connect with friends and for career networking. However, they found that 65% used SNS to gather information and 55% found SNS useful in sharing information and materials with peers. Based on these results, Lim and Richardson concluded that SNS are a valuable educational tool for online environments. SNS have the potential to provide a sustained knowledge sharing community that, if sustained, can enhance learning, create an on-going support system, and provide a venue for social presence.

Social Network Sites and Connectedness

Since their introduction, social networks sites such as Facebook, Ning, MySpace, and wikis have been used to engage learners, increase communication, develop a sense of belonging and improve persistence. Brady et al. (2010) indicated that education-based social network sites were suitable for improving online communication because, they allowed students to share information related to course content, personal feelings as well as other insights that typically occur in face-to-face classes. In support of this perspective, Ryan, Magro, and Sharp (2011) indicated that social network sites like Facebook help to foster a sense of connectedness between instructors and students while bettering connections for students who suffer from low self-efficacy and regulation. Karasavvidis (2010) indicated wikis could help students construct knowledge, as a result of being able to work in a collaborative environment. Karasavvdis asserted that the wiki has the potential of shifting students from passive learners to interactive learners and from individual learners to social learners. But, Karasavvidis noted that students frequently lacked the skills and knowledge needed to use a wiki. Reis (2010) indicated that

knowledge constructed because of active participation in the use of wikis could promote collaboration and the construction of information. Reis noted that, in addition to encouraging active participation, wikis supported solidarity and respect. Othman, et al. (2012) found that SNS can serve multiple functions and require that users perform multiple roles which varied according to the pedagogical design of a course. Felea and Stanca (2013) found that Web 2.0 technologies like wikis provided a platform for cultivating a culture of sharing, collaboration, and cooperation within an academic environment. They indicated that the primary concern with using a wiki as part of the learning process was the readiness of students who are required to work in a technology-driven learning environment. Additionally, Park, Crocker, Nussey, Springate, and Hutchings (2010) noted that students feel empowered using wikis. The students reported that wikis created the autonomy needed to interact with classmates. However, Park et al. cautioned that although students liked using a wiki for group interactions, they reported that the wiki made it difficult to load information causing students to spend additional time rewriting information. In supporting the notion of using wikis in online courses, Thomas, King, and Minocha (2013) indicated that wikis were most effective when used to support the collaborative learning of underdeveloped skills of students in reading and writing. They concluded that wikis could foster support and peer-review of the group's work while encouraging the development of reading and writing skills amid the student's interactions with their peers. Swayze and Jakeman (2014) indicated social networking environments helped members develop academically by facilitating personal support. They suggested the connectedness was nested in deep relationships built on trust, which they described as collegial learning environments shaped by shared leadership. In

contrast, Duncan and Barczyk (2013) contended Facebook had less impact on students' sense of connectedness than on learning. They found, that although students in the study agreed that Facebook lessened the feeling of loneliness and isolation. They liked the benefit of having the ability to collaborate and interact with others during open discussions and forums.

Social network sites have been designed to engage people who are part of a network or who share similar interests and experiences. Current SNS conceived independently of specific tools as a strategy to reinforce connectedness outside of the classroom. For example, Hart (2012) indicated that students who found success in online courses attributed their success to making and sustaining social connections with peers in the course. Ribchester, Wakefield, and Miller (2012) noted social computing helped students build connections and relationships, as well as shape their self-identity and sense of belonging as they integrated into the universities online learning environment. Brady et al. (2010) asserted the use of SNS in higher education was not only a useful tool for online learning but can serve as a forum for students to connect and share information with one another. Rodriguez-Tejedo, Zarraga-Rodriguwz, and Rodriguez-Chacon (2012) examined SNS usage as it related to working with a group on a class group project using Grouply, to see if it helped development the abilities of individuals and the performance of the group and its members as they worked to complete the class project. They found the use of Grouply for the class group project was small. They noted that students indicated communication was better but students felt their ability to learn was hampered by the inflexibility of the technology. Rodriguez-Tejedo et al. suggested that ease of use of a social network site when working with students is related to selecting and ensuring

students can use the technology. As such, researchers have continued to question the value of SNS on attrition and retention of students in online or eLearning environments (Plante & Asselin, 2014).

The ability to interact and communicate with others using SNS serves as a rationale for understanding the importance of social network sites for online learners. Duncan and Barczyk (2013) suggested students found that it was easier to collaborate and interact with one another more often on Facebook. Results from their study on Facebooks impact on CoP concluded: 78% agreed Facebook made it easy to communicate with their classmates, 67% liked the ability to hold forums where they could discuss topics of interest, 74% liked that they were able to share knowledge, and 66% liked that they had access to educational resources on the site. Sant and Catania (2014) found that a relationship exists between using social network sites and interpersonal relationships. In their study, Facebook usage was examined to determine the effect of its usage for various reasons on interpersonal relationships. Sant and Catania concluded that participants in the study reported using Facebook to primarily keep in touch with friends, facilitate already established relationships, and to join and participate in group events. Also, they found there was a gender difference in using Facebook, as males indicated they added friends based on their profile. Based on results of this study, one could conclude that Facebook provides a tool that provides its users a venue for maintaining communication online as well as offline. Sosik and Bazarova (2014) suggested that social network sites allowed people to maintain relationships with their friends, but it is not clear how social network sites help users with relationship maintenance. Sosik and Bazarova indicated that relationship maintenance in Facebook is associated with frequency of communication and

making use of various Facebook media to signal presence. They concluded that social network sites signify co-presence which is essential to relationship maintenance; the more frequently used and more often connected, the stronger the connection.

Research on how social network sites can help a student overcome feelings of isolation indicates may relate to how SNS are integrated into other types of interactions. Thomas, Herbert, and Teras (2014) noted students in online courses indicated that using social network tools helped them develop a sense of belonging which helped them feel more connected than when in a face-to-face course. Connectedness was enhanced through the SNS interactions outside of class. Kear et al. (2014) indicated that constant changes in technology make it difficult for students and instructors to determine if social network sites are a useful tool for online learning and sustaining connections. In fact, most students indicated they preferred communicating with their peers and the instructor face-to-face (Brady et al., 2010). Hung and Yuen (2010) in reporting on the use of Ning to build connections, found value in the use of social network sites as a supplement for enhancing face-to-face courses in building students sense of community and promoting a community of practice. Arnold and Paulus (2010) found that using the social network tool Ning helped to connect what occurred in the classroom to the online environment, reinforcing community.

SNS have strategically been used to support learning in course work though interactions between students. Slagter van Tryon and Bishop (2012) suggested that web-based courses did not produce the same feelings of social connectedness online as found in face-to-face classes. They suggested four themes instructional designers should consider when designing and implementing an online course: a) simulate frequent and

consistent interactions throughout the course, b) incorporate assignments that dictate pace and encourage participation, c) supply comprehensive support for all technologies used in the course, and d) investigate and experience online learning environment prior to teaching online. Slagter van Tryon and Bishop (2012) concluded that e-mmediacy strategies were necessary for enhancing instructional communication within an online environment. They suggested that feelings of social connectedness, e-mmediacy, was essential to online learner success and the factors identified in their 2006 study demonstrated the need for providing online students with the same or similar representation found in a face-to-face course. The use of Social Perceptions in Learning Context Instrument (SPLCI), to measure e-mmediacy (i.e. feelings of social connectedness) in an online environment provided a rationale for increasing social connectedness in an online course. Wichadee (2013) indicated that wikis are being integrated into second language instruction to promote collaborative learning. However, she examined whether student writing scores and satisfaction supported this move. Wichadee found that a small fraction did not agree on the process of collaborative writing. On the other hand, Wichadee indicated the majority of students in this study believed the use of a wiki for collaborative learning helped them improve their writing skills. Wichadee concluded that students reported being satisfied with collaborative learning using a wiki (Wichadee, 2013). Riedl et al. (2013) indicated that communication supports connectedness as seen in tweeting (a source of social networking) can help to foster social connectedness in a computer-mediated environment. With regards to doctoral students in online courses, Bennett and Foley (2014) indicated the use of social

media such as blogging, Web 2.0, and Twitter could help reduce feelings of isolation within a community of doctoral students.

Nalbone et al. (2016) found first-year undergraduates' transition to college was less stressful because, they got to know other students and the instructor through Facebook. Nalbone et al. reported students exhibited positive attitudes and behaviors because of socially interacting with their peers and instructors during their transition to college. Although Nalbone et al. study revealed the use of web technology like Facebook interaction had a positive effect on their performance, they concluded students with low SAT scores were more likely to drop out even with the support of tools like Facebook and that older first-year students had a difficult time forming friendships with the use of Facebook. However, Nalbone, et al. cautioned that while reviewing results from this study participation through Facebook may not represent the true beliefs of the instructor and students on the value of using Facebook as a tool for interaction, learning, and retention.

One example in the value of SNS connectedness was articulated by Cheung, Chiu, and Lee (2011). These researchers indicated the emergence of social network sites created opportunities for collaborating and communicating with online social networks. In using Facebook for their study, Cheung et al. sought to explain why student's used Facebook for collaborating and communicating in an online environment. For this study, they used social influence theory and social presence theory to explain the concept We-Intention. What they discovered is that social presence by way of Facebook significantly affected We-Intention during online courses. More importantly, Cheung et al. found that group norms had a deeper impact on We-Intention, particularly when students realized

they shared similar values. Cheung et al. found that their studies results are consistent with research on the value of social interactions in reducing feelings of isolation in an online environment. Lin, Fan, and Chau (2014) indicated that user attachment to social network sites is a result of feeling a sense of belonging. They found users who felt a strong sense of belonging and satisfaction were more than likely to continue to use social network sites. Also, Lin et al. found there was a perceived value in using social network sites related to awareness, connectedness, and pleasure. Lastly, Lin et al. employed a pure hedonic factor, pleasure, and found that users agreed they used social network sites; because it created a sense of belonging and satisfaction.

Additional research regarding the purpose and usage of social network sites to support doctoral students and decrease feelings of isolation and increase persistence is needed. While research on the value of social network sites for helping students stay connected is evident, the importance of using social network sites at the dissertation phase of online doctoral student retention is scarce.

Persistence and Social Network Sites

Persistence, a term commonly associated with not giving up, whether in public school or higher education. Early on, Rovai and Wighting (2005) noted that persistence among higher education students with a low sense of community would benefit from virtual classrooms through social network sites. Hart (2012) indicated that the success of students in online courses was less about knowledge gained and more about the lack of persistence. Moreover, Hart characterized persistence in online programs as student's satisfaction with online learning, their ability to manage their time, and being able to communicate with the instructor regularly. She argued factors such as a sense of

belonging in a learning community, motivation, peer relationships, family support, time, management skills, and on-going communication may have provided the rationale for why students were at risk of dropping out of online courses. Hart contended that these risks had continuously affected the success of higher education students in online courses.

With regards to doctoral studies, Litalien and Guay (2015) indicated that persistence is the cornerstone of *perceived competence*. They suggested doctoral student's persistence is a manifestation of a heightened sense of self-directed and self-regulated behavior is nurtured through support from advisors. They contend enhanced feelings of competence reduced the likelihood that a doctoral student would drop out.

Glazer and Murphy (2016) indicated persistence in higher education is marked by whether students complete their program and remain in the course(s) in which they are enrolled. In an effort to increase student retention, they conducted a pilot study aimed at understanding whether online master students required to take the University Orientation Seminar as opposed to not making it mandatory, before taking the *First Course* were more likely to complete their Psychology program. They found that student participation in the University Orientation Seminar along with the *First Course* were more persistent and completed the course. Rockinson-Szapkiw, Spaulding, and Spaulding (2016) examined persistence of online doctoral students using two categories "(i.e. continuation of program enrollment in the EdD program after the first semester; withdrawal from program enrollment after the first two semesters of candidacy)" (p. 104). They found that online doctoral candidates connectedness with family caused them to be more persistent as opposed to those who did not experience familial integration. Additionally, student

connections with faculty resulted in higher social and academic integration which caused them to persist. Moreover, they found that students who were satisfied with the social support, curriculum, available programs, and instruction were more likely to persist in completing their doctorate. However, they concluded that financial support, social integration (i.e. faculty and student), and economic did not affect the persistence of online doctoral students in the dissertation phase.

Hammond and Shoemaker (2014) examined whether there is a correlation between academic and social integration, and persistence of graduate students, suggesting that academically and socially integrated students are more likely to persist in completing their degree. They determined this persistence is related to their intellectual development which is nurtured through interactions with faculty and peers. In comparison, Rockinson-Szapkiw et al. (2016) indicated academically integrated doctoral students (i.e. students who were satisfied with their program and the faculty) were more like to persist in completing their dissertation. They concluded doctoral students completing their dissertation in an online program persistence can be attributed to "higher satisfaction with support services and program, curriculum, and instruction ..." (p.108). With regards to social integration, Rockinson-Szapkiw et al. indicated online doctoral students' social integration with their peers was not as high as with faculty members. Participants noted the connection with peers was satisfying from the standpoint of caring about one another, whereas faculty connections allowed them to get support and help with answers to the dissertation process. Rockinson-Szapkiw et al. determined that persistence and retention in an online doctoral program can be predicted by institutional and integrated factors. In

an online learning environment, persistence is becoming a term that can influence a student's ability to finish a course, communicate with others, and graduate (i.e. success).

Laux, Luse, and Mennecke (2016) investigated whether collaborative learning in an online environment influenced student persistent. They found student's perceived connection with the university led to persistence, and when online students did not feel connected they were less committed to persisting. Hachey, Wladis, and Conway (2015) noted student attrition for completing online courses was high, resulting in unsatisfactory student success in higher education online learning. They found that students who had successfully completed an online course were more likely to be successful in subsequent online courses. Their findings suggested that support with regards to instructional design and social interaction may be contributing to this outcome.

Ratneswary and Rasiah (2014) suggested differing preferences in SNS use for engaging learners existed between student and instructor. They contended this disconnect hampers students' engagement and learning. However, they found that the use of the SNS Facebook facilitated team-based learning for students outside of the classroom and in other learning environments. Team-based learning had a positive effect on the students' learning experience and motivation which led to increased persistence. They concluded that Facebook fostered a learning center environment that was not threatening to the student and instructor.

Alt (2015) examined the connection between social media and motivation and found that extrinsically motivated students were more inclined to use social media to engage with others. He determined that the same student's use of social media did not impact satisfying the basic needs of students which he termed Fear of Missing Out

(FoMO). Alt concluded that students who used social media used social media (i.e. SNS) for socializing about a non-academic subject matter. Results from Lint (2013) indicated external attributes that can consist of family and the use of social media had a greater impact on e-Learners' motivation to persist. However, Lint cautioned that too much external attribution could be distracting and slow down student persistence. Lint concluded that social media that facilitates interaction with peers, and the academics remain the best tool for increasing student persistence.

Kelley and Salisbury-Glennon (2016) examined whether intrinsic value and self-regulation caused doctoral candidates to complete their dissertation. They found duration of time had affected the self-regulated behavior of doctoral students. The results indicated a relationship existed between the time doctoral students completed their comprehensive exam and their level of self-regulation decreased the longer it took for doctoral students to complete the dissertation. Rakes and Dunn (2010) examined the impact of self-regulation and intrinsic motivation on academic procrastination. They found that online student's self-regulation and motivation led to procrastination. They concluded that SNS tools like Blackboard with chat rooms created a platform for on-going communication with classmates and the instructor. Thus, SNS may provide the ubiquitous support system for doctoral students that is accessible across time and location.

The use of this technology for lessening procrastination and increasing persistence warrants additional research, due to the potential of technology for creating community involvement and supporting instructional styles. In this study, I used these findings on persistence to examine how SNS use relates to doctoral students' connectedness and persistence while completing the dissertation.

Summary

Social network sites have been found to be excellent tools for building learning communities where interactions are ongoing. Also, social network sites have helped online students communicate and share knowledge within an academic community of their peers. When applied to the online learning environments, SNS can facilitate collaboration and sharing of knowledge by creating a platform for interacting, sharing, and connecting with others in a web-based social media outlet. It is unclear whether SNS can remove the feeling of isolation in students who are completing their dissertation in an online doctoral environment. In this study, I focused on the lived experience of online doctoral students and whether their use of SNS helped them stay connected and stay persistent as they work to complete their dissertation and earn their degree.

In the next chapter, the research approach will inform the use of interpretative phenomenological analysis as the methodology for this study. The research design is organized to provide structure and connections to critical parts of each section as it relates to the researcher's role, methodology, data analysis, issues of trustworthiness, and ethical concerns.

Chapter 3: Research Method

The purpose of this qualitative study was to explore ways online doctoral students in the dissertation phase were using social networking tools to overcome isolation and increase persistence. I was focused on whether online doctoral students used social network sites to make and sustain connections with peers in the dissertation phase and whether these doctoral students perceive the connections helped motivate them to persist towards completing their doctoral degree. Knowledge on the use of social network sites was limited to connecting with peers to share resources, social presence, and networking. Studies on social network sites provided descriptions that contributed to my understanding with regards to its use in supporting online doctoral students in the dissertation phase. Duncan and Barczyk (2013) suggested CoP which were formed within Facebook environments improved student's sense of learning and sense of connectedness as SNS continued to transform how instruction and learning is delivered. Sanchez-Franco et al. (2011) noted that while social network sites allowed users to share information, social network sites were used primarily for social and interpersonal communication. Uusiautti and Maatta (2014) indicated people looking for social connections and individuals to network with resulted in a rise of social media use. Lin, Zhang, and Li (2016) suggested the key to online learner commitment to succeed in an online program was associated with their being able to connect with others for social support through the use of social network sites. Although a large body of knowledge was presented with regards to social network sites usage, descriptions about the lived experiences of online doctoral students in the dissertation phase use of social network sites to stay connected and persistent were unclear.

The literature reviewed in Chapter 2 revealed the strength of social network sites ability to increase student engagement through the use of learning communities and personal learning networks described as collaborators, friends, and external colleagues (Sie et al., 2013). In Chapter 3, the need to understand how SNS might facilitate online doctoral student success at the dissertation stage was the focus of my research. Section one, Research Design and Rationale, includes research questions, central concepts, and the rationale for the chosen tradition. The next section, Role of the Researcher, defines and explains my role, on how biases were managed and planned in addressing issues related to conducting research using social media (i.e. Facebook, LinkedIn, and FindParticipants.com) environment. In the Methodology section, I outline the data collection procedure for this study, participant selection and the process for analysis of data. Finally, the section on Issues of Trustworthiness address matters related to credibility, transferability, dependability, confirmability, and ethical procedures. A chapter summary concludes this section.

Research Design and Rationale

The research questions for the proposed study were designed to understand how using social network sites influenced online doctoral students to remain connected and persistent, during the dissertation phase, to complete their doctorate. The following questions were used to guide the interpretative phenomenological analysis of this qualitative interview study to support my procedures and analysis.

1. How do online doctoral students in the dissertation phase use social networking tools to create connectedness with their peers?

2. How do they understand these tools as helping them overcome feelings of isolation?
3. How do online doctoral students describe connectedness and its importance to their persistence?

The research design followed an interpretative phenomenological analysis (IPA) first theorized by Jonathan Smith, mid-1990s as an approach to psychology, instead of a purely phenomenological study (Smith, 2004). Moustakas (1994) described phenomenological research as exploring the *what* with regards to the meaning of the lived experience of people with a phenomenon. In other words, a phenomenological study uses the lived experiences of several participants to find common meanings from descriptions which explain the phenomenon. In contrast, IPA originated out of principles defined within phenomenology, hermeneutics, and idiography (Smith, 2004; Smith & Osborn, 2008). The difference as indicated by Smith (2004) was that IPA explores how individuals make sense of their personal and social world. The researcher's goal is to make sense of the participants' perspective.

An IPA is a method used in studies that may be complex and new (Smith & Osborn, 2008). Smith and Osborn noted that IPA provided researchers with the flexibility to explore areas of concern in detail. Additionally, using IPA as a design method helped me tease out how online doctoral students used SNS to decrease feelings of isolation and persistence as they completed their dissertation. Smith and Osborn (2008) indicated one of the advantages to using IPA was its focus on the term understanding. They concluded that the term understanding captured two aspects when attempting to make sense of lived experiences such as understanding as a sense of identifying or empathizing with and

understanding of trying to make sense of the participants' world. Because I wanted to understand and make sense of the personal lived experience from the viewpoint of each online doctoral student, I used IPA guidelines to explore how online doctoral students use social network sites to stay connected and persistent.

In consideration of the approaches mentioned above, Smith and Osborn (2008) concluded that IPA inquiry explores the world of people to understand how they make sense of their world from their point of view and to take their side. The danger of using IPA was interpretations is subjectivity. However, Smith and Osborn noted understanding the sense-making of each participant can lead to richer analysis, in-depth details which justified the participant's response. The detailed words of online doctoral students' use of social network sites deepened my understanding of their perceptions to the usefulness of social network sites in promoting connectedness and persistence, during the dissertation phase.

Ethnography is a research focused on large cultural groups, whereas autoethnography involves telling a personal story written and recording from the individual's perspective (Creswell, 2013). If I had chosen autoethnography, according to Patton (2015), I would have had to use my experiences to provide insight into the larger culture of which I reside. As such, I rejected this approach due to its limit of telling a story from lived experiences that could include family, personal friends, and acquaintances. Additionally, Creswell (2013) indicated the stories told by the individual would include personal perspectives, which can exploit the vast cultural domain that the individual resides. Thus, by using autoethnography, I would have had to open up and provide details regarding my lived experience, which would make me appear weak amid

the stories that were told.

Studies related to the use of social network sites were very limited with regards to their use in education, and for improving online doctoral student's success in completing their dissertation. For this reason, I rejected grounded theory because it requires that the researcher sets out to discover how a theory being studied helps to understand explanations provided by participants about how they interacted or used a process under investigation. Creswell (2013) indicated the use of this approach signifies what the participants had experienced with the process, and their experiences could lead to the development of future research. Comments obtained from many participants serve as the basis for determining a theory, which explain a pattern of behaviors. In my study, I was not seeking to use the comments of students to develop a theory about why social network sites may be a valuable tool for supporting online doctoral students working on their dissertation, but how. Thus, grounded theory was not the best option for exploring this topic.

Case studies provide insights or perspectives for an IPA study however, Smith and Osborn (2008) noted that case studies can take a long period of time as transcripts must be critically analyzed. When using single or multiple cases, researchers are required dig deep to get a clear understanding of the events or issues experienced by the participant(s). Creswell (2013) indicated that case studies were best for studies exploring problems or matters related to psychology, medicine, the law, and political science. The challenge for me in using a case study was I would have had to locate a specific case or cases to explore issues related to online doctoral student’s connectedness and persistence. Since I did not have access to individual cases of online doctoral students in the

dissertation phase who had exhibited problems or issues with using social network sites to complete their dissertation, I respectfully rejected case studies as an approach to this study.

I rejected narrative inquiry as a method due to the limited number of participants required for this approach. I was looking to involve more students in order to get a detailed perspective related to the phenomenon of interest. Creswell (2013) indicated that the researcher seeks to tell the story regarding experiences of a single person, such as to understand how social network sites could help online doctoral students stay connected and persistent to the end of the dissertation. I wanted to provide a holistic perspective of the lived experiences of online doctoral students' use of social network sites for sustaining ongoing interactions towards increased motivation and persistence in online doctoral students.

Role of Researcher

Smith (2004) noted that the researcher should take an active role, during the research process. As such, I assumed the role of researcher-as-instrument. As the instrument, I followed an emic point of view to discover and understand the actual text gleaned from online doctoral students in the dissertation phase who used SNS to stay connected and persistent. All of the participants were unknown to me, therefore there was no prior relationship that might influence the participant's disclosures to me.

I used rich, thick descriptions to describe a relevant aspect of the participant's perspective on using SNS to stay connected and persistent while working in an online environment to complete a dissertation. Once I received permission from the Institutional Review Board (IRB), I completed an application to search for participants using

Walden's Participant Pool. Since I was not able to find participants using Walden's Participant Pool, I submitted a change form along with a flyer to search for participants using social media.

Smith and Osborn (2008) indicated the researcher needs to ensure the conversation flows naturally. I built rapport with each participant, by opening with a discussion to allow participants to warm-up and reduce any tension they may be feeling. I asked open-ended questions while encouraging the participant to talk freely about the topic.

Central to my personal values, assumptions, and biases regarding this study was the fact that I was completing my dissertation in an online environment. I made every effort to remain objective and avoided letting my personal biases shape the way collected data were understood and interpreted by bracketing my feelings and views. Moustakas (1994) indicated that epoche, or bracketing, ensured the researcher remained focused on analyzing the experience of the participant. He concluded that by bracketing, firsthand experiences of participants helped validate a phenomenological study and interviews. I provided participants with sample questions in advance, so they could reflect on their experiences and be more open to discussing their experiences, during the interview.

Methodology

This section is organized to provide more details into how I conducted the research. This breakdown serves as a guide for other researchers seeking to replicate this study. The sections include information on participant selection logic, instrumentation, procedures for recruitment, participation, data collection, and data analysis plan.

Participant Selection Logic

Participants for this study consisted of a purposive sampling of students enrolled in an online doctoral program who were currently in the second quarter of their proposal or the dissertation phase. My goal was to explore the impact of social network sites on connectedness and persistence of online doctoral students at the dissertation phase. My criteria for participant selection included: (a) being an online doctoral student, (b) choice points: working for a minimum two quarters on their proposal and in the dissertation phase or only working for a minimum of two quarters on their proposal, and (c) have used at least one SNS while working in the dissertation phase. My rationale for including choice points in item (b) was so that I would have the option of focusing on one group, in the event I receive too many respondents with both criteria. If I had found more participants than I needed, then I would include only those who are in the proposal stage for a minimum of two quarters. If I did not have enough, then I would use participants from all stages, per my choice points.

Pietkiewicz and Smith (2012) noted researchers using an IPA approach to their study should select purposeful groupings that were relevant and personally connected to research. However, Pietkiewicz and Smith cautioned that factors such as: "1. interpretative concerns (degree of similarity or variation that could be contained in the analysis of the phenomenon), and 2. pragmatic considerations (ease or difficulty of contacting potential participants, relevant sample)" (p. 365) may impact the researcher's ability to employ homogenous groupings. Patton (2015) contended that information-rich cases help researchers to gain in-depth insights and information for the study. Maxwell (2013) stated that with purposive sampling researchers can deliberately select people,

settings, or activities that provided information that is relevant to the researcher's study. My choice of purposive sampling was designed to enable me to uncover and get rich thick, in-depth insights from participants who were personally impacted on whether using SNS helped them stay motivated or persistent by being able to connect with peers who were going through the same process.

Pietkiewicz and Smith (2012) indicated researchers using IPA should focus on getting first-hand accounts of the participant's experience with a situation or event. They note IPA is more conducive for small samplings that include a single case or a group of a particular population. Patton (2015) indicated researchers used small samples when they were seeking depth as opposed to breadth of understanding a topic. He concluded that small samples allow researchers to acquire valuable information that help to elucidate the focus of the research and provide robust explanations. Fairbairn (2013), in his study on access to education when living in a rural area used four families, although he had hoped for six families, to explore the benefits of learning in a face-to-face versus virtual environment. As such, Smith and Osborn (2008) recommended researchers using IPA for the first time should identify samplings as small as three. They concluded the danger of having a large number of participants could result in the researcher becoming overwhelmed.

Instrumentation

Smith and Osborn (2008) indicated data collection using an IPA approach should be flexible. In response, I followed a semi-structured approach which IPA purported as necessary for guiding participants (Smith & Osborn, 2008), during the interview. I collected data using in-depth semi-structured interviews, conducted across two sessions

with the participants. Each interview lasted approximately 60 minutes or less for the first session and up to 60 minutes or less for the second. The interviews were conducted by telephone. I used an audio-recorder during the interview sessions and captured notes. I encouraged interviewees to feel free to contact me through email with any additional thoughts which may arise after the interview. I informed participants that if necessary a one-time follow-up interview may be done through email. If follow up interviews were necessary, participants were informed they would take up to approximately 30 minutes to complete. I asked participants if they would send their responses back within 5 days. I had planned to use NVivo 11 software for data management and storage. I stored data in a file cabinet in my home office.

I developed the interview questions based on reviewed literature, feedback from colleagues and the instructor during my Advanced Qualitative Research class, and the essential research questions. The questions were designed to help me understand how online doctoral students used social network sites helped them stay connected and persistent during the dissertation phase. The interview queries for this proposal can be found in Appendix A.

Patton (2015) indicated the use of guided interview questions would ensure participants received the same questions and stimulus at the start of the interview. Moreover, open-ended interview guided questions increased the likelihood that participants would provide an in-depth understanding of this studies focus on social network sites impact on persistence and connectedness of online doctoral students at the dissertation phase. Patton noted a guided interview approach provides the flexibility for researchers to explore, probe, and ask clarifying questions that would elucidate and

illuminate the research topic. By using an interview guided approach, I was able to engage in a conversation with each participant on the research topic. Lastly, Patton indicated interview guided questions help the interviewer stay within a time constraint and focused, during interactions with the participants.

Procedures for Recruitment, Participation, and Data Collection

Once I received IRB approval to conduct the study, I applied to the Institutional Approver, seeking permission to place my study on the participant pool website. Once the Institutional Approver approved my application, I posted my study to the Walden virtual bulletin board hoping to attract interested participants to take part in my study. I was hoping to recruit up to 30 online doctoral students in the dissertation phase, who met my criteria of approximately six to eight participants. I wanted to find doctoral students who were completing their doctorate online and had used a social network site to interact with other doctoral students, mentors/chair, and methodologist, while working to complete their proposal or dissertation. My application included a short description of the study and the following criteria for being able to participate: a) being an online doctoral student, (b) choice points: working for a minimum of two quarters on their proposal and in the dissertation phase or only working for a minimum of two quarters on their proposal, and (c) used at least one SNS while working in the dissertation phase. Further details about this process are detailed in Chapter 4.

Once I was contacted by potential participants that met the criteria for this study, I arranged a meeting to build rapport and learn about the participant. This helped to increase the likelihood of honesty and ensure the interview session was productive. I provided each participant with details of the study and assured them ethical

considerations regarding anonymity and confidentiality were in place. I emailed a consent form to potential participants outlining the goals of the study and asked if each participant would return their signed consent form to me as soon as possible. Once I received the consent form, I contacted each participant to determine a mutual time for an interview between the participant and myself. Data collections took place in real time by telephone.

Data was collected by me, during a one-on-one interview session with each participant. I conducted two one-hour or less interview sessions. During the initial contact, I took the time to introduce and talk about myself and why I chose this topic as well as remind participants they were free to leave the interview at any time. I gave participants an opportunity to talk about themselves before asking any questions, to create an atmosphere of respect and comfort for taking part in my study. Once I felt I had reached a good rapport between myself and the participant, I began the interview.

Data collection took place weekly for approximately 2 months. I contacted the first participant to schedule the first and second one-hour or less interview session, during week one. After the first interview session was completed and coded, I began scheduling the remaining interviews. I conducted first session interviews over an 8-week period. At the end of each interview session, I scheduled the second session interview and transferred audio recordings to a transcription service. I reviewed transcriptions and my annotated notes the next day after each session, while each session was still fresh in my mind. At the end of each session, I let each participant know that I may need to do a onetime follow-up with them through email. I informed them I would email questions which would take approximately 30 minutes to complete. Also, I asked them to return

their response within 5 days. By following this schedule, I was able to complete all of the interviews within 8 weeks.

During interview sessions, I audio recorded sessions and took notes, so I could annotate captured notes along with transcribed notes from audio recordings on checklist matrix (Appendix B) later. Once I received the transcriptions, I reviewed the transcriptions for accuracy. The transcriptions were my first opportunity to read the comments to categorize, code and to look for emerging patterns or themes. I provided transcriptions of interviews to participants for a transcript review as a way of validating the accuracy of my interpretations through member checking. The transcript review took approximately 30 minutes. Participants had the option of opting out of their transcript review. Participants were able to email questions or concerns regarding their transcript back to me. The use of member checking ensured that I had accurately reported the participant's point of view, and validated responses are trustworthy.

At the end of the interview, I thanked the participants for taking the time to answer my questions. I asked each participant if there was anything else they would like to say before concluding the session, in case there was something they may have thought about and wanted to add. I reminded participants they could withdraw from the study at any point, if they became uncomfortable or because they no longer wanted to be part of the study.

Patton (2015) suggested purposeful sampling insures the researcher is selecting individuals who will provide in-depth information that supports the studies purpose. He indicated when gathered information becomes redundant, then the researcher should end data collection. Mason (2010) indicated the most important factors under consideration

for researcher was: 1) to ensure purposeful sampling will inform the study, and 2) to stop when information became redundant. I needed to ensure I had an adequate sample to interview for this study. Without an adequate sample, I could not have generated enough data to code in answering my research questions. In comparison, Patton (2015) recommended that the researcher should specify a minimum sample which the researcher believed would produce rich, this descriptions for the study. I began with interviewing a minimum of 6 participants looking for themes as they emerged. As new themes emerged, which were not expressed by other participants, I moved to interview additional participants, until saturation occurred. Until saturation occurred, Patton indicated the researcher could change the sampling. Saturation occurred once the data I collected from participants became redundant (Mason, 2010). Hence, it was important that I found participants who were currently online doctoral students in the dissertation phase for at least two quarters.

Collecting information related to demographics allowed me to explore which gender uses SNSs more and see whether SNSs enhanced connectedness and persistence. I wanted to know if the gender or age (18 years and over) played a role in whether participants used SNSs to engage with others to share and gain knowledge regarding the dissertation process. I believed this information would help me provide rich, thick descriptions of the participant's perspective on SNS as a tool that may or may not influence online doctoral student success in completing their dissertation online. Also, the demographic information helped me understand whether SNS used mattered based on gender or age. A Pew Research Center report (2014) regarding adult learner and social networking use, indicated there had been a rise from 8% in 2005 to 74% in 2014 in adults

between the ages of 18 – 64 use of the Internet for online learning. In fact, the 2014 report indicated that 71% of adults used Facebook and 23% of adults used Twitter. The Pew Research Center report on women and men indicated that since May 2013, 74% of women used SNS in contrast to 62% of men. Garrison and Akyol (2015) studied the strength of metacognition as a collaborative learning approach and its ability to support emerging communication technologies. They concluded that females had higher co-regulation than males, and sub-elements of self-regulation and co-regulation were not clear regarding monitoring and maintenance functions of collaborative learning environments. Sant and Catania (2014) indicated Facebook offered the potential for sharing with friends, collaborating and attending events; however, they found a gender difference with regards to how males used and added friends to their profile on Facebook. Cho and Kim (2013) studied 407 participants to examine the role of demographics in online student self-regulation while interacting with others. The results showed there was a small to moderate effect of age on mastery of content and student interaction with the instructor and other students. Also, their results indicated that older student had a significantly higher self-regulation for interacting with other students as opposed to younger students with less school experience. Lastly, Cho and Kim found that gender did not affect student self-regulation or the number of courses students had taken online. Huang, Hood, and Yoo (2013) found that gender difference mattered when female students felt marginalized and ill-equipped to access and use Web 2.0 applications. Also, they found that females between 18 – 25 years old used Facebook more than males for support. More information is needed to understand how technology use is being used by online learners in the doctoral phase based on age and gender.

Data Analysis Plan

I used a combination of a priori and open coding to support my analyses. The strategy for analyzing data followed an iterative process. Smith and Osborn (2008) suggested that investigators should review an initial transcript of one participant before interviewing other participants. Analysis of collected data in IPA followed an idiographic approach which takes an example or theme and slowly builds on it until more general categories emerged (Smith & Osborn, 2008). Hence, analysis of data in IPA means that my relationship with transcripts would involve a sustained engagement in interpreting the text. The continued engagement allowed me to gain access to the lived experience of participants which was not exactly transparent.

My initial plan involved collecting and analyzing data from one participant. I used this data to generate a complete list of codes and categories. I did this by reading the transcripts and my captured notes several times to identify interesting and significant ideas in the left margin. In the second stage of analysis, I read and reread transcripts to develop codes and themes which I used for subsequent interviews. As the codes or themes emerged, every effort was made by me to identify expressions that led to theoretical connections from the participant's point of view. I repeated the process with the remaining participants. As I completed the interview process with each participant, the textual results from transcripts became data. I used content coding, too, to capture the words of the participants. My goal was to gather large amounts of data to ensure validity and richness of the content. I displayed codes in the checklist matrix found in Appendix B to make it easier to analyze results later. After annotating the initial participant's responses, I began the process of interviewing, annotating, and coding the remaining

participants' responses in the same manner. A large amount of collected data was added to the richness of the study and helped me write a detailed description of the results. Validation of the content came from aligning the research questions to the content and the use of transcript review and member checking. I created a table using Microsoft Word to help illustrate my conceptual framework and demographics of my study. Finally, I saved collected textual and audio data in EverNote and on the desktop of my laptop for further analysis and storage.

Negative or discrepant data helped to create credibility of research as they showed that I had analyzed the data. However, to strengthen credibility, I went back through the data to determine if I should retain or modify my conclusions regarding discrepant or negative data. As a final step, I reported the discrepancies to allow readers of my study to draw their own conclusions.

Issues of Trustworthiness

Regardless of this researcher's stance in doing a qualitative study, the fact remains trustworthiness was essential to ensuring the reliability of my studies results. Lincoln and Guba (1985) contended through credibility, transferability, dependability, and confirmability the researcher could establish trustworthiness.

Credibility

To insure credibility, I made sure I provided enough time to build trust with participants and I made sure they understood the scope of my study, prior to beginning the interviews. I used a peer debriefer as the lens for establishing credibility to my study. The peer debriefer was asked to sign a confidentiality agreement. I remained persistent during the data collection phase, continuing the process until I had obtained sufficient

details which helped me identify and separate relevant details from details which were irrelevant. I used interviews and data from emailed questions to collect data that would inform my proposed study. By triangulating the data, common themes or categories would emerge leading to evidence of consistency in the views of participants. Member checking provided the validation needed to ensure participants thoughts and intentions were accurately interpreted and communicated by me. I maintained a reflexive journal to capture my thoughts regarding processes used during this study. Lastly, I provided a detailed account of how data were collected to allow readers of my paper to experience the outcome of the process through my lens.

Transferability

Creswell (2013) indicated the researcher should provide rich, thick descriptions of the study's site, participants, and descriptions with the collection of data. Trochim (2006) noted that other researchers would be able to use the thick descriptions to replicate a study in the context of a new setting or similar conditions. The thick descriptions allowed other researchers to make comparisons with another context. To ensure transferability to other qualitative inquiry, I provided procedural steps regarding the study to include rich, thick descriptions from the aspect of acquiring participants, selection of participants, site, and procedure for collecting data. I arranged times to interview participants using an interview guide. My reasoning for using an interview guide was to ensure each participant was asked the same question in the same manner and to ensure the interview session stays within the allotted time. In the event additional information was needed, I telephoned participants to clarify responses. A Skype session was not used to establish agreement on a dates and times. By using the same modes of inquiry, I was able to

establish similarity of conditions using email and telephone interviews.

Dependability

Carefully made plans are never free of minor problems that could over time and can affect the stability of the data as conditions change (Patton, 2015). For this reason, research studies should account for unexpected changes which may occur during the study to ensure the reliability of data collected (Trochim, 2006). Lincoln and Guba (1985) noted that the researcher is accountable for the accuracy and consistency of the study. As such, the researcher's report should outline any changes that may occur with a detailed description. In keeping with the process of tracking and storing data for an audit trail, I used EverNote software program and my personal computer to store data. I used Rev.com to convert data to text. To establish confirmability, I collected and stored raw data, all interview and observation notes, and any documents which I acquired during the process. The use of these programs made collected data accessible during a potential audit of sources.

Confirmability

Trochim (2006) indicated research studies bring to light the perspective of the researcher. He stated that confirmability accounts for the researcher’s ability to confirm or corroborate descriptions for how data were checked and rechecked. Confirmability could involve 2 or more people working together to ensure the objectivity of findings of the study (Elo et al., 2014). Trochim asserted that data audits could help uncover potential biases or distortions of collected data. Patton (2015) and Creswell (2013) indicated member checking is critical to confirming the credibility of data collected by the researcher. I provided participants with a copy of the notes gathered from interview

sessions and responses to emailed questions so that each participant could ensure the accuracy of information. I engaged in research reflexivity of my personal beliefs, values, and biases to ensure transparency of my position and kept a journal throughout the study.

Ethical Concerns

Janesick (2011) indicated the researcher's role is to establish trust with each participant before starting the research study. To gain the trust of participants for my study, I contacted each participant to arrange a meeting or phone call to explain the intent of my study and thank each participant for their participation. Also, participants in the study received written information detailing their right to leave the study at any time. By sharing the intent of the study with the participants, I obtained rich thick details; because, the participants felt appreciated. At the end of the meeting, I provided a copy of the signed consent form to each participant outlining the study's focus through email to each participant.

There was no compensation for participating in this study. Participation was strictly voluntary, and participants could discontinue participation without penalty. I did not use names and economic status to avoid marginalizing participants in the study. I asked the peer debriefer to sign a confidentiality agreement before having her review my data collection and data analysis process. I provided the transcription service with a confidentiality agreement to adhere to before having them transcribe recorded data. I asked them to keep this signed agreement on file for a period of 5 years. I maintained collected data along with transcriptions using EverNote software program on my computer. These data will be kept for a period of 5 years to coincide with the transcription service.

Summary

In this chapter, I discussed the research design and rationale, my role as researcher, the methodology, data analysis plan, issues of trustworthiness, and ethical concerns. The purpose of this qualitative study was to explore ways online doctoral students in the dissertation phase were using social networking tools to overcome isolation and increase persistence. I recruited participants by using social media (Facebook, LinkedIn, and FindParticipants.com). I collected data using semi-structured interviews with seven participants. I analyzed data collected from the first participant to identify themes which answered my research questions. The remaining interviews followed the same process. I used EverNote and Rev.com to support further analysis of collected data and audios, as well as for storage on my computer desktop. To ensure trustworthiness, I acknowledged possible biases and discussed strategies for ensuring credibility, transferability, dependability, and confirmability.

The fact that I am an online doctoral student in the dissertation phase I could identify with other doctoral students in the dissertation phase who used SNSs to stay connected and persistent. Thus, I was able to delve deep into issues or problems that interfered with online doctoral student success in completing the dissertation. This comparison helped me accurately interpret collected data and report on the effect of using SNSs during the dissertation phase. In interpreting the collected data, my goal was to provide insights into the value of social network sites as perceived by students for improving success. I hoped to illuminate the importance of designing online doctoral programs that use SNSs or other media to facilitate on-going presence through the end of

the dissertation to eliminate isolation and improve motivation and completion of the doctorate.

Chapter 4 consists of an analysis of my findings from collected data. Chapter 5 provides implications of my findings. The goal of this research study was to provide a better understanding of the impact of using social network sites, by online doctoral students during the dissertation phase, on connectedness and persistence.

Chapter 4: Results

The purpose of this qualitative study was to explore ways online doctoral students in the dissertation phase use SNS to overcome isolation and increase persistence. I used an interpretative phenomenological approach (Smith & Osborn, 2008) to gain perspective of online doctoral student's usage of SNS to navigate their doctoral journey during the proposal or dissertation phase. I worked to gain insights from the perspective of online doctoral students who used a SNS for support as they completed their proposal or dissertation in physical isolation from peers. The overarching research questions used to gain access to the experiences of participants in this study were:

1. How do online doctoral students in the dissertation phase use social networking tools to create connectedness with their peers?
2. How do they understand these tools as helping them overcome feelings of isolation?
3. How do online doctoral students describe connectedness and its importance to persistence?

The results from this study may provide higher education trustees, policymakers, instructors, and external stakeholders newer ways to support online doctoral students and other online learners as they work to complete courses which will lead to a degree. In this chapter I present details about the setting, demographics, data collection, data analysis, and evidence of trustworthiness. I conclude this chapter with a summary of the study's results.

Research Setting

This study was conducted virtually through telephone calls with seven participants who attended different universities across the United States. At the time of the study, there were no apparent personal or organizational conditions that influenced the participants reporting of their experiences or interpretation of the results. The only change made to the IRB approved plan was the recruitment.

After receiving Internal Review Board approval, I recruited participants using the Walden University Participant Pool. However, after 9 weeks, one potential participant responded to my request. My academic advisor, who was in the middle of recruiting participants for his own study, suggested that I use Facebook and LinkedIn to find participants. I researched the possibility of finding participants using social media and was surprised by the number of suggestions for locating participants. After consulting with my mentor and methodologist, I sought permission from the IRB to use social media to recruit participants and was granted permission. I created a participation recruitment flyer (Appendix C) to post on the Facebook Doctoral Dissertation Cohort, LinkedIn doctoral community, and FindPariticipants.com to recruit participants who were in an online doctoral program and in the dissertation phase.

Participant Demographics

Participants represented a range of demographics to represent the diverse experiences of online students completing their dissertation in an online environment. I used purposeful sampling to ensure participants were doctoral students who used SNS to stay connected and persistent while completing their dissertation. This section provides an overview of demographics and an introduction to each participant.

Overview of Demographics

Seven online doctoral students participated in this study. The participants indicated they were completing 100% online doctoral degrees from four different online institutions from the United States. For the purpose of confidentiality and privacy, I assigned each participant a pseudonym for this study. I chose names of immediate family members (i.e. my dad Clois, my brother Tony, my sisters Bernadette and Piccola, my granddaughters Leigh and Logan Mary, and my spouse Tim), so that their names would be part of my study for posterity. There is no connection between the pseudonym assigned to each participant and personal character.

Table 1

Participant Demographic Matrix

Participant	Pseudonym	Program of Study/Phase of Dissertation	Social Networking Sites Used	Gender	Age
1	Tony	Management-Organization Leadership/Completing Chapter 5	Facebook	M	52
2	Bernadette	Psychology/ Data Collection	Facebook	F	51
3	Piccola	Gamification Technology/ Submitted Proposal	Facebook	F	39
4	Logan Mary	Educational Technology/Chapter 2	WhatsApp	F	47
5	Clois	Psychology/Data Collection	Facebook	M	60
6	Tim	Business/Completing Chapter 5	Facebook	M	51
7	Leigh	Gamification Technology/Data Collection	Facebook	F	59

Note. F = female and M = male

Table 1 displays demographic information for the participants. The participants worked in multiple disciplines including nursing, online adjunct instructor, social service,

education, and business. The following descriptions provide context for the individual participants giving some insight into their background and persona.

Introduction to the Participants

Tony was in his 50s and recently retired from the U. S. Marines. He began his doctorate while still in the Marines over 10 years ago. He did not put in the time needed to complete the degree before transitioning from the military, because, he would start and stop due to lack of motivation and interactions with others. So, he packed up his recreational vehicle and moved from Key West, Florida to Fort Myers, Virginia where he dedicated himself to completing his doctorate this year. When I interviewed him, he was completing his final dissertation chapter in hopes of finishing his dissertation and oral defense in the fall. He joined a Facebook Doctoral Dissertation Cohort where he found the interactions and support from other doctors and doctoral candidates to be the motivation he needed to keep going.

Bernadette, who was working as a nurse at the time of the study, was in her early 50s. She was on the verge of quitting when she found out that her hospital changed their mind and rescinded the letter of commitment to conduct her study. She contacted me through email when she saw my study posted on Walden's Participant Pool Board for advice, and to see if I was meeting with success finding participants. After encouraging her not to give up, I shared information about Facebook Doctoral Cohort. She joined the group and, after securing IRB approval, posted her study solicitation of participants to the Cohort page. She indicated that the wealth of information and connections she made helped her reach her study's participant goal.

Piccola was in her late 30s and had recently been medically discharged from the

military after injuring her back. She decided to get her doctorate and when she contacted me, she had just submitted her proposal for what she hoped would be the final approval, which was the case. Although she worked in the hospital, her passion was gamification. Using mechanics to turn nongame content into an online technical tool was the focus of her study. She requested I interview her while she drove to work because the drive took one hour and she could talk during the drive. She lived on the West coast of the United States as opposed to the East coast where I live. As a result, she asked if I would call her for the interview, during the morning hours, while she drove into work. Although she used Facebook and YouTube for support, she believed that when a student enters a doctoral program, they are responsible for seeking out individuals and resources that can give them the help they need.

Logan Mary was in her late 40s and had multiple roles and responsibilities. She was an online instructor for a junior college. The mother of 4, she currently home-schools her youngest son, while the remaining children are continuing their education in public school and one in college. She spoke passionately about her husband whom she referred to as her supporter. Although she is currently living in a Southern state in the U.S., she and her husband are planning to return to their native country where she plans to continue teaching at a university. With regards to social media, she felt that doctoral students use it to connect, but she preferred working independently. She admitted that she liked to follow postings of online doctoral student's journey through the dissertation process. She also liked to read inspirational messages on WhatsApp and Facebook.

Clois was in his early 60s and lived in a remote area which he described as 30 miles from the nearest grocery store which makes a trip to the store for a quart of milk a

60-mile round-trip. This is important because Clois had lived in a northeast metropolitan city where he was able to meet up and engage in conversations with friends and family within minutes. However, after accepting his current job located in a rural Midwestern state, he was isolated and getting his doctorate through an online college or university; because there were no local colleges or universities nearby where he could get a doctorate. He described himself as a social person who enjoys meeting up for intellectual conversations at coffee houses. However, when he started to work on the dissertation, he felt left out due to the lack of interactions in the online courses. He was working to complete Chapter 3 of the dissertation during the study.

Leigh was in her late 50s and lived out West in the U.S. with her husband. At the time of the study, she was working as an adjunct instructor teaching online courses for the university at which she was completing her doctorate. She was earning her degree in Educational Technology with a focus on robotics in education. She was awaiting IRB approval so that she could begin data collection. Although she engaged with her other university peers, she felt she had to be cautious about relaying her frustrations regarding working on her online doctorate. She used the same resources which she encouraged her online students to use for support: Facebook, LinkedIn, and YouTube.

Tim was in his early 50s and lived on the west coast. He did not indicate whether he was married or had a family. He was working as a manager for an auto-paint company while working to complete his doctorate. He indicated his job, as a manager, required him to travel to several locations throughout the day, resulting him getting home late in the evenings. He was completing the final chapter of his dissertation when he contacted me to take part in my study. In order to stay on track, he joined a service called The

Dissertation Mentor, a paid consultant for assistance and support. He indicated he was ready to finish.

The one thing all of the participants had in common was they all worked full or part-time jobs, they noted getting their doctorate through an online environment kept them from having to worry about going on campus, and they could work at times which were best for them. Once they saw my flyer, each participant emailed and indicated they would like to take part in my study. As I told them about the purpose of my study and what I hoped to uncover, most of them were very interested, and asked that I send them a copy of the final paper. They were curious whether using social networking helped others the way it helped them. Their excitement and willingness to share their insights and experience with using social networking during the dissertation phase helped me feel comfortable interacting with them throughout each interview session.

Data Collection

I collected data from the seven participants during two interview sessions using the interview protocol in Appendix A. Each session lasted between 30 and 60 minutes by telephone. I scheduled interview times at the convenience of each participant within a three-month period. Due to the work schedule of participants, the interviews occurred in early morning and late evening during the work week and on the weekend. All of the participants requested a telephone interview rather than Skype. My home office, which is located in the southeastern part of the United States, was the setting for all interviews. The setting for interviews was consistent, which enabled me to remain consistent in my interactions before, during, and the end of each session.

During the data collection I followed Pietkiewicz and Smith (2014) IPA protocol in order to elicit rich details from each participant's experiences with using social network sites. I used a semistructured interview approach in order to dialogue with participants in real time. I asked questions which probed interesting points as they arose. I modified initial questions based on responses given by participants in order to elicit rich, thick details of the experience with SNS impact on connectedness and persistence. I stopped probing participants once the information became repetitive and no new information was being given.

I recorded data, during the first session, focused on the first research question and subquestions A1 through A5. The initial interview sessions lasted between 34 to 57 minutes. At the end of each interview session, while I reminded participants that if necessary, I would follow up through phone or email, I contacted two participants, Bernadette and Tony, by telephone to clarify information they gave during the interview session. I did not need to follow up with remaining participants.

I recorded phone interviews using the telephone app EverVoice. I supplemented recordings with hand written short notes and then used my notes to ask probing questions for clarification. I uploaded the audio recordings to the EverNote app on my computer in order to send the audio recordings as an MP3 file to Rev.com for transcribing. Prior to uploading recordings, a confidentiality agreement was obtained from the transcriber, to ensure privacy of participants. When I received a transcription, I read through it while listening to the recordings to check for accuracy. I sent each participant her or his transcribed interview to check for accuracy and to allow them the opportunity to reject comments which they did not want included. Participants either emailed me or called to

say they were satisfied with the transcription. No changes were made to any of the transcriptions. I stored the CD recordings and the transcribed information in a locked cabinet in my home office. In addition, I store a copy in a file on my personal computer and a password protected external hard drive.

At the conclusion of the first interview session with each participant, I scheduled the second interview session which occurred two to four days after the first one. The second interview sessions lasted between 45 to 55 minutes. I recorded data from the second research questions and sub-questions B1through B5 (see Appendix A), using the telephone app EverVoice. I followed the same steps used during the first interview session to transcribe the session, to read and check the accuracy of transcriptions, and to have the participant review their transcribed interview.

Variations to my plan presented in Chapter 3 were logistical and a result of not being able to recruit only one participant using the Walden Participation Pool. After I did not receive any additional interest through the Walden site, I submitted a change form to the IRB along with a copy of the flyer that I wanted to post on Facebook, LinkedIn and FindParicipants.com. Once I received approval, I joined and requested permission to post my flyer to the Facebook Doctoral Dissertation Cohort page, LinkedIn Doctoral Candidates group, and FindParticipants.com website. The flyer included information about the study along with my email and cell phone number. I was contacted by numerous potential participants however, they did not qualify based on the criteria for this study. Eventually, I recruited nine potential participants through email from July through September. Of the nine potential participants, seven took part in my study. I emailed my telephone number to each potential participant as they contacted me to

explain the purpose of the study, and to answer any questions which they had. Once I established that they met the criteria and wanted to take part in my study, I emailed the Consent Form to get each participants formal consent before scheduling interviews. Because the participants lived in different regions of the United States, I asked each participant to let me know their available times, and I used the information to set up mutually agreed upon times for the first interview. The second interview was arranged at the end of the first interview session.

Other changes from the proposal were logistical. As previously mentioned, a major change occurred when I was not able to identify or recruit up to 30 online doctoral students in the dissertation phase. I recruited nine potential participants, but two participants did not complete the second session. However, Smith and Osborn (2008) purported that a small sample size is necessary when collecting large amounts of data. They noted by using a small sample size, researchers were able to delve deep into data to understand the participant's perceptions and avoid generalizing.

Data Analysis

Prior to beginning the data analysis, I developed priori codes from my conceptual framework and research questions to use as opening categories for analyzing the initial participant's data. The codes were: sense of connectedness, persistence, self-determination, community of practice, social presence, learning communities, social network sites, peer interaction/support, feelings of isolation, and retention of online doctoral students. As I continued to read and reread the transcripts, new codes began to emerge from the text which provided a richer meaning for the data than the priori codes which I had developed following Smith and Osborn's (2008) guidelines.

Each transcript in this qualitative study was manually coded and analyzed for themes and patterns. I followed an iterative process (Pietkiewicz & Smith, 2014), which required that I closely read and reread the transcript, highlighting experiences of the participant use of social network sites during the dissertation phase. As I listened to the audio recordings, I recalled the atmosphere the interview was conducted as well as the setting. Each time I listened to the recordings, I recorded notes related to the participant's experiences as he or she worked on their proposal or dissertation, trials or events which may have delayed their progress, the context in which the participant relayed their experiences, and the language which was used when responding to the questions. I identified phrases and statements that I found to be significant and that helped me understand the lived experiences of the participants. I followed an idiographic approach (Pietkiewicz & Smith, 2014), conducting an in-depth analysis of each participant's perspective of using social network sites to connect with others and remain persistent as they worked to complete their dissertation or proposal. Using this approach allowed me to build on themes as they emerged from the categories and to remove categories which were redundant. I repeated the process of data analysis with the remaining participants.

Miles, Huberman, and Saldana (2014) indicated collected information (captured notes, recordings, and transcripts) should be assembled and processed before analyzing data. Therefore, after assembling the data, I used descriptive coding to generate words and phrases based on the interpretive experiences of each participant. From initial categories I created themes based on my interpretations of the participants' experience to use in my analysis.

I was able to identify expressions and themes of how the participants made sense

of their experiences by using social network sites to connect with peers and remain persistent during the dissertation phase. Three themes emerged in my analysis of the data. The first theme, SNS as a resource to connect with others, included three subthemes emerged: (a) interconnectedness, (b) support from peers, and (c) support from those with doctorates. From the second theme, communication within a community of practice, included two subthemes emerged: (a) gain knowledge and (b) share information. Finally, the third theme, support on social network sites inspires persistence, included one subtheme emerged: (a) interactions inspire persistence and the final category included peer versus family.

Patton (2015) noted discrepant cases do not rely on any specific guide lines but come from the depth of the researcher's analysis of the data. Patton contended alternative or discrepant cases helped confirm the strength of emerging patterns that support the focus of the study. In my analysis, one discrepant case was found. I used the discrepant case to validate data which emphasized the positives participants described regarding connecting with others in a social networking environment.

Evidence of Trustworthiness

Credibility

To ensure the study's credibility, I followed the plan outlined in Chapter 3. Patton (2015) requires that credibility be met through purposeful sampling of information-rich cases that will illuminate the intent of the study. To this end I allowed enough time to build trust with the participants and ensure their understanding of the scope of my study, prior to beginning the interviews. I remained persistent during data collection ensuring I obtained sufficient details which would help me identify and separate relevant details

from irrelevant details. Through member checking (Creswell, 2013; Patton, 2015), I asked participants to review interpretations to ensure accuracy of my understandings. All of the participants confirmed that my interpretations of their comments were accurate. By triangulating data, I was able to identify common themes or categories as they emerged which led to evidence of consistency from the viewpoint of participants. Finally, I provided a detailed account of how data was collected so that readers of this study can experience the outcome of the participants experience with the phenomenon through my lens.

Transferability

I used the plan outlined in Chapter 3 to maximize transferability of this study. I collected rich, thick descriptions of the study's site, participants, and collection of data as recommended by Creswell (2013). The thick descriptions of online doctoral students' use of social network sites for connectedness and remaining persistent can be applied by others to make comparisons with other contexts.

To ensure the applicability of findings, I used procedural steps which included rich, thick descriptions on acquiring participants, selection of participants, site, and procedure for collecting data. Participants were able to choose how and when they participated, and all chose convenient time by telephone. I used a semi-structured interview schedule to ensure participants were asked the same or similar questions and I stayed within the allotted time for each interview session. By following these steps, I was able to establish similarity of conditions for each participant.

Dependability

In Chapter 3, I noted that Patton (2015) asserted conditions may arise which can affect the stability of the data. I reported changes which occurred as they related to finding research participants and manually coding data collected. For the purpose of maintaining and storing data for an audit trail, I reported a change from using NVivo 11, a computer software program, to storing data in a locked file cabinet in my home office and on my personal computer.

To maximize the consistency and reliability of my research findings, I consulted with my dissertation committee when developing questions for the interview protocol. Once I received approval that my processes and questions aligned with the method of IPA, I used the information to develop open-ended questions found in Appendix A

Confirmability

Moon, Brewer, Januchowski-Hartley, Adams, and Blackman (2016) stated in order for a study to be considered reliable, the researcher must provide a detailed description of the methods, procedures, and processes used in drawing conclusions for potential replication by others. I followed the plan detailed in Chapter 3 to ensure the study's confirmability. I provided participants with a copy of my interpretations of their data to confirm the accuracy of data collected using member checking.

I engaged in research reflexivity of my personal beliefs, values, and bias to ensure transparency of my position. Several tactics were used to ensure reflexivity. I kept a journal throughout the study and I also completed internal audits of coding and development of themes as they emerged. For external auditing, I consulted with a peer reviewer through email twice a week for two weeks to ensure objectivity and

transparency of my interpretations and findings. The peer reviewer helped me eliminate words and phrases which were not relevant to the focus of my study in order to create themes which detailed the participant's experience with the phenomenon. The peer reviewer reviewed my interpretations to ensure that I did not use terms which interjected or reflected my personal bias towards the studies focus. Finally, I will retain the collected data and participant consent in a locked file cabinet located in my home office for five years.

Results

The overarching question for this study what was the experience of online doctoral students in the dissertation phase with using social network sites to stay connected and persistent? I used a combination of a priori codes, listed under data analysis section, and codes that arose from the data to code initial interviews. I combined or eliminated codes as new codes emerged. From the analysis and interpretations of the findings, four themes emerged based on relevance to the research questions: SNS as a resource to connect with others, communication within a community of practice, support on SNS inspire persistence, and peer and family support. The themes aligned with the conceptual framework community of practice and self-determination. This section includes an analysis of the themes and an explanation of discrepant cases.

Theme 1: Social Networking Sites as a Resource to Connect with Others

The use of SNS as a resource depicted the experience of online doctoral students who were in the dissertation phase of their program. The primary finding of this study is that SNS offered a platform for the participants to interact in a community of peers who understood what they were going through. Based on comments by the participants, once

the coursework was over, they felt all alone. Six of the seven participants expressed their views. Three subthemes emerged: (a) interconnectedness, (b) support from peers, and (c) support from other doctoral graduates. Each of these are discussed with illustrations from the participant's expressions.

Interconnectedness. A sense of being interconnected with others was critical to participants' emotional stability and survival during the dissertation phase. For example, Piccola felt she could not have survived without using a social networking site stating, "you need to be able to connect instantly with a cohort." Leigh noted that it was important to understand risks and weigh concerns, but more importantly social networking "has been an emotional Godsend." According to Tony, working independently results in a loss of motivation and loneliness, and he wished he had someone to socialize with that understands this journey while in this phase of the dissertation. He asserted, on-going communication "helps you when you are looking for comfort and support." Becoming a member of Facebook Doctoral Dissertation Cohort helped him survive and advance towards completing his dissertation. Clois noted Facebook was his saving grace. Living in the middle of nowhere he said, "I miss the ability to meet up at a coffee shop and site down with other doctoral students to talk about the process and about who's experiencing what and who's still working on their dissertation." Clois' reflections regarding his experience led him to ask, "if you are completely isolated and you don't have that marketplace interaction what happens to culture ... what happens to individuals ... how do we feel about each other when we don't interact with each other?" He concluded that being part of the Facebook Doctoral Dissertation group helped him to "get out of his head."

Participant responses suggested that being interconnected in a social networking environment with others was critical to them being able to survive the dissertation process, after the classwork was completed. The experience was best summed up by Leigh who suggested, “when you get to be a doctoral student, you’re a good student, but something is missing; the something that is missing is the social aspect, because my regular friends are not students, ... work friends don’t want to hear about the dissertation, and family ‘like you’ and don’t want to see you hurt.” The interconnections -being able to relate to one another- helped motivate members in the dissertation cohort on Facebook as well as those who used other SNS to reach their goal of completing the dissertation.

Support from peers. Peer support - helping one another - connected people going through the same experiences and provided the support needed to overcome feeling frustrated, feeling left out, or missing out on interactions. Participants in this study suggested peer support and interactions helped them complete their dissertation through the use of SNS.

Leigh recalled there were times she sat in front of her computer screen and thought, “Hmm, how the heck am I going to do subquestions to my research question ... how am I going to connect this to this to that?” She indicated that what she needed was social support networks to find information, research sources, and just to have someone to talk about things. Joining her university’s online support group and Facebook Doctoral Dissertation support group helped her advance in the program, as she notes, “I was able to get through using things like an online focus group.” Clois described his support experience differently.

> Online doctoral cohorts gave color, culture, and spice to his experience working on the doctorate ... without the doctoral cohort, it would have been me and an electronic device without a human element to community with ... you need interactions to grow and machines cannot do that for people.

Clois felt in order to understand the nuances associated with the information learned, communication through social network sites helped create connectedness when he was an online student. Peer support helped promote understanding of an experience particularly when working in isolation or in remote areas. Clois went on to say:

Interactions on SNS like Facebook allow me to keep fresh and have fresh ideas. The stimulation from group members keep me from getting caught up in my own head. When I talk with other people, I start to enjoy the conversation and realize that there is something to be gained from looking at views of others with a clearer lens.

Tim indicated support from peers in an online social network site allowed him to keep in touch with people even when they are coming and going from the cohort. As a result of the continuous support of peers in the cohort, Tim described his feelings "as just-in-need and a way he received commiseration."

> I am able to talk with people when I need ...I get information about things happening at the college ... and I realized that I was not alone in needing help and information ... I was able to talk about what was frustrating me.

Becoming frustrated while working on the dissertation did not, according to Tim, have to result in a negative reality. Tim contended that frustration is a normal process however, it helps to know there is a support group of peers who will help you realize "you are not the only one it is happening to and you can go to the site for help."

Piccola expressed a clear connection between networks and degree completion, "People who do not finish, don't have the right connections, motivation, and interaction." She claimed that "they don't have the social support to help them when they reach their breaking point and want to give up, they are like assholes."

She believed that the dissertation takes a lot out of you, so the social supports are critical to helping you stay motivated. If you don't have the support system or somebody to say, 'Hey, you're almost done, you've got this' it makes it a lot harder. Elaborating on how a support system worked, Piccola told a story about how she survived a statistics portion of a class by connecting with someone on Facebook to whom she sent her paper to for feedback. In turn, her connection would send a paper she was working on to Piccola for feedback. Even though Piccola and her peer were not seeking the same doctoral degree, she felt that if they could read each other's paper and understand it, then they were doing their work right. Tony also used this strategy.

> You're connecting with the cohort because you know why, and although you're reading, and you're listening to what they're saying. In the time, times, plural of discouragement, having the connection is vital to remaining positive. Because, in my depression there's others that's going to provide support. ...the value increases when someone else is going through their doubt or depression, and you're able to provide that support and motivation.

Accordingly, Bernadette understood the value of connections, as she indicated that while she preferred online learning, she had a problem connecting with others. She felt she learned more when she connected with other people more so than getting information from the school. Although, Bernadette was not familiar with online doctoral cohorts, she

contended that it was important to be in contact with peers either through email or through Facebook. She indicated that she was "ready to give up" when it did not look like she would be able to find participants for her study, after the hospital rescinded the approval letter of commitment. Desperate, she decided to send emails to five people she found while looking through posted studies on her university's participation pool for help. She indicated everyone to whom she sent an email responded with recommendations. She followed their leads. This experience resulted in Bernadette connecting with a closed support doctoral dissertation group on Facebook. She stated, "I would not have even thought about using social media had I not spoken with a bunch of other dissertation people on Facebook." She concluded that "things we're all struggling with and having a hard time figuring out without talking to people, is harder when you can't or don't connect to people."

In contrast, Logan Mary indicated that although she used Facebook, "I prefer not to have everyone bombarding my space, so I don't really need the connections." She felt the support she received from her mentor, husband, and family was all the support she needed to complete her dissertation. However, she indicated that she used her institution's Facebook page because of the videos and other helpful resources.

While the participants shared different views with regards about why they connected with peers for support whether emotional, motivational, or advisory, it was clear the participants perceived SNS as a valuable tool for connecting with peers. Clois indicated that there are so many different organizations represented in the doctoral cohort to the point that he found himself going to the SNS at least once a week. Tony summed it up when he stated, "the cohort provides opportunity to get information from people who

are getting the doctorate, who got IRB approval, or who have passed the oral defense or getting ready for the oral defense." In the end, Logan Mary suggested online doctoral students should join as many groups as possible on social media, look at tweets from the candidates on school, and connect on Facebook with Ph.D. groups, because she contended it was good to be surrounded by your peers. The consensus was that knowing that others are going through the same process and experiencing the same issues can help to ease frustration and promote persistence.

Support from those with doctorates. Several participants found that joining a Facebook Doctoral Dissertation cohort gave them access to members who had recently completed their doctoral degree and others who have had their doctorates for a few years and these graduates tended to respond promptly to queries. Participants interacting with graduates created an environment similar to that of a classroom, whereby they could ask a question and get back a response oftentimes within minutes. They indicated receiving a response within minutes to their questions saved them from having to send questions and wait on responses from their mentor through email. Tony indicated that the Facebook Doctoral Dissertation cohort was designed for those who have graduated as well as candidates for the doctorate. He stated scholars, "who were members of the cohort, supported other members for example, as subject matter experts in quantitative and qualitative studies, editing, and NVivo." He indicated, members with doctorates were most beneficial because, they provided support as a "motivation host" from a wide span of universities. Logan Mary indicated that, "in terms of motivation, connecting with people in other groups with PhDs helped alleviate feelings of isolation which was motivating."

Comments by other participants in this study agreed that the support they received from members of the cohort who had their doctorate kept them going to the end. Bernadette stated that "a mentor through Facebook became her biggest advocate," and the reason she kept going and trying to work through issues. Piccola's experience connecting with members who already have their doctorate was described as follows:

> After posting in the Facebook Support group what I needed help with, someone, who already has their doctorate, pinged me to explain to me the section I was trying to figure out. They actually researched it for me ...talked about what was in the book and then had me to look at it to see if that's what I needed. The information helped me write up the section and then I sent in my perspective which was approved.

In comparison, Tim indicated, he felt the two to three graduates he interacted with shared information that he presumed to be correct, and that although his peers shared information intended to be helpful, he was more certain information received from graduated members was correct. Clois felt the information he got from one of the Ph.D.'s in the group was "high quality." He indicated "they did not provide information that was misguiding." He asserted that members of the group with their doctorate not only gave information that was accurate, but "they gave advice, and insights on specific items of the dissertation about which the group may be interested."

The SNS participants who had graduated provided more than advice; they also provided insights about research and the field. Leigh felt connections with other members with their doctorate through Facebook cohort created linkage.

> After looking up everything I could find for my study, I sent a little note out which said, this is all the stuff I have. Does anybody else have something else, anything else? A top mentor at the University of Phoenix wrote back, the way that you want to phrase it is this, and what you want to focus in on is that, and here are three sources you might want to look at. I recognized the name and notified my mentor who is very strong. She wrote back that she met him during a residency and provided me other resources that he recommended. That was linkage. It is not just 'Hey have a good day, and here's a funny cartoon,' but the information I received got me to the next step and all of those linkages. I uncovered information that I had not even thought about.

The findings are clear that connecting with scholars or other doctors in an online doctoral dissertation cohort provides opportunity to learn from others who have already achieved success in completing the dissertation. Besides motivation, online doctoral students who connected through a social networking site had access to continuous professional advice, materials, and strategies which helped move them to the next step of the dissertation. Lastly, connecting through an online doctoral dissertation cohort helped eliminated the feeling of isolation and loneliness while learning and interacting with others in a form of community.

Theme 2: Communication Within a Community of Practice

Making progress on the dissertation from the perspective of learning in isolation led the participants in this study to turn to online dissertation cohorts for two reasons: (a) opportunities to gain knowledge, and (b) to share knowledge within a community of practice. These sub-themes align with Wenger's (1998) concept of Community of

Practice, which provide a group atmosphere for practitioners who want support and feedback about their shared interest and work.

SNS provide the platform to connect and communicate with members who were going through the same thing or learn from members who were subject matter experts in the proposal and dissertation process. The participants valued the SNS dissertation cohorts for the quick access to answers and the feeling of community which was lost after the course work was complete. Wenger (1998) suggested social learning was necessary to the acquisition of knowledge and CoP provide the venue for social participation of its members in the learning process. She contended the community of practice offers a chance for members to share their lived experience with a phenomenon as members enter and leave the group. The result of the continuous movement of members, according to Wenger, was the community's competence continued to expand with new insights which members could accept or reject based on their needs. Leigh indicated with social networking "if a member asked a question the conversation began immediately." She indicated this kind of experience was "fantastic" and contributed greatly to the whole, overall experience of using SNS because people understood what she was going through and addressed her concerns. For instance, after receiving approval for her research, Leigh put on the Facebook page a request for participants,

> A guy wrote a, not nasty, but kind of snide comment in there. "It was a criticism on the way one of my questions was phrased, and I was tired when I read it, so I looked at it, and looked at it again the next day from a different perspective, and yet it was still feedback. Ultimately, it was extremely helpful in a way that I didn't expect, but what I expected and got from my social media contacts was a

> lot of support. Lots of people wrote, 'Hey, I'm here, and this is how I solved the problem, this problem, this problem,' but then there's been those unexpected instances, too, like him."

By working together in a community of practice through a social networking site, everyone is connected and working together to get to a separate but shared goal.

Gain knowledge. Working in isolation made online doctoral students disconnected from information which can contribute to completing the dissertation. Participants found the SNS interactions did not only help to alleviate feelings of isolation, but also helped them gain new knowledge while decreasing feelings of loneliness, noted by Wenger (1998) and Lave (1991). Clois suggested the interactions on SNS like Facebook allowed him to "keep fresh" about his subject area with different ideas from the group as well as with procedural aspects of the dissertation. Piccola indicated when she became stuck on how to complete the section on Nature of the Study, she sought information from her SNS support group on Facebook. She also found the answers she need by using resources using SNS like Google, YouTube or any of the others. The online communication which she established provided her with the information she needed faster. Logan Mary indicated that although she is on Facebook, Twitter, Instagram, and LinkedIn, she turned to her institutional Dissertation Facebook group to view videos of the dissertation process which was helpful to her. In addition, she followed tweets from her institution's Twitter page regarding information about APA style, referencing as well as webinars. The participant's engagement with information shared by the institutions Twitter account can be classified as learning that situated in the delivery of webinars can be classified as a facet of community of practice. Lave and

Wenger (1991) indicated situated learning involves a process where engagement in natural situations, such as an institutions Twitter account, involves a community of practice.

Some participants felt that their online cohorts were as much or more beneficial than official institutional supports, such as online focus group, Google+ support group, LinkedIn group, resource (i.e. connected with writers of technology textbook using Facebook cohort), real-time chat Facebook cohort, texting group, support on Pinterest, Twitter, Instagram, to name a few. Bernadette felt that she learned more from other people in the online cohort than from the school. She indicated by going to the Facebook cohort page, she had access to all kinds of questions and answers and things that she never thought about. She used the following metaphor to illustrate what she felt.

> I tend to go into a clothing store and look at the same clothes and I see other people that have mix and match clothes and they come together and look beautiful, which I never would have thought to do. So, then you take somebody else with you shopping and you have them give you a different perspective and you come out with clothes that you really like that you would never have thought about putting together ever. This is what participation and accessing information within the Facebook cohort is like for me. I am able to get a different perspective just by asking a question.

Meanwhile, Leigh indicated social networking was pretty fast and allowed her to go deeper and deeper into the points.

> You start broadening your knowledge, broadening your understanding and saying, 'Okay, there's this, and there's this, and there's this,' and it just starts growing.

> They over-use that word 'x-potential,' but it really grows at a fast pace and I think with social networking, you can accomplish that so much better. You alter your course of information gathering and end up with a deeper understanding of thing. My social networking led me to newer suggestions by the group when I thought I was limited in what I could study with instructional technologies.

Tim described the immediacy and accuracy of his SNS feedback.

> Using a support group helped a lot, because "I could get answers to my questions" for instance, "if I was not sure about a section, I would ask the group for advice. I used email to ask questions of the group," "Hey, how did you do this, or can you send me your proposal?"

He indicated that he connected with people who were further along in the process sent him information and answered questions that helped him along in the process. He felt that he could call them mentors. Tony reiterated Tim's SNS knowledge base and indicated that after a residency he "connected with people that are on Facebook and I'd be able to send messages to them." He wanted to be able to get answers to his questions by just "shooting them a message." Ultimately, the messages went back and forth on the Facebook page. This led him to connect with a Facebook Doctoral Dissertation cohort with over 957 members with diverse backgrounds. According to Tony, as a member of the group he received answers to specific questions which saved him time and resulted in him not having to search for answers to problems because somebody else in the group had already posted and answer for the same problem.

The ability to acquire knowledge as a result of being connected through a social networking site was significant for these online doctoral students. Participants agreed that

using SNS provided the quick responses to their questions which allowed them to continue to make progress on their dissertation. Additionally, participants reported they were able to gain expert and information about the dissertation to their peers. Lastly, as a community of practice members were able to interact with each other gathering information that was relevant to the intent of group members. Wenger (1998) noted institutions are set up to offer student's opportunities to learn an engage with others in a structured environment. However, she suggested institutional websites are not necessarily communities of practice. She contended CoP provide learner's opportunities to engage with others outside of the school where engagement was not based on participating in structure activities with specific people, but socially connecting and learning through engaging in the development of shared lived experiences.

Share information. Participants described how having the ability to communicate and share information with their peers was necessary as they continued to gain knowledge about the dissertation process through their connections. Clois described the experience of sharing information with people he didn't know as a "two-way street" where, as a member of the online cohort, he learned something new and then was able to help someone else. During a residency, he indicated he was discouraged from sharing information about online doctoral dissertation groups. However, when the facilitator left the room, he shared information regarding the how there are other people working on advanced degrees interacting and supporting one another in a very enriched, and intellectual environment. Thus, sharing information provided a form of intellectual engagement that occurred outside of formal university interactions.

Other participants voiced concerned about what information was being shared and

its usefulness. Clois said sometimes he had feelings of doubt when sharing information with the SNS group, and those feelings would cause him to question whether he could say and give a response. He realized as a member of the community of practice, if the information was not quite accurate, there were enough people in the cohort who would clarify or make corrections. Wenger (1998) noted social learning in a community creates opportunities for learners to practice while they catch up with members as they develop their identity and mastery of content. Piccola indicated that although the online communication exchanges provided the information needed, posted information was sometimes misconstrued. She thought that people interacting on the Facebook cohort site sometimes got off topic and started to inject their personal opinion which did not necessarily fit in the discussion. Tim suggested that students in the group shared information that was not correct, not to hurt the group, but in an attempt to be helpful. Although this may have occurred Leigh indicated that as doctoral students, members in the group were taught to question and check the information for accuracy. Wenger (1998) asserted that CoP are not free of injustices and prejudices found in other enterprises; however, she concluded that the value of contributions by participants was the opportunity for on-going transformation and quality review by all members as indicated in the experiences of the participants.

While some SNS groups tried to replicate a classroom environment, the SNS had distinctive dynamics as described by some participants. Tim suggested that while an SNS sometimes created the illusion of classroom environment, in the end, it was more of a give and take of a community. The give and take included sharing learned information of value with others who were not as far into the process as he was, which prevented others

from making the mistakes he had. He recommended online doctoral students actively participate as a member of social network group. He realized from his experience that if a member gave something to the group, members of the group gave back, and that he gained knowledge when he provided knowledge to someone who was floundering. Clois suggested the SNS created an "echo chamber" of people with the same ideas sharing information that kept him "fresh" with up to date information. After realizing how excellent a resource the Facebook Doctoral Dissertation was for him, Tony started a Facebook group for Marines in his military occupation specialist (MOS) to help current retirees and future retirees gain employment opportunities, stay in touch, and pass on information relevant information. Tony noted:

> When there is common denominator like what we do as far as earning our doctorate online or like retiring from the Marines, a tremendous wealth of information can be uncovered and shared with members within the group.

Bernadette's experience with the importance of shared information from the cohort came as a result of losing her host site for her study. By turning to a SNS, she indicated connecting with people in the same situation as she allowed her to learn from others and then be able to share how she overcame locating participants for her study. She asserted "persistence is finding out what they did to get past it," and then using the new knowledge she acquired to help others. Regardless of responses received by members of the cohort, Leigh concluded that it is important when working within support groups to establish an understanding that "everyone is not in the same place when they are seeking information, and as doctoral students, we learn in the doctoral program how to be discerning in the information that comes across, and I think that we get really good

through the doctoral program of sorting through garbage versus useful stuff," that is being posted. As a result, she contended that each member needed to take a professional stance and respond to members of the cohort appropriately. Equally important was Logan Mary's assertion that "...people in likeminded situations are able to provide support which can be motivating." She indicated, "if you've slowed down because your chair or your committee is not responding to you as fast as you might want them to, there may be somebody that you can connect to who will answer your question or give you a push or if you take a break and come back to it, there are people who are in a like-minded situation and so that support and motivation would help." Accordingly, Logan Mary asserted "when I am giving information, I am getting a sense of interaction." To know that someone is asking for information, and they are still working towards their goal, inspired her to continue to work and share with others what she had learned.

Based on the responses from participants, when working in an online support group using SNS, participants are part of a community of like-minded individuals with a common goal. Although everyone was not in the same stage of the dissertation, there was a lot to be learned while interacting in a community of practice. For the majority of participants, sharing information using an online cohort not only helped them as members, but allowed them to be supportive of other members working on their dissertation. The result is SNS work as a resource that fuels interactions through communications while helping members gain and share knowledge in a community of practice. Wenger (1998) indicated that in a community of practice, sense of belonging was defined by engagement with participants in a community of members with shared interest. Accordingly, Wenger suggested relationships built within in the community

helped participants to develop concepts of learning and competency which would help them be accepted by the community, as evidenced by the participants of this study.

Theme 3: Support on SNS Inspires Persistence

The impact of SNS to influence persistence provided the framework for exploring whether connections increased self-determination (Litalien & Guay, 2015) for finishing the proposal or dissertation. The participant's perspective on the importance of social network sites to their persistence varied. Sub-themes which emerged from experiences of participants were focused on (a) interactions inspire persistence, (b) peer versus family support, and (c) self-determination.

Interactions inspire persistence. In the 20th century the classroom was the norm for interacting with peers and the instruction during a course. With the influx of online courses and degree programs came the added pressure of creating opportunities for students to interact, engage, or collaborate with peers in ways similar to in a traditional classroom. Most of the participants in this study felt that creating a space where interaction with others going through the same academic experience was vital to the success of students enrolled in online college or university programs. Clois suggested that if "you can't hang out at a coffee shop" with others, then getting online was essential. He pointed out that being online interacting with other's improved "understanding and participation in an educational culture."

> [The] Doctoral cohort meant everything to me because when you're at home or where ever and completing a degree online, you don't have the interactions like you would working on a university campus where you can be involved in an enriched and intellectual environment.

Leigh's experiences corroborated those of Clois.

> Because of the connections, I did not sit in front of my computer any longer wondering, how am I going to do this? I'm looking at a whole handful of people that were just working on that last night. Again. That's another whole bunch of resources that I might have had access to answer my question, to give me ideas, and to make me feel like, 'Hey, we're all moving in that direction. People are doing research as we speak and I'm part of that. I'm not just a person sitting at a desk.'

She indicated that social media helped her, because, she was able to interact with people that understood what was going on. As a result, she was able to make advances in completing her dissertation.

Tim contended when he was talking with people through the SNS, the interactions had a positive influence on his drive to complete his dissertation. For instance, he stated:

> Just the fact that there's other people going through what you're going through gets you through some of those aggravating times. I'm sure you know what I'm talking about where you're thinking, 'Should I do this college? Should I quit? Should I have a rampage?' You get to these frustrating levels where you think you're the only that's happening to and you go on there and you see, 'Okay, well this is a normal process. This is how it works.'

Upon reflection Tim added to his initial thoughts.

> So, if you're connected with people, whether it's online or not, and they know that you're working on something or have a goal like getting the dissertation

> done or getting to the proposal, whatever stage you're in, I find that that motivates me to be persistent, to get it done in the timeline.

Tony described connecting outside of the classroom was more of a personal connection. He indicated that he nearly gave up after having worked on his dissertation for over seven years. He stated that "having the connections was vital to remaining positive and motivated." "I was just talking to one of the cohorts who had a doctorate, and he and I connected on Facebook, so we took it to a different level, and just in speaking with him, it gives me the motivation I need, because, I want to be at that level." Tony indicated he was motivated to persist just knowing that one day he would be able to hear someone refer to him as Doctor. "It's empowering." According to Tony, the mere fact that he was able to connect with someone who had their doctorate provided the extra push for him not to give up. Tony stated, "This has been my link to kind of keep up and the connection helped my motivation to keep going." Tim indicated that with Facebook groups, everyone was just about in the same stage or ahead of others in the dissertation phase and that group members understood the process and how aggravating it could be working on a dissertation. According to Tim, this was why group members were better equipped to assist, understand, and support each other to persist and complete their dissertation. Everybody was there for the same purpose, whether they were at different stages or not. Leigh indicated that everyone was connected in some way with everyone in the world. She indicated that they were all connected in the same place with different roles and responsibilities. She concluded:

> Doctoral research in an online world even those in a sub-group of doctoral research need to survive and connecting with others on Facebook took away the

> lonely feeling I felt once I began the dissertation phase. Connectedness helps us to survive and persist. Therefore, you can't do it alone... you're not an island. Everyone needs to be connected all the way to the end.

Piccola indicated that the social support helped an online doctoral student when she or he was at the breaking point and want to give up. She indicated, "you're fucked, because the dissertation takes a lot out of you and can cause everyone at some point in time to lose motivation." She used Facebook Messenger as a tool for motivation from her peers who make it hard for you to give up when they say, "Hey, you're almost done, you've got this."

Although Logan Mary did not use SNS to connect with cohorts, she indicated that she followed a group of doctoral students who were documenting their doctoral while on a cross-country trip. She noted that SNS can be informational, but she did not want "everyone else's stuff bombarding her page," because she is very connected to her family. However, Logan Mary reconciled that:

> SNS can be a bit of release, like a break from the whole process of the dissertation. …So, you can use Facebook or some sort of an online site as a vehicle for that especially if the person is going through what you are going through. If you are in a group with other PhD students, then you can share your experiences and feel, I am not alone in this and can begin to help and encourage others.

Participants in this study found that interactions and connections with others who were going through the same thing provided motivation needed to remain persistent, during the dissertation phase. SNS allowed online doctoral students to stay motivated and to persist,

due to connections and self-determination. Wenger (1998) indicated that CoP were based on instrumental purposes, but "they are about knowing ...being together ...living meaningfully, developing a satisfying identity, and altogether being human" (p. 134).

Peer versus family support on self-determination. When asked whether being connected using a social network site was important to persistence, most of the participants agreed that it was, but not necessarily the most influence on self-determination. For instance, Tim indicated that he preferred peer pressure experienced through the SNS as opposed to family. Tim indicated that he was less likely to make progress on his dissertation when he told his family rather than if he told a total stranger. Tim asserted, "I'm even less likely to accomplish something if I tell my family than I am if I tell total strangers." Tim found that by being connected to the cohort and telling members of the cohort what he was going to do, he would get it done, as opposed to telling his family**.** Tim went on to say that once he figured out the Facebook groups existed and the support he gained from joining a group, he invited his friends from residencies and other places to try it. Leigh confirmed Tim's belief as she found when you talk to family and friends, "they may care about you as a person, but they really don't understand all of the things that you're going through as a student." Leigh stated that "...family likes you and doesn't want to see you hurt and work friends don't want to hear it." Leigh indicated that she really needed those peer networks to find information, find research sources, and to just talk about things.

Tony felt differently about the source of his self-determination when he reported:

> One of the questions someone posed in the forum not long ago, was questioning the fact, as far as getting down, getting discouraged, they wanted to know, they

> posed the question, just for people to think about this, is your family, and your friends, are they responsible to motivate you through your program? ...further discussion included do you tell people that you're in a doctoral program?

In addressing do you tell your family and friends, Tony indicated, "they can provide you support, 'Hey how's your program going? Have you completed your doctor yet,' and so for me "I'm like yeah I'm not going to let them see me fail at this." For example, Tony went to a CrossFit gym, and joined a program for those 50 years and older. After the first day of class, he had to make the decision whether or not to continue.

> I posted on Facebook, because here's the caveat, others will hold you responsible. You're going to hold yourself responsible, but putting it out there makes you responsible. I control the outcome. It's my dedication.

Tony indicated his friends were holding him responsible, because, they are living vicariously through him, while he is earning a doctorate. So, "who controls whether or not you succeed or fail." Tony concluded that "each individual going through the process is responsible for their own success." In comparison, Logan Mary indicated she used WhatsApp to connect with family and friends for inspiration. However, the relationship with her husband is what she relied on to sustain.

Some participants specifically articulated how they were different in their SNS and in their familial relationships. Piccola suggested that people working on their PhD were very high strung and oftentimes older with a family. She asserted that each person's life experiences may affect their progression through their degree program. In spite of this assertion, Piccola concluded that it is important to find resources -whether through SNS, Google, or YouTube - that can be used to find solutions during the dissertation

process, because family can't give the same kind of support as peers. Thus, for Piccola, her self-determination was more likely to come from being connected with peers through SNS.

One participant indicated that family was important to her persistence, more so than SNS. Bernadette indicated that although 95% of her interactions were online, she got the most support from her husband who was also working on his dissertation. The opportunity work with her husband, who was getting his doctorate through an online program at a different institution, created a community of practice where learning together was integral to their persistence and success. She said, "we tend to bounce ideas off of each other. That's really a benefit to both of us because, where he doesn't understand something, I may and vice versa". Nevertheless, Bernadette indicated it is good to have another person's perspective of what you're trying to do.

> I had a positive experience being able to talk to people that have gone through the same experiences that I got wrong. Facebook allowed me to not track where all my cohorts are, but for us to encourage each other not to give up.

Engagement in a social learning environment such as a community of practice could foster motivation and persistence towards self-determination. For this reason, interactions in social networking settings should be valued as an opportunity for participants to make gains towards self-identity, because of the advice and information gleaned from the community of practice, family, and friends. While participants reported that family and friends were important, the majority of participants found members of their online SNS, which they referred to as "other people," caused them to remain persistent while completing their dissertation. Within the community of practice where

members share knowledge and gain social support from graduates as well as doctoral graduates from other institutions helped facilitate achievement of personal goals through motivation. Although two participants indicated that their spouses were their primary support, during this process, both participants agreed that connecting with others going through the same thing was motivating as well.

Discrepant and Nonconforming Data

Miles et al. (2014) noted during the analysis of data there are times when discrepant or nonconforming data will become evident, as occurred in this study. During the analysis of data, one discrepant case was noted. I used the data to support how the use of SNS supported connectedness and persistence for online doctoral students completing their dissertation. These data included words and phrases such as “social network sites created environments which were hostile and argumentative” and these comments were contradicted by comments from other cases which indicated that participants suggested frequent connections and negative feedback as an opportunity to reexamine one’s work as well as reduce feelings of loneliness. The use of discrepant cases helped me to confirm the themes which defined the results of this study.

Summary

The research questions used in this study were created as an outgrowth of information I gleaned from research articles and books I read, as well as my personal perspective as a current online doctoral student in the dissertation phase. I developed questions with the goal of understanding how online doctoral students used SNS to stay connected and persistent. I designed questions that allowed me to explore the lived experience of other online doctoral students working to complete their dissertation

through an online doctoral program. I wanted to provide answers to the following research questions: 1) how do online doctoral students in the dissertation phase use social networking tools to create connectedness with their peers, 2) how do they understand these tools as helping them overcome feelings of isolation, and 3) how do online doctoral students describe connectedness and its importance to persistence? The sub-questions allowed me to explore factors which may have contributed to their use of SNS and the impact on their progress.

My conceptual framework was situated in CoP and the theory on self-determination. The results from the data analysis indicated participants received more support from members in the community who were not part of their institution described common experiences with using SNS as a resource to connect with others, interconnectedness, support from peers, and support from those with doctorates. Also, the data analysis suggested participants assumed members would provide accurate information and correct them when information they shared was not correct. The description of participants experiences from the data included being able to communicate within a community of practice where they could gain knowledge and share knowledge was important as it simulated a classroom environment and took away the feeling of isolation. The most significant factor for the participants was the value in working with graduates and other doctoral candidates from other institutions for remaining persistent in completing the dissertation and earning their degree. The results indicated support on SNS inspires persistence through on-going interactions as well as peer versus family support for influencing self-determination. From these results, I provided a discussion as well as offered my perspective in the recommendations and conclusions in Chapter 5.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this qualitative study was to explore how online doctoral students in the dissertation phase used SNS to stay connected and remain persistent while completing their dissertation. An interpretative phenomenological analysis was used to explore the lived experience of online doctoral students in order to understand their use of SNS to help them remain persistent as a result of sustained interactions and connections. Community of practice (Wenger, 1998) and self-determination theory (Litalien & Guay, 2015) were used to frame this study as I explored how sharing knowledge and learning within a networked community helped online doctoral students persist and complete their doctorate. The seven participants, enrolled in various university online doctoral programs, provided insights on how they used SNS to stay connected and persistent as they worked to complete the dissertation and particularly diminish the feelings of isolation often experienced during the final phases of the dissertation process.

Social media, to be more specific SNS, is continuing to evolve by some online learners as a tool for interacting and engaging with others. Lim and Richardson (2016) suggested learner's social communication can improve with their engagement in social network activities found on SNS. However, research on the SNS in educational environments is limited in the midst of a continuously growing presence of online learning. The result is that educational institutions (universities, colleges, and K12 programs) are left wondering how to maximize the success of students in these online programs.

The findings revealed that self-selected SNS were preferred over institutional supports and informed the purpose of CoP by its members rather than by institutional

mandate. Participants in the study shared their experience of using SNS as a resource to connect with others helped created interconnectedness, support from peers, and support from those with doctorates. Wenger (1998) indicated that CoP assumes that learning is situated in a social dimension where working together in a shared community can help increase the success of online learners. Findings revealed that participants assumed that the SNS members would provide accurate information or that other members would correct information that was not correct. Study participants shared that communication within a community of practice allowed them to learn as they gained knowledge and shared information. The findings also suggested support on SNS inspired persistence and most clearly was the value of working with graduates, as well as doctoral candidates, from other institutions contributed to online doctoral students completing their dissertation and earning their degree.

In this chapter I discuss findings from this study and draw on suggestions using SNS as a resource to connect with others for social support during the dissertation phase. The next section includes the limitations of this study and recommendations and implications for decision-makers and students alike.

Interpretation of the Findings

The research questions in this study explored the perceptions of online doctoral students about their experience with SNS to connect with peers, remain persistent, and help them complete their proposal or dissertation. The exploration of this topic grew out of my desire to understand what other online students were doing to complete their proposal or dissertation as they navigated feeling alone and isolated from peers. The majority of the participants communicated once the reality of working on the dissertation

set-in, and coursework tasks of weekly discussions had ended, they found themselves disconnected from the community where interactions were expected. As a result, the participants used phrases such as: suddenly felt alone, felt isolated, frustrated, and lonely to describe their feelings of having entered the dissertation phase. The findings build on research reviewed in Chapter 2. Desphande (2016) and Myer et al. (2015) found that feelings of isolation and lack of support is reduced when student participation in learning communities is limited. They indicated the learning communities helped students feel connected and increased motivation.

In terms of the first research question, which focused on the value of SNS as tools which could connect students with others, the findings of this study indicated that participants self-selected a SNS to connect externally with a community of practice, such as the Facebook Doctoral Dissertation Cohort, so they could talk with peers and learn from members about the dissertation process and get help with finding participants for their study. The participants intimated at the beginning of the dissertation phase, they were left trying to figure out what comes next, once the course work ended. Although their universities had their own social network support group, they felt they would not be able to talk freely about their frustration regarding what they felt was a lack of support and information about getting started with the dissertation or completing the dissertation. Most of the participants contended they used the institution support group as a place to find out what was happening around campus or congratulate people on finishing their program. Wenger (1998) suggested CoP helped members come together to collaborate, share, and gain information within a learning community. So, the participants turned to

SNSs like the Facebook Doctoral Dissertation cohort or LinkedIn groups to connect and interact with a network of people outside of their institutions social network group.

Additionally, the study results found that participants were not concerned with connecting with the same person(s) each time they signed on to Facebook. The participants chose to connect through SNSs because, they were able to talk with their peers and get advice on newer ways to tackle tasks as they occurred. Based on Wenger's (1998) community of practice, the awareness of competence acquired by participants with members outside of their institution provided a chamber where old and new information generated constant updates in support of community members who were working on their dissertation. Now members of the community of practice are able to avoid the pitfalls (i.e. frustration, lack of understanding, lack of knowledge, so forth) while working in isolation to complete their dissertation. Although it may be argued these pitfalls were deemed a normal reaction to the dissertation process, the participants in this study realized engagement in a community of practice was satisfying and increased the likelihood they would complete their dissertation; because their primary focus was to learn, acquire knowledge, and engage with others for social support throughout the dissertation process from a community of people or meet-up group, who shared the same interest and experiences. They interacted outside of the academic environment with their peers and colleagues.

Moreover, the majority of participants in this study revealed that working independently to complete a dissertation left them with feelings of loneliness and unmotivated. However, the participants seem to suggest that once they reached out to connect with other people in a community of practice through SNSs, they were able to

finally get started or restart working on their dissertation. Since they were looking for support, they indicated the connections they made provided the peer support they needed in helping them get answers to questions, networking with people who had the same interest and experience and have a community where they can socialize and eliminate the feelings of loneliness. Duncan and Barczyk (2013) contended that Facebook had a greater impact on learning than sense of connectedness. However, they found that students liked being able to collaborate and interact with others on Facebook as a strategy to lessen feelings of loneliness and isolation. Lin, Zhang, and Li (2016) suggested the key to online learner success is connecting with others through a social network sites for social support. For participants in this study this was indeed the case, although it wasn't any SNS, it was one of their own choosing.

Findings indicated participants connected with peers using SNS and these connections allowed them to help one another and go through the process with someone in the same situation. They regarded experience as surviving the dissertation phase, in spite of feelings associated with periods of frustration, loneliness, isolation, and excitement. The peer relationships established using SNS (i.e. the Facebook Doctoral Dissertation Cohort) afforded participants the opportunity to communicate daily or weekly with a host of online doctoral students who found themselves feeling extremely cut-off from course-based learning communities. The steady flow of people on the Facebook Doctoral Dissertation Cohort, much like participating in a meet-up group, helped online doctoral students feel more at ease and connected to the group, which is essential to the support they needed while working to finish their dissertation. In research findings by Bennett and Folley (2014), doctoral students used Twitter to interact within a

community of people undergoing the same experience with regards to their respective programs. Findings from this study indicate, external peer support is critical for online student success. The use of SNS for peer interactions and support may be the difference between retention and failure of online doctoral students in the dissertation phase.

From this study, participants support from others who already had completed their doctorates motivated online doctoral students and was regarded as source of information when quick answers to questions were needed. Participants indicated they were able to link up with subject matter experts who could answer questions related to the quantitative and qualitative process, provide professional advice, materials, and strategies, as well as help them avoid wasting time getting answers to questions. Findings of this study appear to build on the work of researchers reviewed in Chapter 2. Myers et al. (2015) indicated community of scholars (COS) gave online learners an opportunity to interact with other faculty, professionals and experts during the process. They suggested opportunities for interaction and mentoring by COS, during online sessions gave PhD students a chance to ask and get answers to questions. Thomas and Kryilmaz (2014) suggested when learners will more likely remained engaged in the learning process when they are able to interact and exchange information with one another. The weakness of this study is the lack of unity in doctoral procedures while interacting with scholars from various online doctoral programs and universities.

Findings for the second research question in this study on SNS as a resource to overcome feelings of isolation during the dissertation phase indicated that the participants turned to Facebook Doctoral Dissertation Cohorts, because the cohort had the sense of being in a classroom where interactions and conversations are on-going. The interactions

led them to assume members would provide accurate information and correct them when something was not correct. Hence, in this study, participants suggested active communication, where information was being exchanged and talked about within a community of practice such as an online cohort helped them learn about different aspects of the dissertation and tools which could help them at various stages. The participants described their experience, being able to communicate with others through Facebook Doctoral Dissertation Cohort, as a platform much like being in a classroom. In addition, there was general agreement by all of the participants in this study that interacting through the Facebook cohort provided opportunities for them to gain knowledge, share information, and continuously interact with peers and scholars minute by minute. The majority of participants valued, unlike their institutions social network group, that the Facebook Doctoral Dissertation cohort represented a diverse community of practice. They noted there was a wealth of knowledge to be gained though interactions within the community where everyone is either working to complete their doctorate or they have already completed their doctorate. Also, it was helpful to know that members of the community, regardless of the institution they were from, were experiencing the same issues, and help was readily available.

Findings in this study appear to build on research reviewed in Chapter 2 on CoP role as facilitating or mimicking classroom. Lahenius (2012) suggested the benefit of CoP is they operated like learning communities where doctoral students can go for help. Swayze and Jakeman (2014) indicated students used SNS such as Google, Facebook, Skype, and text to communicate with their peers in cohorts. Ratneswary and Rasiah (2014) indicated that the SNS Facebook facilitated team-based learning for students

outside of the classroom and in other learning environments.

Moreover, participants in this study indicated being able to acquire knowledge from others helped to eliminate feelings of not knowing which they attributed to increasing feelings of isolation. Participants felt the on-going interactions and support through SNS was critical to getting the dissertation done. The majority of participants indicated by participating in an SNS, they were able to post a question and get back an immediate answer or response to their question. They asserted they did not worry if the response was accurate or not, because members with doctorates provided responses or verified responses given by members who were working to complete their own doctorate. Hence, the participants agreed the community's goal was to help members be successful by ensuring the support they received was accurate. Lim and Richardson (2016) found that 55% of college students using SNS indicated it was useful for sharing information and materials with peers. Moreover, Lin, Zhang, and Li (2016) indicated social network sites grew in popularity as a result of the social support offered to users. The results of this study reflect previous findings in that social interactions using SNS as platforms for gathering and sharing information that is critical for student success; however, research on the accuracy of posted information provided by those with doctorates and doctoral candidates on external social network CoP was not found.

Findings for the third research question in this study looked at issues of persistence, during the dissertation phase, using a SNS. The findings suggested support on SNS inspire persistence, informed the most significant factor in the value of working with graduates as well as doctoral candidates from other institutions contribution to online doctoral students completing their dissertation and earning their degree. In this

study, participants indicated that persistence was grounded in the interactions with peers, which allowed them to be able to understand and participate within an educational culture, consisting of a community made up of a different universities and organizations. They reported the connections and interactions helped them feel more relaxed and at ease, and the result is they were self-determined to move forward in completing their dissertation. Participants contended that the SNS groups became their *go to* family, which held them accountable and encouraged them to persist. Most of the participants indicated the Facebook group shared insights and their perspective on research and the dissertation, in addition to advice, support, and motivating GIFs to keep them going. Moreover, membership in the group created opportunities to dialogue with mentors from other universities, research textbook writers, and professionals with doctorates from different backgrounds with various expertise. The connections helped participants in this study continue moving through the process, because they had the tools, connections, and expert knowledge they needed from graduates with their doctorates and doctoral candidates to finish their dissertation. In fact, participants indicated they felt empowered to persist in completing their dissertation from the connections with community members who had their doctorate as well as doctoral candidates, because each time they completed a phase or section of their dissertation, they experienced feelings of euphoria for the dissertation was nearly complete. Findings in this study were not found to be related to previous research on the impact of working with graduates with their doctorate and doctoral candidates to increase persistence in the dissertation phase.

In this study, I provided insights into the value of using SNS to help online doctoral students faced with how to remain motivated as they completed their

dissertation. The results showed that the participants preferred to self-select external SNS rather than their institution. Most of the participants indicated they self-selected an external SNS for the accuracy of information provided by community members, and support from graduates with their doctorate as well as doctoral candidates. Additionally, the participants noted other professionals in the community of practice reinforced the benefits of having an external support system to give guidance, encouragement, and academic support which help to sustain online doctoral students, during each phase of the dissertation. Additionally, the study concludes that CoP were not only necessary to help promote a sense of connectedness and persistence but engaging with others going through the same experience functioned as promoting a mind-set of self-determination and having choices which will ensure completion of the dissertation and finishing the degree.

Findings revealed that SNS communities are as important as or more important than face-to-face support networks, just as family and non-academic friends. Lint (2013) found that family had a greater impact on online learner motivation to persist; yet, there were mixed feelings among participants in this study in regard to family supports. The majority of the participants indicated that if they had to rely on their family, they probably would not have finished suggesting that families tended to empathize with whatever they were feeling at the moment - despair, depression, exhaustion- which was an implicit form of reinforcement to quit. However, they reported that peer pressure from strangers was most likely to motivate them to complete their dissertation. It may be that posting to the SNS was a conscious or unconscious strategy to receive motivational feedback. Several participants reported they purposely posted in their SNS cohort their status; for instance, what chapter they were writing, if they got IRB approval or not, what

they needed to correct, and how they were feeling whether good or bad, to name a few. They hoped to elicit social support which came in the form of motivational messages, research sources, and opportunities to engage in back and forth postings. Wenger (1998) suggested CoP in providing an atmosphere of group support and feedback helped members going through the same thing not only learn from each other, but also to encourage one another to persist. As a result, members of the community experience a heightened sense of self-determination to reach their goal of completing their doctorate.

Limitations of the Study

A limitation of this qualitative study is the use of purposeful sample of online doctoral students in the dissertation phase who used a social network site. The decision to collect data from only online doctoral students was due to the amount of time participants and myself would be able to contribute. Everyone was working on a dissertation as well as taking care of personal responsibilities. Furthermore, the study was limited by the qualitative method which called for a small sample size. Smith and Osborn (2008) indicated the in-depth engagement with participants in an IPA study could be overwhelming for a first-time researcher due to the large amount of data that would be collected. In a quantitative method, the researcher can gather data from larger groups of people to help explain a phenomenon, and the findings of which can be transferred to larger populations (Creswell, 2013) which did not happen in this study. Another limitation is that participants may have distorted the truth in response to the interview questions about their experience due to wanting to make sure they provided a right answer or the answer which would help my research study. The last limitation for this qualitative study is researcher bias, since I am an online doctoral student in the

dissertation phase. I engaged in bracketing (Moustakas, 1994) which included setting aside my beliefs and personal experiences. Lastly, Spillet (2003) indicated a peer debriefer can help to ensure the credibility of a study. I used a peer debriefer to review my analyzed data and written report to make sure the participants' thoughts and words were not altered or overstated by me, and to certify the credibility of the results. The use of a peer debriefer helped me to maintain an open, honest, and transparent delivery of the participants' responses, thereby limiting researcher bias, and ensuring credibility of my results.

Recommendations

Findings in this study add to what higher education administration and instructional designers who develop online courses for students in the dissertation phase, already understand about the importance of SNS in supporting online doctoral student's connectedness and persistence. One avenue for future research into procedures for online doctoral students would be to explore whether the rate of completion is better for online versus traditional doctoral students who take part in a community of practice, particularly one external to the institution and not just consisting of peers. It is important to understand the impact of community of practice when designing the process online students will follow in during the dissertation phase.

Another possible area for future research would be to focus on whether online doctoral students in the same dissertation phase use of SNS helped them keep up with non-SNS using peers as they progressed to the next phase. This information will shed light on the importance of SNS in supporting online learners. Finally, much information has discussed the value of self-selection of Facebook cohorts in supporting online

doctoral students' connectedness, sense of belonging, social support, peer interactions, and motivation. Future research should focus on whether assigning online doctoral students to an online doctoral cohort after completing the coursework would help them finish their dissertation along with members of the cohort.

Implications

Finding ways to support online learners, in this case, online doctoral students to finish their degree provided the impetus for this study. My findings suggest that online doctoral students are often left struggling to figure out the next step as the work to complete their dissertation, which oftentimes led to hardships related to: family gatherings, school loan debt, no degree, and feeling like a failure. As higher education continues to add more online alternatives to completing a graduate degree, institutions must understand how to support student success rather than create barriers which are not easily dismantled. From this study, it is vital that trustees, board members, and heads of departments find ways to create and manage online institutional dissertation cohorts which mimic cohorts found on campuses so that online doctoral students will be connected to a group which they could move through each phase of the doctoral process. Additionally, online doctoral students could benefit from competition created by being part of a connected group working towards the same goal, even if external to the university. By doing so, colleges and universities offering online doctoral programs may be able to reduce the number of students leaving their program before earning their degree. The potential for ensuring the success of students who are on the cusp of giving up due to limited interactions and feeling like they are all alone can be achieved.

It is important that colleges and universities that offer online degrees find ways to support online students in mastering content and earning their graduate degrees. College graduates, in this case, graduates with doctorates who can bring a wealth of knowledge, expertise, and skills to the workforce and various industries, provide the rationale as to why it is incumbent on higher education to find ways to increase graduation rates of online students in the dissertation phase, as well as those on campus. When students in online programs such as the doctorate fail to complete their degree, a strain is felt within the affected communities workforce, economy, and schools. The lack of subject matter experts available to teach and advise new learners critical to the continued growth of the community which they live and work means that communities fail to thrive. Therefore, it is incumbent that universities re-examine how instruction and support for online doctoral students are being implemented with the goal of increasing retention and success of online doctoral students. Consideration should be given to designing and developing online learning programs which incorporate ways to use social networking sites to build communities of practice to help learners and ensure on-going connections, interactions, and support from peers and others in pursuit of completing the degree.

Conclusion

This qualitative study was designed to understand online doctoral student use of SNS to stay connected and persistent, during the dissertation phase. Seven online doctoral students demonstrated their persistence and self-determination by self-selecting external SNS for support and advice in completing their dissertation. They understood they needed to connect with peers and other doctorates in a community of practice for motivation, during the dissertation process.

The concept CoP was reflected as growing in value with regard to the success of online doctoral students working to complete their dissertation. Wenger (1998) indicated "surviving together is an important enterprise" such as a community of practice builds on learning as a social phenomenon, which can increase the personal satisfaction of learners who are working together to achieve a goal (p. 95). The CoP SNS are becoming important to transforming the community member's capacity in completing tasks like the dissertation. In transforming member's capacity, new and inventive ways to engage online students in meaningful practices such as online cohorts, meet-up groups, and snowballing techniques, could help increase online learner participation and set them on a path for success. The added benefit of what could be deemed "teaming" may provide higher education another piece for reducing attrition of online learners.

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Appendix A: Interview Queries and Probes

First Interview Session Questions:

Research Question 1: How do online doctoral students in the dissertation phase use social networking tools to create connectedness with their peers?

Related interview queries (semistructured questions with probes)

A. Please describe your experiences using social network sites for learning.

- What is your view on the benefits of using social network sites in supporting the completion of a dissertation?
- What social network sites have you used for interacting and staying connected with other doctoral students in the dissertation phase? Why did you choose this site/these sites?
- What is your view on the quality of information acquired through using a social network site as a resource while completing your dissertation?
- What would you describe as a challenge in setting up and using a social network site for communicating with other doctoral students in the dissertation phase?

Research Questions 2: How do they understand these tools as helping them overcome feelings of isolation?

Second Interview Session Questions:

Research Question 3: How do online doctoral students describe connectedness and its importance to persistence?

Related interview queries

B. Please describe how the dissertation phase has changed your belief about being able to interact with your peers.

- How many times during the week do you connect with a peer who is currently completing their doctorate through an online program or via a traditional program?
- How did connecting with a peer or mentor/chair using a social network site help you stay motivated and persistent?
- How often did you interact with other doctoral students on your social network site while working to complete your dissertation?

C. What recommendations do you have for making social networking an integral part of doctoral student connectedness and persistence?

Demographic Information:

Gender: Female ___ Male ___

Age: ____18-28 ____29-38 ____39-48 ____49-59 ____60-64 ____65 & over

Phase of dissertation: Beginning___ Submitted Chapters 1-3____

Thank you again for participating in this study. Your responses and your identity will be kept confidential.

Appendix B: Data Accountability Log

I used these charts to help me with my data collection and analysis

Accountability Log

Participant Name	**Tony**	**Bernadette**	**Piccola**	**Logan-Mary**	**Clois**	**Tim**	**Leigh**
Interview 1 Date	7/19/7	7/29/17	8/03/17	8/3/17	8/16/17	9/26/17	9/25/17
Interview 2 Date	7/21/17	7/31/17	8/6/17	8/7/17	8/17/17	9/27/17	9/27/17
Emailed Questions	No	No	No	No	No	No	No
Transcript Request	No	Yes	No	No	Yes	No	No

Participant demographics

Name of participant	
Gender	
Phase of Dissertation	____ Beginning ____ Submitted Chapters 1-3
Name of participant	
Gender	
Phase of Dissertation	____ Beginning ____ Submitted Chapters 1-3
Name of participant	
Gender	
Phase of Dissertation	____ Beginning ____ Submitted Chapters 1-3
Name of participant	
Gender	

Phase of Dissertation	____ Beginning ____ Submitted Chapters 1-3
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Phase of Dissertation	____ Beginning ____ Submitted Chapters 1-3
Name of participant	
Gender	
Phase of Dissertation	____ Beginning ____ Submitted Chapters 1-3
Name of participant	
Gender	
Phase of Dissertation	____ Beginning ____ Submitted Chapters 1-3

Checklist Matrix: Annotated response to research questions

Research Questions

Type of Change Theme	**Initial Themes**	**Second Themes**	**Final**
Social Network Sites Interventions			
Connectedness			
Persistence			

Appendix C: Participant Recruitment Flyer

This flyer was submitted, 06/27/2017, with my change in procedures request to recruit participants via findparticipants.com and using social media sites. I received approval on 07/13/2018 and the approval number for this study remained the same.