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Social Media and the Learning and Engagement Experiences of Minority Doctoral Students

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Walden University

College of Education and Human Sciences

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Denzil O. Barnett

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Walden University
2023

Abstract

Social Media and the Learning and Engagement Experiences of Minority Doctoral Students

by

Denzil O. Barnett

MA, Fuller Theological Seminary, 2003

M. Ed., Temple University, 1993

BS, Southern Illinois University, 1987

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Education

Walden University

February 2023

Abstract

Social media as a medium to facilitate and foster learning and engagement in education has received increased attention in recent years. Researchers have highlighted the affordances and drawbacks of social media use in educational contexts. There is a gap in the relevant literature on the social media learning and engagement experiences of doctoral students from underrepresented communities. The purpose of this qualitative study was to understand minority doctoral students' experiences and perceptions of social media use in learning and engagement during the doctoral process. To ground this study, the connect learn and engagement (CoLeEn) conceptual framework, based on Siemens's connectivism theory, Kereluik et al.'s 21st century learning framework, and Pittaway's engagement framework, was used. The central research question examined minority doctoral students' learning and engagement experiences through social media during the doctoral process. 12 current doctoral students were selected from a large U.S. university and from *Minority Doctoral Network*, a closed Facebook group. Data were obtained through semistructured interviews and qualitative data analysis was used to identify codes and themes. Findings revealed that social media is described as a medium to access information and resources; provides opportunities to acquire and apply 21st century learning skills; allows for positive engagement experiences with peers, faculty, content, and the doctoral process; and provides spaces and opportunities for psychosocial engagement during the doctoral process. The findings could lead to positive social change in terms of improved pedagogical practices and enhanced learning and engagement for underrepresented doctoral students.

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Dedication

I dedicate this study to my father who told me at a very young age that you are never too old to learn, and to my elementary school teacher Ms. DiBiase who inspired in me a passion for life-long learning.

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I would first like to acknowledge God for the courage, strength, and guidance throughout this journey. I would also like to thank Dr. Gladys Arome, my dissertation committee chair who constantly supported, encouraged, and guided me throughout the dissertation process. I would also like to acknowledge Dr. Asoka Jayasena, my methodologist for her cogent, clear, and well-articulated comments and guidance throughout the dissertation process. Special thanks to Dr. Darci Harland for serving as a committee member during the final stages of this study. I also thank Dr. Floralba Arbelo Marrero, the University Research Reviewer who was instrumental in helping me focus my dissertation during the proposal stage and provided valuable feedback. I thank my colleague and friend Dr. Michael Chamberlain for his consistent support, encouragement and prayers. I also thank my cousin, Dr. Claudia Barnett for her encouragement and inspiration. Much gratitude to my Small Group members Bob and Diane Roybal, Stephen and Robin Welch, Phoebe Chan, Marshall Kwong, Janice Fraund, and Susan Von Tress for their prayerful support throughout my journey. I thank the Rock Solid group members (Dave, Haney, Tim, Moses, Derrick, Peter, an Steve) who have supported me during the process, and Albert Williams for his prayerful support and encouragement. Finally, I thank my brother Clive and my sisters Audrey, Vivienne, and Joan for their unwavering support and prayers throughout my journey.

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Chapter 1: Introduction to the Study

In recent years, the use of social media as a medium for stimulating student learning and engagement, both formally and informally, has received increased attention (Anderson, 2019; McLoughlin & Lee, 2016). While several researchers have pointed to the use of social media as having a positive impact on student learning and engagement (Cooke, 2017; Luo et al., 2019; McLoughlin & Lee, 2016; Platt, 2019), others such as Ciampa et al. (2016) and Josefsson et al. (2016) have questioned the viability and efficacy of social media use in education. Furthermore, some researchers have identified potential drawbacks of social media in education contexts (Kent, 2014; Piotrowski, 2015). In addition, research continues to reveal that the success and achievement rates of minority students across all levels of education has continued to lag compared to the success and achievement rates of their white peers in the United States (Kim-Prieto, et al., 2013; McHenry, 2018; National Center for Educational Statistics [NCES], 2015; Okahana et al., 2018). The recent COVID-19 global pandemic has caused schools worldwide to shift from face-to-face instruction to fully online or hybrid teaching. In light of this development, the use of social media as a medium for teaching and facilitating learning has received renewed interest.

In this study, I explored the intersectionality of social media, learning, and engagement among current minority doctoral students. Little research has been conducted on this topic, and this study could potentially contribute new knowledge to the discipline of education by informing pedagogical practice of incorporating social media in supporting minority doctoral student learning and engagement. Potential implications for

education may include enhanced learning and engagement for minority doctoral students, which could possibly result in higher achievement and success rates. The narrowing of the achievement gap between underrepresented minority doctoral students and their majority counterparts could lead to a positive social change.

In this chapter, I provide the background to the study by briefly summarizing the relevant literature and describing the current gap in the discipline and provide a rationale for the study. In the next section, I state the research problem, engage the relevant evidence that demonstrate the existence of the problem within the education discipline, and articulate the current gap in the research literature. I then state the purpose of the study by describing the research paradigm and the concepts under investigation for the study. This will be followed by the research questions with a concise description of the conceptual framework and its relevance to the research questions and study. A brief explanation of the nature of the study is then provided, including a rationale for the research design, the key concepts that reflect the focus of the study, and a summary of the methodology that include data collection and analysis processes. Next, I provide operational definitions of key terms, followed by brief sections on assumptions, scope and delimitations, limitations, and significance. Finally, the chapter concludes with a summary of the main points and a transition to Chapter 2.

Background of the Study

The use of social media and technology in education has received much attention in recent years (Iclal et al., 2019; Junco, 2014; McLoughlin & Lee, 2014). Social media has the potential to provide quick access to all kinds of information and data to everyone

with a computer and internet access. Consequently, one of the affordances of technology is the availability of enormous amounts of information and data in a very short amount of time, which has led Allen (2016) to claim that technology has the potential of "removing boundaries and providing access to growth and learning for literally everyone" (Allen, 2016, p. 30). Despite the potential of technology to remove boundaries and provide access to information and data to everyone, particularly in education contexts, its full potential to a large extent remains unrealized (Kent, 2014). Research has shown that although social media use has been widely embraced in society in general, this has not been the case in education contexts, and both students and teachers have expressed some skepticism about using social media in education contexts (Allen, 2016; Ciampa et al., 2016; Josefsson, et al., 2016). For example, Seaman and Tinti-Kane (2013) reported that while faculty regularly use social media for personal and professional development purposes, they are less likely to use social media in their classes for teaching and learning purposes. Furthermore, while some faculty acknowledge the potential affordances of social media for teaching and learning purposes, they point to privacy concerns for both their students and themselves as one reason for not using social media in classroom teaching more frequently (Seaman & Tinti-Kane, 2013). Moreover, others such as Krutka and Damico (2020) recommend targeted but limited use of Twitter. However, an increasing number of researchers point to evidence that attitude toward the use of technology in education in general, and social media in particular, may be changing (Anderson, 2019; Cook, 2017; Greenhow & Lewin, 2016; Gruzd, et al., 2018; McLoughlin & Lee, 2016; Seaward, 2020).

For this study, I specifically focused on the learning and engagement experiences of minority doctoral students through social media. Furthermore, the current research literature on the academic performance and achievement levels of underrepresented minority students compared to that of the white majority point to a pervasive gap (Brunner, 2017; Kim-Prieto et al. (2013). Some have pointed to inherent structural and institutional inequities and a lack of diversity among students and faculty as contributing factors (Allen, 2016; Visser, 2015). As a result, some (e.g., Davis et al., 2020) have advocated for a narrative shift from a deficit approach to an asset approach in minority students' experiences and success.

In this study, I explored the role of social media in terms of learning and engagement in general, and specifically focused on the experiences of underrepresented minority doctoral students and their use of social media during the doctoral process.

Some researchers have investigated the efficacy of social media use in higher education between countries (Greenhow & Lewin, 2016; Romero, 2015). For example, Romero (2015) explored social media as a learning tool between students in Mexico and Korea. The results showed that social media tools in both countries "facilitate informal learning through the acquisition and management of information, creation of open spaces for discussion, and to perform tasks beyond the classroom" (Romero, 2015, p. 12). Based on two contrasting case studies between Europe and the United States, Greenhow and Lewin (2016) proposed a theoretical model that views social media as a learning space with varying degrees of formality and informality. Greenhow and Lewin highlighted elements of the model such as purpose, process of learning, learning context, and content

and social media attributes. By so doing, the authors claimed the model provides a means of leveraging the benefits of social media in learning, while simultaneously minimizing the challenges.

Some studies have revealed a direct correlation between social media use, engagement, and learning (Cook, 2017; Evans, 2014; McLoughlin & Lee, 2016; Platt, 2019). Using a mixed-methods approach, Cook (2017) conducted a study that explored the views of undergraduate students with regard to the use of social media in higher education. The study addressed the question of whether students believed the use of social media increased their level of engagement in the learning process and affected their motivation and goal orientation. Two thirds of the participants believed that social media contributed to their learning. This result clearly points to evidence of support for the use of social media in higher education as a means of facilitating learning and enhancing student engagement. The results indicated no direct relationship between the use of social media and motivation and goal orientation (Cook, 2017). In this study, I focus specifically on the social media platforms of Twitter and Facebook respectively.

One key question that Evans (2014) sought to answer in a study on Twitter was to determine whether or not, and the extent to which, Twitter has an impact on student engagement. The results showed that there is indeed a positive correlation between the amount of time spent using Twitter and student engagement. Evans concluded that using Twitter as a part of the teaching and learning process can be a viable means of enhancing student engagement, and that educators need to be strategic in determining when, where,

and how to use Twitter in the teaching and learning process. These results are consistent with conclusions by Junco et al. (2014).

Some researchers (Greenhow & Lewin, 2016; Ricoy & Feliz, 2016) have found that social media can be used as a learning tool in higher education. For example, Ricoy and Feliz (2016) explored the use of Twitter as a viable learning tool in an online master's program at a Spanish university. The purpose of the study was to determine the efficacy of using Twitter to train university students. The results showed that students learning progressed over time with increased use and familiarity of Twitter. Furthermore, the results indicated that the use of Twitter was conducive to higher student engagement and motivation.

One important aspect of using social media for educational purposes is that learning with, or through, social media can occur both formally and informally. In fact, some researchers (Anderson, 2019; Greenhow & Lewin, 2016; Romero, 2015) acknowledge that the learning affordances through social media occurs on a continuum between informal and formal learning, and that this is a complex, and largely unexplored area for researchers and practitioners. In addition, social media has the potential of facilitating collaborative learning.

Several researchers (Anderson, 2019; Luo & Xie, 2018; McLoughlin & Lee, 2016: Seaward, 2020) have found the use of social media to stimulate collaboration and enhance learning. For example, in their comparative case study of the integration of Twitter use in two undergraduate classes, Luo and Xie (2018) found that students believe Twitter use was instrumental in enhancing their learning, engagement, and collaboration

with their classmates. Although social media has shown to be a viable tool for enhancing student learning, engagement, and collaboration, there are possible drawbacks and challenges.

In an autoethnographic study, Rainford (2016), using reflexivity, set out to understand the way in which Twitter had been central to his own doctoral development. Rainford pointed out that while Twitter provides affordances for doctoral students such as the opportunity to engage with a large number of interlocutors including fellow doctoral students, researchers, and educators, there are also some challenges as well. One significant challenge, according to Rainford, is the need to share private and emerging thinking in a public space, which can quickly become permanent. Another challenge is that in certain professions, such as health care, discussing certain issues or topics in a pubic forum such as Twitter may violate rules of protocol of the profession (Rainford, 2016). It is therefore important that educators not only consider the affordances that Twitter can provide for doctoral students, but also be cognizant of the potential challenges it can present.

Researchers have conducted several studies that reveal many of the affordances of Facebook as a viable platform for teaching and learning in higher education contexts (Anderson, 2020; Duncan & Barczyk, 2016; Hajin, 2016; Kalelioglu, 2017; McLoughlin & Lee, 2016). For example, Facebook groups have been used effectively as a teaching and learning tool and as a means of thesis supervision in higher education (Hajin, 2016). Facebook has also been found to be an effective means of establishing a co-learning community designed to help learners from diverse backgrounds (Cuesta et al., 2016).

Researchers have also found that students in Facebook-enhanced courses experienced a somewhat more positive sense of community of practice, sense of connectedness, and sense of learning when compared with students in non-Facebook-enhanced courses (Duncan & Barczyk, 2016).

This current study is important because a gap exists in the research on social media and its relationship to learning and engagement in the context of the experiences of minority doctoral students in higher education. The study can thus make a positive contribution to pedagogical practice in doctoral education. Furthermore, the study is important because it could also potentially help to facilitate improved engagement and learning among minority doctoral students, and by so doing, serve to mitigate the achievement gap between minority doctoral students and their majority counterparts.

Problem Statement

The problem to be explored in this study is a gap in the relevant research about the learning and engagement experiences of minority doctoral students using social media during their doctoral studies. Research continues to show that minority students at all levels of education continuously perform at lower levels compared to their majority peers (Kim-Prieto et al., 2013; Okahana et al., 2018; Visser, 2015). A recent report by the National Center for Science and Engineering Statistics (NCSES, 2022) showed that the percentage of earned doctorates awarded to White students was 67% of all doctorates awarded in the United States in 2021. The percentage of earned doctorates awarded to Hispanic/Latino and Black students were 9% and 7.7% respectively. Educators need to find innovative and creative approaches that can help to ameliorate this achievement gap

between the two groups. In recent years, some researchers have proffered social media as a viable and effective tool in educational contexts, with applications such as Facebook, Twitter, blogs, and Instagram (Bennett & Foley, 2014; Greenhow & Lewin, 2016; Junco, 2014). Research has also shown that establishing communities of practice, networking, and collaborating, are key elements for academic success for all students (Herndon-Stallings, 2018). Furthermore, social media can provide the space in which minority doctoral students can overcome isolation, enhance persistence, and potentially experience improved learning, achievement and success (Herndon-Stallings, 2018). However, little research has been conducted in the area that specifically focuses on the intersection of social media, learning, and engagement and the experiences of minority doctoral students. Therefore, a gap in knowledge exists with regard to the social media experiences of minority doctoral students in terms of learning and engagement during the doctoral process.

Purpose of the Study

The purpose of this general qualitative study was to understand the learning and engagement experiences of minority doctoral students using social media during the learning process.

Research Questions

This study was guided by the following four research questions:

1. What are the experiences of minority doctoral students with social media in the context of their learning and engagement?

2. What are the viewpoints of minority doctoral students about the role of social media in 21st century learning skills?
3. What are the experiences of minority doctoral students using social media to engage with peers, faculty, and the doctoral process?
4. How do minority doctoral students describe social media as a means to facilitate learning and engagement when they are engaged socially, behaviorally, cognitively, and emotionally?

Conceptual Framework

The conceptual framework for this study was comprised of one theory and two conceptual frameworks, which will be referred to as the "connected learning and engagement" (CoLeEn) framework. The first element of the proposed framework is based on Siemens's (2005) theory of connectivism. Advanced as an alternative approach to behaviorism, cognitivism, and constructivism, *connectivism* focuses on the notion of building a network of connections in which individuals can readily access information (Siemens, 2005). Unlike behaviorism, cognitivism, and constructivism in which "know-what" and "know-how" are the epistemological basis in learning, connectivism emphasizes "know-where." Knowledge is no longer viewed as residing in the individual, but instead is available from a shared or connected network (Siemens, 2005). The rationale for using connectivism as one of components of the overarching conceptual framework for this study is that it serves to address the connectedness of the central research question that serves to guide this study. A more detailed exposition on the principles of connectivism is provided in Chapter 2.

The second element of the proposed CoLeEn framework is based on Kereluik, Mishra, Fanhoe, and Terry's (2013) 21st century learning framework. This framework categorizes 21st century learning into three knowledge areas (i.e., foundational, meta, and humanistic) and three skills within each knowledge area that are critical for 21st century learning. Some of these skills include digital and ICT literacy, cultural competence, problem solving, critical thinking, and communication and collaboration (Kereluik et al., 2013). This component of the framework is justified because it serves as a means of addressing the learning aspect of minority doctoral students. Further details on the 21st century framework are provided in Chapter 2.

The third component of the proposed CoLeEn framework is derived from Pittaway's (2012) engagement framework. The framework is designed for students and staff in higher education contexts and has five elements, including:

- Personal
- Academic
- Intellectual
- Social
- Professional (Pittaway, 2012, p. 40).

In this framework, the personal component is central, and includes cognitive, affective, and behavioral aspects that reflect what and how individuals think, feel, and behave. Engagement that includes the cognitive, affective, and behavioral is important psychologically, and conducive for learning to take place (Pittaway, 2012). The personal element is one that is central to not only the engagement framework, but also to

connectivism and 21st century learning framework. The engagement framework was included as part of the proposed CoLeEn framework as engagement is one of the central constructs of this research study. A more in-depth treatment of the engagement framework is provided in the next chapter.

The CoLeEn framework was conducive for this study because the elements of connectivism, learning, and engagement are core constructs of this study. These constructs, as reflected in the research questions in this study, include social media (connectivism/connectedness) and its perceived role in terms of learning and engagement in the experiences of minority doctoral students.

Nature of the Study

The phenomenon of interest in this study is related to the social media experiences of minority doctoral students in terms of learning and engagement in the doctoral process. This study employs a general qualitative design (Caelli et al., 2003). A general qualitative approach was chosen for this study because a general approach falls outside of the parameters of common qualitative designs such as ethnography, grounded theory, case study, and phenomenology (Caelli et al., 2003; Cooper & Endacott, 2007; Kahlke, 2014). In addition, a general qualitative approach is not beholden to any given theoretical or epistemological tradition or framework (Caelli et al., 2003; Kahlke, 2014; Percy et al., 2015). Because a general qualitative design is not bound by traditional qualitative methods in terms of data collection and analysis, it is imperative that the general qualitative researcher be intentional and transparent in articulating and documenting data collection and analysis procedures in order to demonstrate rigor by

enhancing trustworthiness, dependability, and confirmability (Cooper & Endacott, 2007). As I engaged in the data collection and analysis process, I was mindful of the importance of being sensitive in the way I interact with the data through reflexivity. I used journaling throughout the entire data collection and analysis process.

In this study, I used semistructured interviews and thematic analysis to obtain an in-depth understanding of minority doctoral students' social media experiences in terms of learning and engagement in the doctoral process. I used King and Horrock's (2010) basic three-stage thematic analysis system, which includes: (a) descriptive coding, (b) interpretive coding, and (c) overarching themes. The rationale for this approach is that the movement from comments to descriptive codes to interpretive codes is consistent with a general qualitative approach in which the researcher sets out to obtain an in-depth understanding of complex phenomena as experienced by individuals (Creswell & Creswell, 2018; Patton, 2015; Yin, 2016;). I recorded and transcribed all interviews into data through verbatim transcription, and I used detailed summative notes.

For this study, I used purposive sampling as the means of selecting participants (Creswell & Creswell, 2018). The participants included 12 minority doctoral students from a private online university in the United States and from Minority Doctoral Network, a closed Facebook group. A small sample size allowed for rich and thick data for a deeper understanding of participants' experiences as it relates to social media, learning and engagement. The rationale for using 12 participants is that this range is conducive for obtaining saturation in a general qualitative study (Rubin & Rubin, 2012).

Definitions

21st century learning: The ability to apply knowledge in a variety of ways and in a variety of contexts. Some examples of the skills that reflect 21st century learning include the ability to "think critically, access, retrieve, analyze, synthesize, evaluate, and communicate knowledge and information through the use of digital technology and media effectively and efficiently" (Greenstein, 2012, p. 9).

Connectivism: The theory of learning for the digital age that emphasizes learning through a shared connection of networks (Siemens, 2005).

Engagement: "The time, energy, and resources students devote to activities designed to enhance learning at university" (Krause, 2005, p. 3).

Learning community: "A group of people with common interests, values, and or goals, who actively learn with and from, one another" (McLoughlin & Lee, 2016, p. 45).

Minority doctoral students: Individuals from underrepresented communities who are currently enrolled in, or have recently graduated from a doctoral program, and who do not racially or ethnically identify as a member of the White majority of European descent in the United States.

Social capital theory: The tendency of individuals "to look to existing social networks for information that is easily accessible, relevant, and contextually rich, seeking to gain understanding from others within those networks who are engaged in similar activities" (McLoughlin & Lee 2016, p. 46).

Social media: "A generic, all-encompassing term for a range of digital tools and platforms used for networking, sharing, commenting, and collaborating online" (Pechenkina & Aeschliman, 2017, p. 29).

Social networking sites/services (SNSs): One aspect of social media that allow individuals and groups to share content (Rowan-Kenyon et al., 2016). Examples include Facebook, Twitter, Youtube, and Instagram.

Assumptions

The purpose of this study was to obtain a deep understanding of the social media experiences of underrepresented doctoral students in terms of learning and engagement during the doctoral process. The primary assumption that undergirded this study was that social media is currently underused in education contexts in general, and even more so in higher education contexts at the doctoral level. I also assumed that using social media in higher education contexts can have a positive impact on minority doctoral students' learning, engagement, and achievement. It is further assumed that minority doctoral students' social media use during the doctoral process is likely less than that of students in the white majority. I decided to include current minority doctoral students as participants in this study. As the primary means of data collection was based on interviews, it was also assumed that the responses participants provided would be consistent with their actual social media use during the doctoral process. Finally, based on the purpose of this study, it was assumed that the research questions and the CoLeEn conceptual framework are appropriate and consistent with the constructs of social media, learning, and engagement. These assumptions were necessary due to the nature of the

research questions, the purpose of the study, and the nature of a qualitative study approach.

Scope and Delimitations

The fundamental problem as outlined in this study is the gap in the existing research literature on the learning and engagement experiences of minority doctoral students using social media during their doctoral studies. The study specifically addresses social media experiences of minority doctoral students in terms of learning and engagement. Research has revealed that the twin constructs of learning and engagement are important components to enhanced performance and achievement (Kent, 2016; McLoughlin & Lee, 2014). When students are engaged socially, behaviorally, cognitively, and emotionally, the potential for learning and achievement are highly enhanced, and social media has shown to be a means and medium that facilitates learning and engagement (McLoughlin & Lee 2016). The scope of the study was limited to the social media experiences of current minority doctoral students in terms of engagement and learning.

Because the focus of the study is on the experiences of minority doctoral students, purposeful sampling was used in the participant selection process. Patton (2015) defined purposeful sampling as "selecting information-rich cases, cases that by their nature and substance will illuminate the inquiry question being investigated" (p. 264). The participants in this study consisted of current students in doctoral programs in the United States. The criteria for inclusion in the study were that each participant must identify as a minority doctoral student, defined herein as individuals who are currently enrolled in a

doctoral program and who do not racially or ethnically identify as a member of the White majority of European descent in the United States.

I included current doctoral students as participants in this study. At the time of this study, these selected participants were enrolled in a face-to-face or online doctoral program in the United States. Similar studies have been conducted with online doctoral students on engagement, connectedness, and persistence (e.g. Herndon-Stallings, 2018; Worley, 2015). However, there are no studies to date that specifically look at the experiences of minority doctoral students at the intersectionality of social media, learning, and engagement.

Although the community of practice framework (Wenger, 1998) is a potentially applicable framework for this study, the CoLeEn conceptual framework is more aligned and relevant to the research questions and purpose of this study. Furthermore, the CoLeEn framework is ideally aligned the central constructs of connectivism, learning, and engagement, respectively.

Limitations

As this study employed a qualitative approach, one inherent limitation of the study is that it focuses on the particular, in this case, the social media experiences of minority doctoral students in terms of engagement and learning; consequently, the results of this study therefore cannot be generalized across the general population due to its small sample size. In this case, the sample size was 12 participants. Another possible limitation related to the small participant size is that while a small sample size is

appropriate for general qualitative studies, results can be somewhat limited when compared to qualitative studies with a larger number of participants (Creswell, 2018).

In qualitative studies, the researcher is the primary research instrument (Patton, 2015) and because humans are fallible, this poses yet another potential limitation to this study. In this case, the principal researcher shares some of the same qualities as that of the research participants. For example, as the principal researcher in this study, I am an African American, or Black, individual who is currently pursuing a doctorate degree in education. Because of my close connection with the participants in terms of identity and status, the potential for researcher bias is high, which in turn can have a potentially negative impact on the validity of the results. Furthermore, the narrow focus of the study could limit the transferability of the results to similar educational contexts.

There are several strategies that a qualitative researcher can undertake to mitigate researcher bias in the research process, which are important in terms of validity. In addition to rich, thick descriptions from structured interviews, triangulation is one procedural strategy I used as a means of checking the accuracy of the findings of this study. Yin (2016) defined *triangulation* as "an analytic technique, used during fieldwork as well as later during formal analysis, to corroborate a finding with evidence from two or more different sources" (p. 240). In addition to semistructured interviews, I employed triangulation. Using additional types of data is not only important as a means mitigating researcher bias and enhancing validity, but is also inherently consistent with general qualitative interview studies, which are designed to enable the qualitative researcher to

acquire an in-depth understanding of complex phenomena through multiple data sources (Creswell, 2018; Yin, 2016).

Another means of addressing researcher bias is member checking (Creswell, 2018; Patton, 2015). Finally, I plan to use peer debriefing as a way to further minimize researcher bias and to further validate the accuracy of the study findings.

Significance

The success of all students, particularly underrepresented students who have struggled and continue to struggle to attain the same levels of academic achievement and success as their majority counterparts is important for the individuals themselves, institutions, and society as a whole. The purpose of this study was to explore the social media experiences of current and recently graduated minority doctoral students in terms of engagement and learning. The study therefore fills a gap in the literature as it pertains to the social media experiences of underrepresented doctoral students in terms of engagement and learning. It is hoped that this study will contribute to existing knowledge within the discipline of education. More specifically, it is hoped that this study will inform instructional design and pedagogical practice by shedding some light on the use of social media as a means of facilitating engagement and learning in doctoral education contexts. The study may also be beneficial for teachers in environments seeking creative and innovative ways to facilitate student engagement and learning. For example, the integration of a social media component as a means of complimenting existing pedagogy, as well as creating a space to facilitate engagement and learning may positively contribute to enhanced achievement for some students. Implications of the findings from

this study may include improved academic performance for minority doctoral students and a reduction in the achievement gap between minority students and their majority counterparts, and a more diverse and equitable society. When minority doctoral students are successful in achieving the doctorate, it serves to build their sense of self-efficacy, confidence, and motivation, for further career development and positions them to contribute to positive social change.

Summary

This study was motivated by the seemingly pervasive academic performance and achievement gap between minority doctoral students and their white majority counterparts. Furthermore, the study was motivated by the increasing body of research studies that point to the viability of social media use in higher education contexts. The study addresses the existing gap in the research literature with regard to the experiences of minority doctoral students at the nexus of social media use, engagement, and learning. My objective was to obtain an in-depth understanding of the experiences of minority doctoral students in terms of engagement and learning through social media use during the doctoral learning process.

In terms of research design, employing a general qualitative study approach served as a means of acquiring a deep understanding of the complex social phenomena of the connection between social media usage, engagement, and learning (Creswell, 2018; Patton, 2015; Yin, 2014). Furthermore, the study employed the CoLeEn conceptual framework designed to holistically explore the key constructs of *learning, engagement*, and *connectivism* (Kereluik et al., 2013; Pittaway, 2012; Siemens, 2005, respectively).

This study is significant for two main reasons. First, the results of this study could serve to inform current pedagogical practice in doctoral education contexts by helping educators provide creative and innovative approaches to instruction. In addition, the use of social media as a means of facilitating engagement and learning could serve to help enhance the academic performance and achievement of minority doctoral students.

In Chapter 2, I provide a review and synthesis of the literature on social media use in higher education contexts, its relevance as a means of facilitating student engagement and learning, and minority doctoral students' social media experiences.

Chapter 2: Literature Review

The problem to be explored in this study was the lack of knowledge about the learning and engagement experiences of minority doctoral students using social media during their doctoral studies. The purpose therefore of this general qualitative study was to understand the learning and engagement experiences of minority doctoral students through the lens of social media during the doctoral learning process.

The rate of academic achievement and success among minority students at all levels of education has consistently lagged behind that of students in the dominant majority (Kim-Prieto et al., 2013; NCES, 2015; NCSES, 2022; Okahana et al., 2018; Visser, 2015). Research has shown that the issue of diversity has continued to be a problem across all levels of education, where underrepresented minority students have consistently performed below that of their majority counterparts in terms of academic achievement and success (Kim-Prieto et al., 2013; Okahana et al., 2018; Visser, 2015). In response to the U.S. Supreme Court decision in the case of *Abigail Fischer v. the University of Texas*, 37 college associations issued a joint statement on the importance of diversity in higher education, which in part read:

> A diverse student body enables all students to have the transformational experience of interacting with their peers who have varied perspectives and come from different backgrounds. These experiences, which are highly valued by employers because of their importance in the workplace, also prepare students with the 21st Century skills they need to live in an interconnected world and to be more engaged citizens. (Jaschik, 2013, p. 1)

Diversity in education and all areas of society results in the betterment of all individuals, and the overall social good in a democratic society. In recent years, the use of social media applications such as Facebook, Twitter, Instagram, blogs, and wikis as learning tools and as a means of creating a learning space for students have received increased attention as innovative ways of facilitating student learning and engagement (Bennett & Folley, 2014; Greenhow & Lewin, 2016; Veletsianos & Kimmons, 2013;). Few research studies have been conducted on the role of social media and the learning, engagement, and achievement experiences of minority students, particularly in the context of higher education. An even larger void in this area exists at the doctoral level. There is, therefore, a gap in the relevant literature in terms of the role of social media in the learning and engagement experiences of minority doctoral students during the learning process.

In this study, I sought to understand the learning and engagement experiences of minority doctoral students through social media. More specifically, the study focuses on the learning and engagement experiences of minority doctoral students through the twin social media platforms of Facebook and Twitter during the doctoral learning process. In this study, I employed a general qualitative approach to help address the gap in understanding and the extant literature. Participants in this study included current minority doctoral students.

In the first section of this chapter, I provide a literature review search strategy. In the second section, I introduce the CoLeEn conceptual framework by highlighting the core elements of the framework, which consists of two preexisting frameworks and one

theory. These include (a) Kereluik et al.'s (2013) 21st century learning framework; (b) Pittaway's (2012) engagement framework; and (c) Siemens's (2005) connectivism learning theory. In the third section, I provide an overview of the relevant literature on social media and learning and engagement in general. In addition, based on the results of the literature search, I provide specific focus on three aspects: (a) research on social media use in higher education, (b) Facebook and Twitter use in higher education, and (c) diversity and social media use in higher education, which focuses on the experiences of minorities with social media in higher education. In the final section, I provide a summary of the chapter.

Literature Review Search Strategy

The literature used in this study was procured through Walden University library, Azusa Pacific University library, Web-based resources including Ebsco Host Databases, Academic Search Premier, Proquest Central Library Guides, Education Research Information Center (ERIC), and Google Scholar. Additional sources include SAGE publications and Google Books. Zotero was used as a means of redirecting relevant articles through Walden University library serving as a proxy. Zotero was also used as a means of storing relevant articles. The primary sources used are peer-reviewed, scholarly articles and books. The following keywords were used during the literature search process: *social media in higher education, doctoral students and social media use, minority doctoral students, learning in higher education, student engagement, social networking sites, Facebook use in higher education, Twitter use in Higher education, technology in higher education, diversity in higher education,* and *doctoral education.*

Much has been written on the use of social media and learning and engagement in education; however, few studies have explored social media use and learning and engagement at the doctoral level, and I found no studies on social media, learning and engagement with regard to the experiences of minority doctoral students.

Conceptual Framework

This study employed what is referred to herein as the CoLeEn conceptual framework, which can be described as eclectic, as it is based on two pre-existing conceptual frameworks and one learning theory. The two conceptual frameworks on which the CoLeEn framework are based are Kereluik et al.'s (2013) framework for 21st century learning, and Pittaway's (2012) conceptual engagement framework. Siemens's (2005) connectivism constitutes the learning theory. The rationale behind the design of the CoLeEn conceptual framework is that at the heart of the frameworks and theory on which it is based are the key constructs of *connectedness*, *learning*, and *engagement*. More importantly, these constructs are consistent with the topic and purpose of this study (i.e., exploring minority doctoral students' experiences as it relates to social media use and learning and engagement in higher education contexts). In the sections that follow, I discuss Kereluik et al.'s (2013) 21st century learning framework, Siemens' (2005) connectivism theory, and Pittaway's (2012) engagement framework. Finally, I introduce the CoLeEn framework, followed by a brief overview and analysis.

21st Century Learning Framework

The rapid development of technology over the past 20 or more years has resulted in almost instantaneous access to vast amounts of information and knowledge. These

developments have yielded significant changes in terms of the dynamics of learning and teaching. Classroom teachers are no longer the primary or sole purveyors of knowledge, and the availability of knowledge and information is not limited to the classroom or physical places and spaces. Today, advancements in technology have made it possible for just about anyone with a computer and internet connectivity to access information and knowledge in ways that would not have been considered possible fifty years ago. Traditional approaches to learning and teaching emphasized mastery of content; however, learning in the 21st century emphasizes skills that include the ability to apply knowledge in a variety of ways and for a variety of contexts. According to Greenstein (2012), some of these 21st century skills include the ability to

- think critically
- access, retrieve, analyze, synthesize, evaluate, and communicate knowledge and information through the use of digital technology and media effectively and efficiently
- develop intercultural communicative competence and global awareness and understanding

In their synthesis of 15 different 21st century learning frameworks, Kereluik et al. (2013) concluded that the types of knowledge and learning required for the 21st century can be described in three main categories (i.e., foundational, meta, and humanistic knowledge) and three subcategories within each main category. Therefore, it can be argued that the use of social media in educational contexts is conducive for facilitating the development of the digital information and communication literacy subcategory of

Kereluik et al.'s 21st century knowledge framework. The use of social media also provides a means of facilitating, whether directly or indirectly, the development of the meta and humanistic knowledge categories, and their associated subcategories. Kereluik et al.'s 21st century learning framework is primarily geared towards K-12 educators and addresses some Common Core issues in terms of the types of knowledge that are important. However, the principles as articulated in the framework are applicable across all levels of education, particularly with regard to the importance of, and need to foster 21st century skills necessary for learners at all levels.

Connectivism Learning Theory

Grounded in principles of "chaos, network, and complexity and self-organization theories" (Siemens, 2005, p. 8), connectivism has been put forth as a learning theory for the digital age and an alternative to the traditional learning theories of behaviorism, cognitivism, and constructivism, respectively (Siemens, 2005). Key principles of connectivism include the following:

- Learning and knowledge rest in diversity of opinions.
- Learning is a process of connecting specialized nodes or information sources.
- Capacity to know more is more critical than what is currently known.
- Ability to see connections between fields, ideas, and concepts is a core skill.
- Currency (accurate, up-to-date knowledge) is the intent of all connectivist learning activities.
- Decision-making is itself a learning process. (Siemens, 2005, p. 8)

Choosing what to learn and the meaning of incoming information is seen through the lens of a shifting reality. While there is a right answer now, it may be wrong tomorrow due to alterations in the information climate affecting the decision (Siemens, 2005, pp. 6–7). The starting point for connectivism is the personal knowledge of the individual and his or her personal network, which is extended to include organizations and institutions. The continuous cycle of knowledge and information between the personal, to networks to organizations and institutions reflects the strength and potential of the Connectivist learning theory. Siemens (2005) reflected this point in the following statement: "This amplification of learning, knowledge and understanding through the extension of a personal network is the epitome of connectivism" (p. 8).

Social media, and more specifically, SNSs such as Facebook, Twitter, Instagram, Youtube and others provide a means for individuals, organizations, and institutions to share relevant and up-to-date knowledge and information in real time through common network connections. According to Siemens (2005) in addition to "know-what" and "know-how," "know-where" has become an indispensable means of acquiring knowledge and information in the 21st century.

In this study, I employed elements of connectivism learning theory as there is a direct connection between the principles as outlined in connectivism and social media use, learning, and engagement. Social media and Web 2.0 technologies comprise the means and medium in which connectivism learning theory is made manifest. Additionally, the use of connectivism learning theory can help to provide insights in terms of articulating relevant research questions on the experiences of minority doctoral

students as it relates to social media, learning and engagement. In addition to elements from Kereluik et al.'s (2013) 21st century learning conceptual framework and Siemens's (2005) connectivism learning theory, elements from Pittaway's (2012) conceptual framework for student engagement in higher education contexts were also used in this study.

Engagement Conceptual Framework

Krause (2005) provided the following definition for engagement: "the time, energy, and resources students devote to activities designed to enhance learning at university" (p. 3). Much research has shown that engagement is an important factor in student learning and achievement (Chen et al., 2008; Stanford-Bowers, 2008). For example, research has demonstrated that engagement is positively correlated with desired outcomes such as (a) "high grades", (b) "student satisfaction," and (c) "persistence" (Chen et al., 2008, p. 1). Furthermore, researchers have examined the nature of engagement as a construct in higher education contexts (Kahu, 2013; Pittaway, 2012; Zepke, 2014). For example, Kahu's (2013) student engagement framework takes a comprehensive approach to student engagement in higher education contexts that accounts for the antecedents to student engagement, including structural and human influences that contribute to student engagement. Kahu's (2013) student engagement framework looks at student engagement from an emotional, intellectual, and behavioral perspective. Finally, the framework also includes near-term outcomes, such as learning achievement and overall well-being, and long-term outcomes such as life-long learning and personal growth.

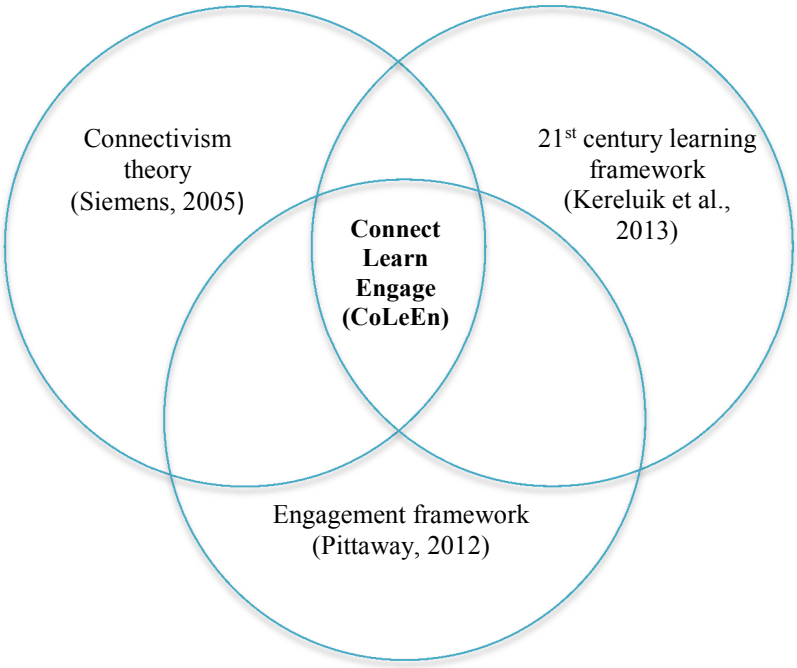
Similarly, Pittaway's (2012) engagement framework also takes a comprehensive approach to engagement in higher education contexts. The framework consists of five elements: *personal, academic, intellectual*, *social,* and *professional*. Pittaway also placed importance on the environment or context in which these five elements are situated; in other words, the nature of the teaching and learning environment also play an important role in terms of the quality of student engagement. The implication here is that teachers have a key responsibility in ensuring that the teaching and learning environment is safe, respectful, and challenges and encourages students to engage and learn.

The personal element is central to Pittaway's (2012) framework. This is reflected in the following statement: "Personal engagement is the necessary first element of the Framework. Students bring expectations, experiences, assumptions, knowledge, skill and dispositions with them to university" (Pittaway, 2012, p. 42). This emphasis on the importance of the personal element parallels that of Siemens's (2005) connectivisim learning theory, where the starting point is the individual. The concepts of *conation* (i.e., the will or desire to do something) and *mindset* (i.e., fixed or growth with regard to intelligence) are two key concepts that undergird the personal element of Pittaway's engagement framework. The personal element of the framework is also analogous to the emotional, intellectual and behavioral aspects of Kahu's (2013) engagement framework. For Pittaway, the personal engagement element includes cognitive, affective, and behavioral (i.e., what and how the individual thinks, feels, and acts). Drawing on the common elements of connecting, learning, and engagement, as illustrated in Siemens' (2005) connectivism learning theory, Kereluik et al.'s (2013) 21st century learning

framework, and Pittaway's (2012) engagement framework, respectively, I proposed the CoLeEn conceptual framework here for this study (see Figure 1).

Figure 1

CoLeEn Conceptual Framework



CoLeEn Conceptual Framework

As shown in Figure 1, the CoLeEn framework, is essentially a combination of the critical constructs of Siemens's (2005) learning theory (Connect), Kereluik et al.'s (2013) 21st century learning conceptual framework (Learning), and Pittaway's (2012) engagement framework (Engagement). These three constructs constitute the guiding premise of this study; that is, the use of social media (connect) can and does serve to facilitate student learning, engagement, and ultimately student achievement in higher education contexts.

Social Media, Learning, and Engagement in Higher Education

The use of social media in the past two decades has become ubiquitous in all areas of society. No longer are social media simply the various means for friends to socialize or communicate with each other; instead, social media platforms and applications are being used increasingly in organizations and educational contexts as viable tools for teaching and learning purposes (Anderson, 2019; Cooke, 2017; Davis et al., 2020; McLoughlin & Lee, 2016; Platt, 2019). Some examples of the increased use of social media applications in teaching and learning include Facebook, Twitter, Instagram, YouTube, Wikis, Blogs, and social bookmarks, to name a few. Some of these applications have received much attention in recent years as viable means of stimulating innovative learning, fostering 21st Century skills and competencies, as well as creating a space that can facilitate learning and engagement (Bennett & Folley, 2014; Greenhow & Lewin, 2016). Commenting on the growth and development of social media in education, McLoughlin and Lee (2016) stated,

> The advent and growth of these tools and technologies [Web 2.0 technologies and social networking tools] have been paralleled by a heightened emphasis on student-centered pedagogies, and they have garnered much attention among educators, many of whom see them having the potential to address issues of demotivation and disengagement with didactic modes of teaching. (p. 43)

Despite the increasing body of literature that point to the positive and potential benefits of social media in facilitating learning and enhancing student engagement, some researchers have questioned the efficacy and affordances of social media in educational

contexts, particularly in higher educational settings, and the extent to which social media serve to promote learning and engagement. For example, with regard to Facebook group pages, Kent (2016) concluded that although they provide benefits for learning and engagement, there are also drawbacks, some of which include the blurring of the lines between: (1) formal and informal learning, and (2) "the professional and social lives of both students and staff" (Kent, 2014, p.57). Furthermore, Tang and Hew (2017) noted that although Twitter provides affordances in terms of increased interactions between students and teachers as a 'push' technology, the link between Twitter use and learning performance is inconclusive, and many challenges remain. Some of the concerns regarding the implementation and use of social media in education from the perspectives of students and teachers include, among others, privacy issues, instructors' unfamiliarity with web 2.0 platforms, and data overload (Piotrowski, 2015a).

The preponderance of the relevant research on the relationship between social media, learning and engagement in higher education contexts point to a generally positive relationship (Piotrowski, 2015a). Using logical argumentation and a social constructivist approach to learning, McLoughlin and Lee (2016) highlighted the psychosocial benefits of using Facebook as a medium for learning. The authors point out that students adopt a positive outlook regarding the learning space when they have the opportunity to establish relevant and meaningful connections with peers, and engage in constructive dialog, which, according to the authors, makes learning "a connected, social, and networked phenomenon" (p. 44). McLoughlin and Lee went on to claim that as a result, students are able to engage socially, cognitively, and emotionally, which, the authors argue are key

foundational ingredients for cognitive development and academic achievement. Engagement at the social, cognitive, and emotional levels are consistent with Kereluik et al's (2013) 21st century learning framework mentioned above.

The use of social media as a means of learning and engagement is increasingly being adopted across a variety of disciplines in higher education contexts. In her article on embedding social media in an academic curriculum as a learning strategy designed to enhance student engagement and learning, and develop e-professionalism, Megele (2015) described the redesign and implementation of a module on mental and social care in a higher education context in the UK. Grounded in social constructivism pedagogy (Freire, 1993/1970; Vygotsky, 1978), the module redesign involved the creation of an online component to compliment the pre-existing face-to-face component of the module, resulting in a blended approach. Megele (2015) adopted an enquiry and action-based learning environment (eABLE) as a pedagogical model for applying the constructivist framework. The online component primarily involved the use of Twitter and student-generated Wikis combined with the Moodle learning management system (LMS). Megele (2015) found that the integration of social media in the module redesign "increased the students' engagement and the depth and breadth of their learning, while enhancing their appreciation for e-professionalism and personal learning networks" (p. 414). The findings relevant to an increase in students' learning and engagement are consistent with Tananuraksakul's (2014) similar study with the use of Facebook as a pedagogical tool and an LMS.

Reflecting the increasing shift from an exclusive reliance on lecture oriented didactic approaches to teaching and learning, to a more learner centered approach, social media applications provide opportunities for educators to allow learners to acquire 21st Century skill of learning collaboratively. Using a case-based learning (CBL) approach, Cole et al. (2017) explored how small group collaboration could be supported by embedding two types of social media platforms [Scoop.it (a content curating platform) and Wikis)] within the existing virtual learning environment of an undergraduate medical education program in the UK. The authors also gave students the freedom to engage other social media platforms such as Facebook. Cole et al. (2017) concluded that the social media platforms support collaborative learning, and potentially contribute to developing digital literacy, as well as "critical appraisal skills, and awareness of wider health issues in society" (p.1). Cole et al (2017) also noted that in order to minimize challenges and maximize the potential of social media platforms, training for both students and faculty is an important factor that should be addressed prior to implementation. This final conclusion is consistent with research previously mentioned above regarding the challenges and concerns about using social media for educational purposes (Piotrowski, 2015a; Kent, 2014; Tang & Hew, 2017).

Research on Social Media Use in Higher Education

Several studies (Ciampa et al., 2016; Hajin, 2016; Josefsson et al.,2016; Kalelioğlu, 2017; Kent, 2016; Neir & Zayer, 2015; Pechenkina & Aeschliman, 2017; Tananuraksakul, 2014) have explored student perceptions on the value and usefulness of using social media as a means of learning, communicating, and engagement in higher

education contexts. Although students generally have a positive view towards social media, and use social media extensively for private purposes, the majority of research studies show less enthusiasm for using social media as a means for learning and engagement in higher education contexts (Pechenkina & Aeschliman, 2017). There seems to be a distinct bifurcation or compartmentalization in terms of how students perceive social media, and how social media should be used. With some exceptions (Neier & Zayer, 2015; Tananuraksakul, 2014), students tend to view social media as predominantly for private purposes, and not necessarily as a means for learning and engagement in higher education settings (Ciampa et al, 2016; Josefsson et al, 2016). In their study of Australian university students' use of digital technology in higher education contexts, Henderson et al. (2015) explored students' patterns of use and perceived usefulness of digital technology in learning during their university experience. The results revealed that most of the uses of technology were described as "logistical" uses of technology, and that the 'learning' that takes place as a means of using new technology is not necessarily novel, but more reflective of traditional learning approaches shaped by "transmission of learning, rather than any more fluid, networked, connected or individually driven forms of learning" (Henderson et al, 2015, p. 317). This result at first glance would seem somewhat surprising given the recent advancements in technology in general, and increased popularity of Web 2.0 application in particular. However, the results are consistent with those of similar studies on students' use of technology for learning and engagement in higher education contexts (Aayeshah & Bebawi, 2014; Ciampa et al., 2016; Josefsson et al., 2016).

In their mixed-methods study of undergraduate marketing students' social media usage and preferences and students'perceptions of the use of social media as an effective medium for teaching in higher education, Neier and Zayer's (2015) unique study explored four key factors relevant to marketing education in terms of students' usage and perceptions of social media use in higher education:

- students' experiences with social media
- the extent to which students view social media as an effective pedagogical tool
- students' motives for social media use in education
- students' perceptions of instructors and institutions that use social media (p. 133)

With regard to students' experiences with social media, the results revealed that students' experiences mainly related to SNSs and video content and sharing sites, with significantly less experiences with social bookmarking and microblogging. With regard to social media as an effective pedagogical tool, Neier and Zayer (2015) found that although students are generally open to the use of social media as a learning tool in education contexts, they are also cautious about the type of social media tools used. In terms of students' motives for social media use in educational context, social interaction was found to be the most salient and significant factor. Finally, with regard to students' perceptions of instructors and institutions that use social media, the findings revealed that students perceive instructors who engage in social media are more innovative and often more sensitive to students' needs. Students believe that the opportunity to interact with

their peers through social media can provide affordances for enhanced motivation in learning. The nature of students' engagement with social media in higher education contexts is probably best summed up in the following statement by Pechenkina and Aeschliman (2017):

> How higher education students engage with social media for learning is a complex and contested terrain: social media's educational uses vary and many factors, both intrinsic and extrinsic, influence student engagement. It matters whether social media is embedded organically or is used in an ad hoc manner, while such factors as students' previous experiences with social media as well as the value they attach to it generally and specifically within a learning context, all matter a great deal. (p. 30)

In other words, students' prior experiences with social media, coupled with their attitudes toward social media in general, and the use of social media for educational purposes in particular, are key factors that will determine students' perceptions, and ultimately, their levels of learning, engagement, and achievement. Furthermore, the extent to which social media is adopted in an ad hoc manner, or whether it is integrated strategically and intentionally (Dyson, 2014; Junco, 2014; Kivunja, 2012) can shape students' perceptions of social media use in higher education contexts. It is clearly evident from the relevant literature that the use of social media in higher education contexts as a means of facilitating learning and engagement is a complex phenomenon with a host of variables. Some of these variables include students' experiences with social media, the types of social media being used, the needs of learners, the extent to which social media is

integrated in an ad hoc or strategically intentional and proactive way, and the purpose of learning (Dyson, 2014). One clear implication with regard to the use of social media in higher education, or any other learning context is the importance of taking each of these variables into consideration during the planning and implementation stages. Moreover, educators will need to take a more proactive and intentional approach when considering integrating social media in the teaching and learning process. Two of the most popular forms of social media researched in terms of their use in education settings are the SNSs of Facebook and Twitter.

Facebook and Twitter Use in Higher Education

Facebook and Twitter are two of the most popular SNSs used primarily for friends and groups to communicate, create, and share content. According to recent research, almost two-thirds (68%) of American adults use Facebook, and approximately three-fourths of that number use Facebook on a daily basis (Pew Research Center, 2018). Almost a quarter of Americans (24%) use Twitter, and this number continues to grow (Pew Research Center, 2018) The rapid increase of SNSs in recent years has led to an increasing number of scholars, researchers, and practitioners advocating for the integration of SNSs into the teaching and learning process. The rationale for engaging these SNSs in education contexts is driven by the belief that many learners already use Facebook, Twitter, or both on a regular basis, and are generally quite accustomed to the platforms and formats. Given the widespread use of, and familiarity with Facebook and Twitter and other SNSs, the next logical step would be to incorporate these learner-centered applications into the teaching and learning process. However, although the use

of Facebook and Twitter has shown to be viable mediums and platforms for enhancing student learning (Carpenter, 2014; Evans, 2014; Kent, 2016; McLoughlin, 2016), these social media platforms have not been embraced by some educators as a medium for facilitating and enhancing learning. Between Facebook and Twitter, Facebook is the more popular of the two. One reason for Facebook's popularity is attributable to the fact that Facebook is a social networking site that offers users a host of options in communicating and sharing content.

Facebook in Higher Education

Several studies (Aayeshah & Bebawi, 2014; Cuesta, Eklund, Rydin & Witt, 2016; Dougherty & Andercheck, 2014; Duncan & Barczyk, 2016; Dyson, Vickers, Turtle, Cowan & Tassone, 2014; Hajin, 2016; Kalelioglu, 2017; Kent, 2014; McLoughlin & Lee, 2016; Seaward, 2020) have been conducted on the efficacy of using Facebook as a means of fostering student engagement, collaboration, and as a learning management system. For example, studies on the use of Facebook in language learning contexts in higher education reveal generally positive to mixed results for social media as a means of enhancing language learning, and as an LMS (Alm, 2015; Tananuraksakul, 2014). The results of Alm's (2015) study, for example, showed that Chinese, German, Japanese, and Spanish language students learning English at a New Zealand university viewed Facebook as helpful in terms of informal language learning. Students' use of Facebook varied around three key factors:

- proficiency levels of participants (beginning, intermediate, and advanced)
- strength of social ties with native speaker Facebook friends

- personal attitude toward the site (p. 3)

There was a direct correlation with regard to proficiency level and use. Students with higher language proficiency levels showed more frequent use of Facebook, and students with lower language proficiency levels demonstrated less usage of Facebook for language learning. However, the results also indicated that there was a tendency for students not to view the use of Facebook as useful in terms of the formal aspects of language learning (Alm, 2015, p. 3). This last finding is consistent with subsequent studies (Ciampa et al, 2016; Josefsson et al, 2016) that reveal students generally being open to engage social media in terms of informal learning, but reluctant with regard to using social media for formal aspects of learning. Some studies, on the other hand, show students are open to using social media as a means of learning as well as an LMS (Tananuraksakul, 2014; Wang, et al., 2012). For example, Tananuraksakul (2014) conducted a qualitative study of Thai English language learners at the university level that examined their perceptions of Facebook group usage as a viable means of improving their English writing ability as well as the use of Facebook as a LMS. Using an action research approach and snowball sampling in her hybrid English Paragraph and Essay Writing class, Tananuraksakul discovered that Facebook groups can be effective as a LMS for blended learning environments, and that it was also helpful because it was "a practical, trendy, and beneficial teaching tool, which helped to motivate them to learn English virtually and enhance their positive attitudes towards learning the language" (Tananuraksakul, 2014, p. 3). The viability of Facebook as a pedagogical tool and as an LMS in a hybrid or blended context in higher education was later replicated by Megele (2015). Moreover, subsequent

studies on students' perceptions of Facebook as a medium for enhancing learning and engagement also revealed positive attitudes towards the use of Facebook (Cuesta et al, 2016; McLoughlin & Lee, 2016; Pechenkina & Aeschliman, 2017). These and other studies (Herndon-Stallings, 2018; Seaward, 2020) point to the social constructivist nature of collaborative learning through Facebook groups and the resulting affordances of cognitive, social, and emotional levels of learning and engagement (McLoughlin & Lee, 2016; Pechenkina & Aeschliman, 2017).

Wang et al (2012) conducted an exploratory study designed to determine the efficacy of using Facebook Group as a LMS and students' perception of the use of Facebook at a teacher education institute in Singapore. The study involved two courses – an elective undergraduate class of fifteen students, and an elective graduate class of sixteen students. In the study, Facebook was used as an LMS to post course announcements, share course-related resources, organize weekly tutorial sessions, and conduct discussions online (Wang et al., 2012). The findings revealed that Facebook can be used as a stand-alone LMS or to supplement an existing LMS. The findings also showed that the undergraduate students were more open and willing to use Facebook as a LMS compared to their graduate counterparts. One possible reason for this difference is the fact that the younger undergraduate students are generally more familiar and experienced with Facebook as a SNS, and therefore, experienced less of a learning curve compared to the older graduate students (Wang et al., 2012). Finally, Wang et al (2012) identified several limitations of using Facebook as a LMS:

- limited support in terms of file formats

- discussions not listed in threads
- perceived as a potentially unsafe environment (p. 429)

An important implication of the results is that teachers who may be considering using Facebook, whether as a LMS or as a pedagogical tool to compliment an existing course, must take into consideration students' experiences with and perceptions of using Facebook in formal learning contexts. Moreover, the potential limitations must be carefully examined prior to implementation.

In a similar study that involved the use of Facebook groups in a higher education context, Cuesta et al. (2016) explored the viability of using Facebook groups as a means of helping Swedish university students from diverse backgrounds become oriented with and integrated into the university academic environment. Cuesta et al. used a combined approach that included a *norm-critical perspective* (Bourdieu, 1995) in conjunction with a *consciousness-raising pedagogy* (Freire, 1993/1970) as theoretical frameworks in their study. The purpose was to "stimulate a process of co-learning among students and a coming to terms with unequal conditions for achievement and success in higher education" (Cuesta et al., 2016, p. 57). In other words, the authors sought to determine whether the use of a norm-critical perspective combined with a consciousness-raising pedagogy in Facebook groups would help minority students navigate the cultural norms and practices necessary for their academic success. Cuesta et al. also wanted to learn if this would not only enhance their learning but also give them the confidence to be critical of existing norms and practices that limit their progress. The data analysis was based on a mixed qualitative (see Lindlof, 1995) and online ethnography design (see Skågeby,

2011). It was shown that through the conversations that occurred in the Facebook groups, students from diverse backgrounds were able to acquire the knowledge and competence necessary to better integrate into the academic environment. The results also revealed that participating in Facebook groups empowered them to identify and critique unequal conditions that impede their academic success and achievement. Providing a space and voice for all learners is one clear benefit of using Facebook in the teaching and learning process.

Duncan and Barczyk's (2016) study compared the perceptions and attitudes of 586 university students toward Facebook-enhanced courses and non-enhanced courses. Duncan and Barczyk sought to determine whether there was a difference between students in Facebook-enhanced courses and students in a non-Facebook-enhanced courses in terms of their perceived sense of community, learning and connectedness. The findings revealed that students in the Facebook-enhanced courses not only experienced an enhanced sense of learning and connectedness, but also experienced a more positive outlook on the role of community of practice compared to students in the non-Facebook-enhanced groups (Duncan & Barczyk, 2016). Students recognize and value the social affordances of connecting and learning that the use of Facebook in HE contexts provide.

In a related follow up study, Duncan and Barczyk (2017) explored the role personality plays in terms of students' sense of classroom connectedness (SCC) in Facebook-enhanced and non-enhanced courses. The authors specifically analyzed the "Big Five personality variables," which include extroversion, agreeableness, openness, neuroticism, and conscientiousness (p. 42). Correlation and regression analyses revealed

extroversion and agreeableness had a significant impact on students' sense of classroom connectedness. One important implication of the findings is that instructors with this knowledge are better able to make informed decisions on Facebook-enhanced group activities designed to enhance students' sense of connectedness to their class.

The use of Facebook groups in higher education also points to further benefits of a social constructivist approach to learning. In their effort to build community, engagement and stimulate collaborative participation in a large Introduction to Sociology course of more than 200 students in a US university, Dougherty and Andercheck (2014) incorporated a Facebook Group in the course. Dougherty and Andercheck (2014) noted that despite the limitations, which include the fact that the study relied on correlations and content analysis, and was limited to a single course, the authors found that use of Facebook groups provided a "powerful tool for community-building and learning" (p. 95). The authors highlight the social benefits in learning afforded by the use of Facebook groups and provided specific guidance to educators who may be interested in using Facebook groups, some of which include

- have content waiting for students when they first access the group
- add content regularly
- use simple voting or polling questions
- direct students to add their own content to the group

(Dougherty & Andercheck, 2014, p. 102,103). These results are similar to previous studies (Ciampa et al., 2016; Josefsson et al., 2016; Wang et al., 2012) that recognize the strengths

of integrating Facebook in higher education courses as well as the need for teachers to be mindful of limitations.

The evidence for support for the use of Facebook in higher education contexts for learning and engagement point to psychological and social affordances. McLoughlin & Lee (2014) sum up the benefits of using Facebook for learning purposes in the following statement:

> The real value of Facebook is therefore arguably of a psychosocial nature: by establishing supportive links with peers and engaging in constructive dialog, students become more positive about the learning space and experience a psychological sense of community. Hence, the case can be made for learning as a connected, social, and networked phenomenon (p. 44).

The importance of the psychological and social factors in learning cannot be overstated and Facebook provides a fertile space that fosters psychosocial interaction necessary for learning and engagement in higher education contexts.

Twitter in Higher Education

Categorized as a micro blogging platform, Twitter allows users to send 280-character messages, doubled recently from 140-characters (Heisler, 2018), in the form of 'tweets.' Despite this perceived limitation, users of Twitter typically use what is referred to as #hashtags to identify specific topics of interest in which users can "follow" other users (@username) with similar interests regularly, and links to connect users to resources such as websites, blogs, and videos. Several research studies have been conducted on the efficacy of using Twitter in higher education contexts (Adams et al.,

2018; Carpenter, 2014; Carpenter & Krutka, 2014a; Carpenter & Krutka, 2014b; Carrington et al., 2017; Evans, 2014; Ferguson et al., 2015; Fries & Lam, 2018; Hernandez, 2015; Tang & Hew, 2017).

Twitter use in higher education contexts have shown to facilitate student engagement and enhance student grades. In an experimental study of 125 first-year seminar students enrolled in a course for pre-health professional majors at a US university, Junco et al. (2011) sought to determine whether the use of Twitter for educationally relevant purposes could potentially affect student engagement and grades. The study used the *National Survey on Student Engagement* (NSSE) (Chen et al., 2010) to measure student engagement. Some of the educationally relevant assignments and activities that required the use of Twitter include *continuity for class discussions*, *provide a low-stress means for students to ask questions*, *book discussion*, *helping to enhance student-to-student, class and campus event reminders, organizing service learning projects and study groups, and student-to-instructor connections* (Junco et al., 2011, p. 122). With regard to research questions on engagement and grades respectively, the results indicated that the experimental group that used Twitter had higher engagement scores than the control group, and that the use of Twitter for educationally relevant purposes had a positive effect on grades (Junco et al., 2011).

In a subsequent, and related follow-up study with a different student group, Junco et al. (2013) assessed student outcomes based on Twitter use in terms of collaboration, engagement, and success. Students in the initial study (Junco et al., 2011), were required to use Twitter; however, in the follow-up study (Junco et al., 2013) students were not

required to use Twitter. In this study, Junco et al. (2013) compared the two different approaches to integrating Twitter in college courses. In the follow up study, the researchers sought to determine whether there were differences in collaboration between a class that required Twitter use and one that did not. Furthermore, in the subsequent study, Junco et al. (2013) also sought to identify the key elements involved in effective Twitter integration in college courses. The results of the study revealed that the way in which instructors use Twitter - i.e., the extent to which instructors "engage with students by answering questions, encouraging discussions and providing support." (Junco et al, 2013, p. 283) is directly correlated with enhanced learning outcomes. With regard to the effective elements of integrating Twitter, the study revealed that Twitter should be integrated in educationally relevant ways, and that faculty engagement on Twitter are essential elements for a positive effect on learning outcomes (Junco et al, 2013). These conclusions have been supported by other researchers in later studies (Adams, et al., 2018; Menkhoff, et al., 2018; Tang & Hew, 2017). The implications here are quite clear – in order for Twitter to have a positive impact on student learning outcomes, it must be intentionally and strategically integrated into courses, and instructor presence and engagement are key factors necessary to having a positive impact on learning outcomes.

Evans' (2014) quantitative study investigated the extent to which Twitter can be used to enhance the learning process for students in a higher education context. Using Siemens' (2005) *Connectivism Theory* as a theoretical framework and factor analysis, the author set out to determine how Twitter use increased interpersonal relationships, student engagement, and whether Twitter use showed a link to attendance (Evans, 2014, p.913).

With regard to the first question on Twitter use and interpersonal relations between students and instructor, the results showed that there was no correlation between the two. In other words, using Twitter in the teaching process does not necessarily increase the personal relationship between students and their instructor (Evans, 2014). In terms of student engagement, the results showed a strong correlation between Twitter use and student engagement. Finally, the results revealed that there is no correlation between Twitter use and attendance (Evans, 2014). The implications for practice are that teachers should: (a) have a realistic perspective regarding Twitter use and their relations with students, (b) be aware of the potential of Twitter use in higher education and consider using it as a means of enhancing student engagement, and (c) not be overly concerned about Twitter's impact on students' attendance (Evans, 2014). These results and implications point to the need for instructors to have realistic expectations in terms of interactions with students on Twitter, that is, to focus more on course-related affordances such as student engagement with content and their peers in the learning process than on the personal and informal use. A teacher-centered approach is viewed as an appropriate consideration for Twitter intervention (Fries & Lam, 2020) in HE courses and consistent with previous studies (Adams, et al., 2018; Menkhoff, et al., 2018; Tang & Hew, 2017). Additional studies on Twitter use in higher education contexts point to affordances that

- foster a sense of belonging, engagement, and persistence (Fries & Lam, 2020)
- demonstrate positive attitude towards the integration of Twitter activities and facilitate active class participation (Luo & Xie, 2018)

- help to keep students engaged; preferred by students over traditional discussion boards in LMSs; help students to reflectively articulate learned course content; and enhances critical thinking (Luo et al., 2019)

Overall, the majority of research on the viability of using Twitter in higher education contexts reveal positive benefits and these positive benefits far outweigh any potential drawbacks. The challenge for educators is to be aware of these limitations and take the necessary steps to mitigate potential problems (Cole et al., 2017; Geenhow & Lewin, 2016) prior to embarking on integrating Twitter in higher education courses. The next section explores related literature on diversity and social media in higher education.

Diversity and Social Media in Higher Education

There is a dearth of relevant studies on social media use and the learning, engagement experiences of minority students in higher education contexts in general. This void is even more evident when it comes to research on the experiences of minority doctoral students in terms of social media, learning, engagement. There is, therefore, a gap in the relevant literature as it relates to social media and the learning and engagement experiences of minority doctoral students. Several studies have explored social media and diversity in higher education contexts from a variety of perspectives. For example, Mathiyalakan et al. (2016) explored the perceived impact of social media on academic achievement from the perspectives of African American and Hispanic students; Mwangi et al. (2016) investigated the use of social media as a medium for creating a "(Counter)space" for minority students to engage and collaborate in social activism and identity construction; and Amzalag et al. (2015) investigated the extent to which

engagement in social media affected ethnic Ethiopian students' academic integration into university environment in Israel. Using a case study approach, Daugird et al. (2015) analyzed a specific case in which a female freshman student (Jenny) posted comments on Twitter, characterized as intolerant and bigoted about one of her professors at the private college she attended without naming him. Her classmates recognized her post and encouraged her to remove it; however, Jenny refused, claiming she had the right to post her message. The college took punitive steps in response, to which Jenny protested that her rights were being violated. Using this as a foundation, the authors explored previous related cases and the legal decisions by courts as precedents to stimulate critical thinking and provide guidance for school administrators in crafting policies that simultaneously protect higher education institutions, maintain students' rights to freedom of expression and promote diverse and inclusive learning environments (Daugird et al., 2015). The study highlighted one of the challenges of using social media in educational contexts, specifically, the challenge of engaging ideas on institutionally related topics expressed on social media outside the confines of the educational institution.

In their quantitative, survey-based study designed to understand minority students' perceptions of Facebook use for academic purposes, Mathiyalakan et al. (2016) compared the perceptions of African American students from a Historically Black College (HBCU) and Hispanic students from a Hispanic Serving Institution (HSI). The purpose of the study was to understand minority students' perception of the use of Facebook in an academic context and its relationship to academic performance (Mathiyalakan et al., 2016). The results revealed significant differences between the two

groups in terms of their use and perceptions of Facebook in academic contexts. For example, although Hispanics have a negative view towards Facebook use and academic performance, when compared to their African American counterparts, they used Facebook more often to "interact with others to learn about their classes, communicate with their friends, about their courses, arrange study groups, get information about their school work and communicate with their professor" (P. 109). The results also revealed that although African American students are on Facebook longer, and have more friends, Hispanic students generally use Facebook more frequently (Mathiyalakan et al., 2016). The authors observed that despite these differences, the amount of time spent during each session is essentially the same for both groups. A key conclusion drawn by the authors from these differences in Facebook use is that cultural differences in social media use could possibly explain the perception of social media use in academic contexts. Mathiyalakan et al. also concluded that minority students, who also tend to come from lower socioeconomic backgrounds, might not yet realize the value of social media as a means of enhancing intellectual mobility, particularly when compared with their white counterparts who typically come from higher socioeconomic backgrounds. One implication for this in terms of practice would be that educators need to take steps to help minority students understand that social media use can and do provide affordances that positively contribute to enhanced academic performance and intellectual mobility.

A few researchers (e.g. Chan, 2017; Gin et al., 2017; & Mwangi et al., 2018) have conducted studies on minority students' experiences with social media in higher education contexts. Some of these studies highlight how social media has been, and

continues to be used to perpetuate microaggressions, racism and discrimination on college campuses. Some of these studies have also explored the role of social media as a social activist platform, or counter-space for minority students to address institutionally racist practices in both online as well as face to face (f2f) college and university learning environments (Mwangi, et al., 2018). Solórzano et al. (2000) define the term counter-spaces as "sites where deficit notions of People of Color can be challenged and where a positive collegiate racial climate can be established and maintained (p.70). According Solórzano et al. (2000), Counter-spaces make it possible for minority students to facilitate their own learning in an environment where their experiences and input are recognized as valid contributions to knowledge.

Using the concept of Counter-spaces and critical discourse analysis (CDA) as a theoretical framework, Mwangi, et al (2018) explored student activism through social media, specifically, through the lens of the *I, Too, Am* movement at Harvard and Oxford universities, respectively (Mwangi et al., 2018). The movement was formed initially at Harvard out of reaction against forms of microaggressions, and racism experienced by minority students at Harvard and Oxford and at other college and university campuses in the US and elsewhere (Mwangi et al., 2018). The authors looked at how the role of language and images on *I, too, Am* sites serve to help students (a) construct their Identity, (b) define campus racism, and (c) shape student activism (Mwangi et al., 2018, p. 146). The authors of the study used data in the form of documents and images posted on the social media platforms of Facebook, Twitter, and Tumblr respectively. The results of the study revealed that British and American students of color (a) are resisting deficit

narratives of how they are perceived while simultaneously articulating their own definitions of themselves, (b) using the *I, Too, Am* movement as a means of highlighting the transnational pervasiveness of institutionalized racism on college and university campuses, and (c) recognizing the usefulness of social media as a platform for promoting solidarity and counter-spaces for minority students in higher education contexts. The implications of the findings from the study point to several affordances of social media use and diversity in higher education contexts. First, social media provide counter-spaces for identity expression and development among minority students. Social media can provide the space to develop support and solidarity among minority students, while at the same time empowering them to reject the stereotypical narratives regarding their identity perpetuated by the dominant majority. Second, social media can be used as a viable means of shedding light on the pervasive and rampant nature of social issues such as institutionalized racism, which in turn raises awareness and the potential for actualizing social change. Finally, social media, as argued throughout this document, can be used as a viable tool for teaching and learning – formally, non-formally, and informally.

The notion of social media being used as a counter-space for minority students in higher education is similarly echoed in Hernandez's (2015) expository article on the affordances of Twitter as a counter-space for Latina doctoral students. The underlying premise of Hernandez's (2015) article is based on the notion that Latina doctoral students are faced with specific types of stressors as a result of engaging in an academic environment that is not sensitive to Latina/o cultural values. Examples of some of these cultural values include "*respeto* (respect for all- particularly elders and superiors),

falisimo (which refers to familial loyalty and interdependence), and *personalismo* (interactional style of collaboration and personalism)" (Hernandez, 2015, p. 124). Twitter, according to Hernandez (2015) is a potentially viable means for counter-spaces for Latina doctoral students due to its ease of use, and more importantly, its conduciveness to facilitating the cultural values of communication and collectivism of Latina/os. Furthermore, Hernandez claimed that Twitter use is potentially helpful for Latina doctoral students to establish a community of support, help Latina doctoral students establish an identity that is more reflective of who they really are, and ultimately because Twitter allows users to create content, it can also potentially be a source for social change.

Summary

The literature on the use of social media in higher education contexts overall points to affordances that support 21st century learning skills such as critical thinking and working interactively and collaboratively with others in the learning process. Social media use is also conducive to facilitating engagement cognitively, behaviorally, socially, and emotionally. Social media platforms such as Facebook and Twitter are increasingly integrated into higher education courses to either compliment existing LMSs or as an independent component in online, face-to-face, and hybrid courses. More recent studies show that social media use in higher education also provides opportunities for students, particularly minority doctoral students, to not only learn and engage course content and their peers but also serve as a space that empowers them to construct and shape the narrative of their identity. Despite the many benefits of integrating social media into the

teaching and learning process, not many teachers have actively embraced the practice in higher education contexts. Instructors considering integrating social media use in their courses need to be mindful of potential drawbacks and be intentional, strategic, and engaged when using social media in higher education contexts. The general qualitative approach in this study is conducive for acquiring a deep understanding of minority doctoral students' social media experiences in terms of learning and engagement and is the focus of chapter 3.

Chapter 3: Research Method

The purpose of this general qualitative interview study was to explore and understand the experiences of current and minority doctoral students as it relates to learning and engagement through the lens of social media. There is a performance and achievement gap between minority students and their majority counterparts across all levels of education in the United States (Hemphill, 2011; NCES, 2015; Okahana et al., 2018). Some researchers have indicated the potential for social media as a means of facilitating both informal and formal learning in higher education contexts (Pechenkina & Aeschliman, 2017; Tananuraksakul, 2014). no research studies, however, exist that specifically explore the experiences of minority doctoral students at the intersection of social media, learning, and engagement. A gap therefore exists in the research literature that needs to be addressed. Grounded in the constructs of learning, engagement, and connectivism respectively (Kereluik, et al., 2013; Pittaway, 2012, & Siemens, 2005), this general qualitative study employs the CoLeEn conceptual framework as a means of guiding the study. Specifically, the CoLeEn conceptual framework as used in this study is designed as a means of engaging the research questions relevant to the central constructs of 21st century learning, engagement, and connectivism respectively.

In this chapter, I provide the research design and the rationale for the chosen research design tradition, followed by a discussion of the role of the researcher in which I describe my role as an observer and engage ways in which potential biases may be mitigated. Next, in the Methodology section, I discuss participant selection logic, instrumentation, procedures for recruitment of participants and data collection, and the

data analysis plan. This is followed by a section that addresses issues of trustworthiness, in which I engage credibility, transferability, dependability, and confirmability. The chapter concludes with a summary and transition to Chapter 4.

Research Design and Rationale

The research questions for this general qualitative interview study are designed to provide an in-depth understanding of the experiences of minority doctoral students with social media use in terms of learning and engagement. The following research questions guided the study:

1. What are the experiences of minority doctoral students with social media in the context of their learning and engagement?
2. What are the viewpoints of minority doctoral students about the role of social media in 21st century learning skills?
3. What are the experiences of minority doctoral students using social media to engage with peers, faculty, and the doctoral process?
4. How do minority doctoral students describe social media as a means to facilitate learning and engagement when they are engaged socially, behaviorally, cognitively, and emotionally?

The central concepts of the study include (a) 21st century learning, (b) connectivism, (c) engagement, and (d) social media. In this study, I specifically focused on the social media platforms of Facebook and Twitter and minority doctoral students' experiences with both in terms of learning and engagement. The concepts of 21st century learning, connectivism, engagement, and social media are central to this research study because

they are aligned with the purpose and research questions that seek to determine the experiences of minority doctoral students in terms of learning and engagement through social media. Table 1 displays the alignment of the research questions and the core concepts of the CoLeEn conceptual framework of connectivism, 21st century learning, and engagement. Furthermore, the concepts of connectivism, learning and engagement align with, and are central to the CoLeEn conceptual framework used in this study.

Table 1

Alignment of Research Questions and CoLeEn Conceptual Framework

Research questions	CoLeEn framework
RQ 1: What are the experiences of minority doctoral students with social media in the context of their learning and engagement?	Connectivism 21st century learning skills
RQ 2: What are the viewpoints of minority doctoral students about the role of social media in 21st century learning skills?	Connectivism 21st century learning skills
RQ 3: What are the experiences of minority doctoral students using social media to engage peers, faculty, content, and the doctoral process?	Connectivism Engagement
RQ 4: How do minority doctoral students describe social media as a means to facilitate learning and engagement when they are engaged socially, behaviorally, cognitively, and emotionally?	Connectivism Engagement 21st century learning

I opted to use a general qualitative interview research design for this study because a qualitative research design, though generally characterized by informal, structured and unstructured type interviews with open-ended type questions, allows the qualitative researcher to obtain an in-depth understanding of the phenomenon of interest (Creswell, 2018; Moustakas, 1994; Yin, 2016). A qualitative research design is therefore consistent with the research questions and purpose of this study. More specifically, within

the qualitative tradition, I have chosen to use a general qualitative interview study design. A general qualitative design is conducive for providing rich and thick descriptions of the complex phenomena of the learning and engagement experiences of minority doctoral students through social media (Creswell, 2018; Patton, 2015; Yin, 2016).

Alternative qualitative design approaches such as phenomenology, case study, narrative, ethnography, and grounded theory were deemed inappropriate based primarily on the purpose of my study and the central research questions. For example, a case study design approach focuses on "how," and "what" type research questions and the use of multiple types of data sources in order to obtain an in-depth understanding of a complex phenomenon within or across cases (Creswell, 2018; Yin, 2016). The research questions in my exploratory study, in contrast, are "what" type questions designed to obtain an in-depth understanding of the learning and engagement experiences of minority doctoral students through social media. Similarly, a phenomenological approach was deemed inappropriate as this approach seeks to describe the "essence" of the lived experiences of participants regarding a specific phenomenon (Moustakas, 1994). Finally, an experimental oriented quantitative research method that looks at the relationships between variables is not consistent with the purpose and goals of my study.

Role of the Researcher

My primary role in this study was that of an observer. In qualitative research, the researcher is considered to be the primary means or instrument for data collection (Creswell, 2018; Patton, 2015; Yin, 2016). As such, the researcher needs to take specific steps to mitigate the potential for bias in order to ensure accuracy and maintain validity.

For example, as a minority doctoral student myself, I must be cognizant of the potential emotional attachment with the research participants. The first step I took towards minimizing not only bias, but also errors was to record all interviews. This served to ensure that the data collected were consistent and accurate. Another specific and important step that I took as a means of minimizing the potential for bias was to keep an ongoing journal throughout the data collection process. Keeping a journal and using memos to introspectively document my thoughts, feelings, and reactions throughout the research process can serve to enhance objectivity and minimize bias (Maxwell, 2013). The use of memos is an effective way for qualitative researchers to help address researcher bias (Maxwell, 2013). Another means of addressing potential researcher bias is member checking (Yin, 2016). Participants in the study agreed to be contacted as needed to confirm and or clarify the accuracy of the interview transcript data.

Methodology

In this section, I describe the data collection process and how the data was analyzed. Specifically, I begin by discussing the logic for participant selection, followed by a section on instrumentation, which is then followed by procedures for recruitment, participation, and data collection steps. Finally, I conclude this section with a data analysis plan.

Participant Selection Logic

The population for this study consists of current minority doctoral students. Purposive sampling was used because it allows the qualitative researcher to have access to information-rich cases that can provide in-depth understanding of complex social

phenomena (Patton, 2015; Yin, 2016). For this study, minority doctoral students are uniquely qualified to provide information-rich data on their learning and engagement experiences through social media during the doctoral process. The study sample was drawn from the research participant pool of a large online university in the United States. Moreover, the sample was also drawn from Minority Doctoral Network, a private Facebook group exclusively dedicated to minority doctoral students. Demographic-specific information was provided during the data collection process. In order to participate in the study, potential participants had to meet the following criteria:

1. identify racially or ethnically as a minority, and
2. have completed dissertation course work, and are currently in the dissertation writing stage, or
3. have successfully completed the dissertation within the last 12-24 months

The participants who volunteered for the study were informed of the criteria for inclusion in this study. I ensured that those who were willing to participate understood the criteria for participation in the study. Procuring participants through a trustworthy third party such as the participant pool of a large online American university is a viable means of not only obtaining potential research participants, but also serve as a means of verifying that participants are credible, and are who they say they are (Salmons, 2015). I obtained approximately 15-20 prospective participants from the research participant pool initially. I then used the criteria for inclusion along with the participant demographics to narrow the number of participants to 12. The rationale for this number of participants is reflective of, and consistent with, the general qualitative design for this study, as well as

the purpose of the study. Furthermore, because the study used purposive sampling, data saturation was achieved with the 12 participants. Data saturation can be defined as the point "when the collection of new data does not shed any further light on the issue under investigation" (Glasser & Straus as cited in Mason, 2010).

Upon receiving approval from Walden Institutional Review Board (IRB; Approval No. 02-26-21-0410247) and obtaining a list of potential study participants, I initiated contact with prospective participants by sending them an invitation to participate in the study via e-mail. Once a participant agreed to participate, I then sent the participant a copy of the informed consent notice to review. The participant was then directed to respond via e-mail with "Yes, I consent," after which I contacted the participant to set up a mutually agreeable time to conduct the online interview.

Instrumentation

In qualitative studies, the researcher is considered to be the primary instrument for collecting data (Creswell, 2013; Patton, 2015; Yin, 2016). For this general qualitative study, I conducted online interviews with participants using Zoom (https://zoom.us) as a tool designed for computer mediated communication (CMC). The rationale for conducting the interviews online is that online interviews (a) are consistent with the design and conceptual framework of the study, (b) allow me to observe participants' non-verbal feedback to interview questions, and (c) provide the opportunity for me to record the interviews via the Zoom CMC platform. Furthermore, Salmons (2015) noted that one of the categories of online interviewing is for those researchers seeking to "study online or technology-mediated behaviors, culture, practices, attitudes, or experiences" (Salmons,

2015, p. 127). My study falls into this category; therefore, I used Salmons's e-interview framework as a guide throughout the interview process. I also used an interview guide that included a few open-ended questions at the beginning of the interview; however, the majority of the questions are semistructured questions (see Appendix A) with follow-ups and probes in order to obtain rich, and in-depth responses from participants (Creswell & Creswell, 2018; Maxwell, 2013; Yin, 2016). The interview questions align with the study's research questions (see Table 2).

Table 2

Alignment of Research Questions and Interview Questions

Research questions	Interview questions
RQ1. What are the perceptions of minority doctoral students regarding the use of SM for their learning?	What is your view on the integration of SM in the doctoral learning process? Could you tell me more? What is your view of using Facebook & Twitter as part of the doctoral learning process?
RQ2. What are the experiences of minority doctoral students regarding the use of SM in acquiring or using 21st Century learning skills?	Can you describe your experience with SM in acquiring/using 21st Century learning skills? Can you share some specific examples? /What were your experiences with Facebook and Twitter?
RQ3. What are the experiences of minority doctoral students regarding the use of SM to engage peers, faculty, content, and the doctoral process?	Describe your experiences with SM to engage: (a) peers (b) faculty, (c) content, and (d) the doctoral process How have these experiences influenced your view of SM learning and engagement in the doctoral process?
RQ4. What do doctoral students say of social media as a means and medium that facilitates learning and engagement when they are engaged socially, behaviorally, cognitively, and emotionally?	What is your view of SM as a means of facilitating learning & engagement when you are engaged in the doctoral process(a) socially, (b) behaviorally, (c)cognitively, and (d) emotionally? Can you share some examples? Can you tell me whether your use of SM was required or voluntary, formal or informal? Describe your feelings about this.

Note. SM = social media.

Procedures for Recruitment, Participation, and Data Collection

After receiving IRB approval from Walden University, I contacted potential participants from the online university research participant pool via e-mail invitation to participate in the study. I also recruited participants from Minority Doctoral Network, a closed Facebook group. Once participants read the invitation, which included the purpose of the study, and responded by affirming their willingness to participate, I sent them the

informed consent notice via e-mail message and arranged for a mutually agreeable time to conduct the online interview. I also encouraged participants to ask me any questions via e-mail regarding the purpose of the study or any questions they may have regarding the informed consent notice (Creswell & Creswell, 2018; Salmons, 2015). Along with the informed consent notice, participants were asked to complete a brief demographic questionnaire (see Appendix B). Moreover, I provided the research questions for participants to engage. The rationale for this is that by providing the questions ahead of the actual interview, it will help to mitigate potential affective factors, such as the pressure of having to respond to queries in an impromptu manner, and any nervousness that may occur as a result of being video-taped (Patton, 2015; Salmons, 2015). For this general qualitative study, I gathered data by conducting a single round of 60-minute, online interviews with the selected 12 participants. Participants agreed to engage in follow-up conversations via e-mail for confirmation and verification purposes as needed.

During the online interviews, I used an interview guide (see Appendix A). The questions are semistructured, and open-ended, and are designed to elicit rich data from participants' responses.

Data Analysis Plan

Prior to deciding on a specific data analysis plan, I reviewed King and Horrocks (2010) three-stage thematic analysis system that includes: descriptive coding, interpretive coding, and overarching themes. I also reviewed Rubin and Rubin's (2012) four-step approach that includes: identifying, sorting, weighing, and integrating coded items. Finally, I reviewed Yin's (2016) five analytic phases for qualitative data analysis. These

five phases include: “compiling, disassembling, reassembling and arraying, interpreting, and concluding” (Yin, 2016, p. 185).

I initially opted to use Yin’s five-phase approach for data analysis because it is comprehensive in scope and reflects the most recent thinking on qualitative data analysis schemes. I also wanted to use a comprehensive and holistic data analysis scheme that would allow me to thoroughly engage the collected data to enhance internal validity of my single-round online interview study. However, I finally decided to use King and Horrocts’s (2010) three-stage thematic analysis system. I provide a rationale for this change in chapter 4. Throughout the data collection and analysis, I took notes. Merriam and Tisdell (2016) note that the data collection and analysis is a fluid and iterative process, and that the qualitative researcher actually begins analysis while collecting the data through notes and engaging in the process of reflexivity.

I conducted and recorded interviews using Zoom, a digital computer mediated communication platform. I transcribed all interviews using Dictanote, a transcription software. I read through the transcripts to get a sense of the data and then highlight key terms, phrases, and ideas relevant to the interview questions as a means of developing initial descriptive coding (Rubin & Rubin, 2012). I subsequently use the qualitative data analysis software NVivo 12 Pro to develop more focused coding and identified descriptive codes, interpretive codes, and overarching themes (King & Horrocks, 2010).

I addressed possible negative or discrepant data by reporting them as a part of the findings. I also used any discrepant data to temper my conclusions. This served as an additional step to enhance credibility and to minimize researcher bias.

Issues of Trustworthiness

Unlike quantitative studies that focus on validity and reliability, qualitative research emphasizes the notion of the overarching concept of trustworthiness, with the four components being credibility, transferability, dependability, and confirmability (Merriam & Tisdell, 2016; Shenton, 2004). In fact, Merriam & Tisdell (2016) note that the terms "validity" and "reliability" are what make research studies trustworthy (p. 298). The issue of trustworthiness is even more important for general qualitative studies because general qualitative designs are not based on established qualitative traditions nor theoretical or epistemological frameworks.

In terms of credibility, I used triangulation and member checking during the data collection and analysis process. Triangulation allows the qualitative researcher to check data by comparing data across different sources. In this study, the primary data source will be participants' interview responses. In this study, I employed *analytical data triangulation* in the data collectin process and *analytical theoretical triangulation* in the data analysis process (Denzin, 1970/2009; Ravitch & Carl, 2021). In the data collection process, data were collected from participants from (a) multiple universities, (b) in face-to face (f2f) and (c) online modalities of teaching and learning. Ravitch and Carl (2021) sum up analytical theoretical triangulation as "understanding the back-and-forth between theory and data as well as your own sense-making and the sense-making of your colleagues and peers with whom you discuss what you are learning from the data" (p. 246). In this study, the "theory" is the CoLeEn conceptual framework which served to

isolate the key constructs of connectivism, learning, and engagement during the data analysis process.

Transferability involves the researcher providing adequate contextual descriptions for the study (Shenton, 2004). Contextual descriptions are important for qualitative studies because of the inductive nature of qualitative research (Creswell, 2018). Therefore, the findings of this study are based on the context. For this study, the context focused on minority doctoral students' experiences with learning and engagement through social media during the doctoral process.

Dependability relates to the level of transparency provided by the researcher for replication (Shenton, 2004). I documented an audit trail during the entire process. I also used notes. Furthermore, I maintained a journal during the process. The combination of these are helpful for me to engage the practice of reflexivity in which I intentionally took into consideration by documenting how my values, beliefs, and potential biases could impact the research procedures and findings. Documenting this introspective dynamic throughout the research process helped me to maintain transparency (Merriam & Tisdell, 2016).

Finally, confirmability has to do with ensuring that the findings of the study are consistent with the experiences of participants (Shenton, 2004). I had initially planed to provide participants with copies of the interview transcripts as a means of confirming specific comments and experiences; however, this was not done due to constraints brough on by the COVOD-19 pandemic. Instead, the transcribed data was checked with the interview recording multiple times for accuracy and meaning.

Ethical Procedures

I took specific steps throughout this research process to ensure adherence to appropriate ethical procedures. First, I did not attempt to contact or engage prospective participants until after I had received authorization from Walden's IRB. After receiving approval, I engaged prospective participants by sending them a letter of invitation to participate in the study. Once prospective participants had agreed to participate in the study, I sent them an Informed Consent form. Once potential participants had reviewed the Informed Consent form and agreed to participate, they were directed to respond via e-mail with "I consent."

I contacted each participant via e-mail or telephone prior to the actual interview. The purpose of this is to help build trust between the participant and myself, as well as provide the participant an opportunity to ask any questions related to the study prior to conducting the interview (Janesick, 2011). This also served as an ice- breaker prior to the actual online interview and helped to provide a more relaxed atmosphere. Participants' names were kept confidential, and pseudonyms as P1, P2 and so on were used. Interview data were kept secure on password protected laptop and digital devices. Data from interview transcripts will be kept for five years, after which it will be destroyed five years after the study is completed.

Summary

In Chapter 3, I provided the research design and rationale, my role as the researcher, the methodology and methods—including the data collection procedures, data analysis plan, issues of trustworthiness, and ethical procedures. The purpose of this

general qualitative study is to understand the learning and engagement experiences of minority doctoral students through social media. In Chapter 4, I discuss data collection, analysis, and the findings of the study.

Chapter 4: Results

The purpose of this general qualitative study was to explore minority doctoral students' experiences with, and perceptions of social media in terms of learning and engagement during the doctoral process. To that end, the CoLeEn conceptual framework was created based on Siemens' connectivism theory (2005), Kereluik et al. 21st century learning framework (2013), and Pittaway's Engagement Framework. Based on the CoLeEn conceptual framework, four research questions were used for the study.

Research Questions

To understand the experiences and perceptions of minority doctoral students' social media use in the context of learning and engagement during the doctoral process, four research questions were used to guide this study.

RQ1: What are the experiences of minority doctoral students with social media in the context of their learning and engagement?

RQ 2: What are the experiences of minority doctoral students about the role of social media in 21st century learning skills?

RQ 3: What are the experiences of minority doctoral students using social media to engage peers, faculty, and the doctoral process?

RQ 4: What do minority doctoral students describe social media as a means to facilitate learning and engagement when they are engaged socially, behaviorally, cognitively, and emotionally?

This chapter includes the setting for the study, participant demographics, data collection, and data analysis. The chapter also discusses evidence of trustworthiness, the results, and concludes with a summary.

Setting

Data for the study were collected through 12 online interviews via Zoom, lasting on average 45–60 minutes. The interviews were conducted on my personal password-secured computer from home. Most of the interviewees (n = 11) used a personal computer to participate in the Zoom interview while one interviewee accessed the Zoom interview via phone. All interviewees participated in the interviews from home.

Demographics

Participants for this study were recruited from the research participant pool of a large online university in the US and from Minority Doctoral Network, a Facebook group comprised of current and former minority doctoral students. During the recruitment process, participants were asked to complete a brief demographic questionnaire (see Appendix B). Data based on the questionnaire include participants' gender, age, race/ethnicity, area of study (major), and the stage of the doctoral process, respectively. Pseudonyms were used to protect participants' identities. All identified participants were drawn from minority communities; 10 participants identified as Black or African American, one as Black/Afro-Caribbean, and one as Hispanic/Latinx. All participants were in the doctoral process; no participant had completed the dissertation or had recently graduated. All participants in this study were female, 11 of whom were enrolled in

doctoral programs at U.S. universities. One participant was enrolled in a doctoral program in the Netherlands. Participant demographic data are provided in Table 3.

Table 3

Participant Demographic Data

Participants	Gender	Age	Race/Ethnicity	Major	Doctoral stage
P1	Female	31	Black	Comparative international development education	Approved proposal
P2	Female	32	Black	Public health	Proposal
P3	Female	33	Hispanic/Latinx	Health information management	Prospectus
P4	Female	36	Black	Education	Proposal
P5	Female	51	African American	Nursing education	Prospectus
P6	Female	28	African American	Curriculum & instruction	Proposal
P7	Female	33	African American	Engineering education	Data analysis & writing
P8	Female	25	Black	Sociology	Prospectus
P9	Female	32	Black	History	Approved proposal
P10	Female	41	Black	Psychology	Prospectus
P11	Female	43	Black	Information science	First year
P12	Female	50	Black	Industrial & organizational psychology	Proposal

Data Collection

Twelve current doctoral students drawn from minority communities participated in this general qualitative study. Upon receiving IRB approval, I engaged participants from the research participant pool of a large online university in the United States. I also posed a flyer soliciting participants for the study on the Minority Doctoral Network

Facebook group. After receiving e-mails from potential participants expressing an interest in participating, I e-mailed a letter of invitation to interested individuals, thanking them for their interest and willingness to participate in the study and this was followed up in a subsequent e-mail with a copy of the Informed Consent Notice. Finally, Zoom interview sessions were scheduled.

Data were gathered through a single round of 60-minute online Zoom interviews. Interviews were recorded via Zoom and stored on a password-protected laptop computer and alphanumeric pseudonyms, as indicated in Table 2, were used to protect participants' identity. All data were collected between March 2021 and June 2021. Interviews were initially transcribed via), an online transcription service. After this initial data transcription, I carefully cleaned and edited any discrepancies between the audio recordings and transcripts. This process was quite helpful in allowing me to become more familiar with the data and provided early clues relevant to data analysis and potential themes (Merriam & Tisdell, 2016). All transcripts were reviewed a second time before uploading to NVivo (Version 12) in the process of coding, categorizing, as well as identifying themes.

Data Analysis

Data analysis for this general qualitative study was based on King and Horrocks' (2010) basic three-stage thematic analysis system that includes (a) descriptive coding, (b) interpretive coding, and (c) overarching themes. As stated in Chapter 3, I had initially planned on using Yin's (2016) five-stage approach to data analysis; however, as I completed the data collection and began the analysis, I realized that King and Horrocks'

basic three-stage thematic analysis of descriptive coding, interpretive coding and overarching themes resonated, and were more in line with the process I had initiated. According to King and Horrocks, in the descriptive stage, the researcher highlights key information from the transcripts, makes preliminary comments, and defines descriptive codes. Next, in the interpretive stage, descriptive codes are clustered and interpreted considering the research question(s). Finally, overarching themes for the data set were derived by analyzing interpretive codes through the lens of the CoLeEn conceptual framework and practical stance of the project. King and Horrocks' three stage thematic approach fits well with this general qualitative study and is ideally suited to facilitating an in-depth understanding of the complex phenomenon (Patton, 2015) of the social media, learning and engagement experiences of minority doctoral students during the doctoral process.

I used NVivo (Version 12) qualitative data analysis software and Microsoft Word throughout the data analysis process that included the following steps:

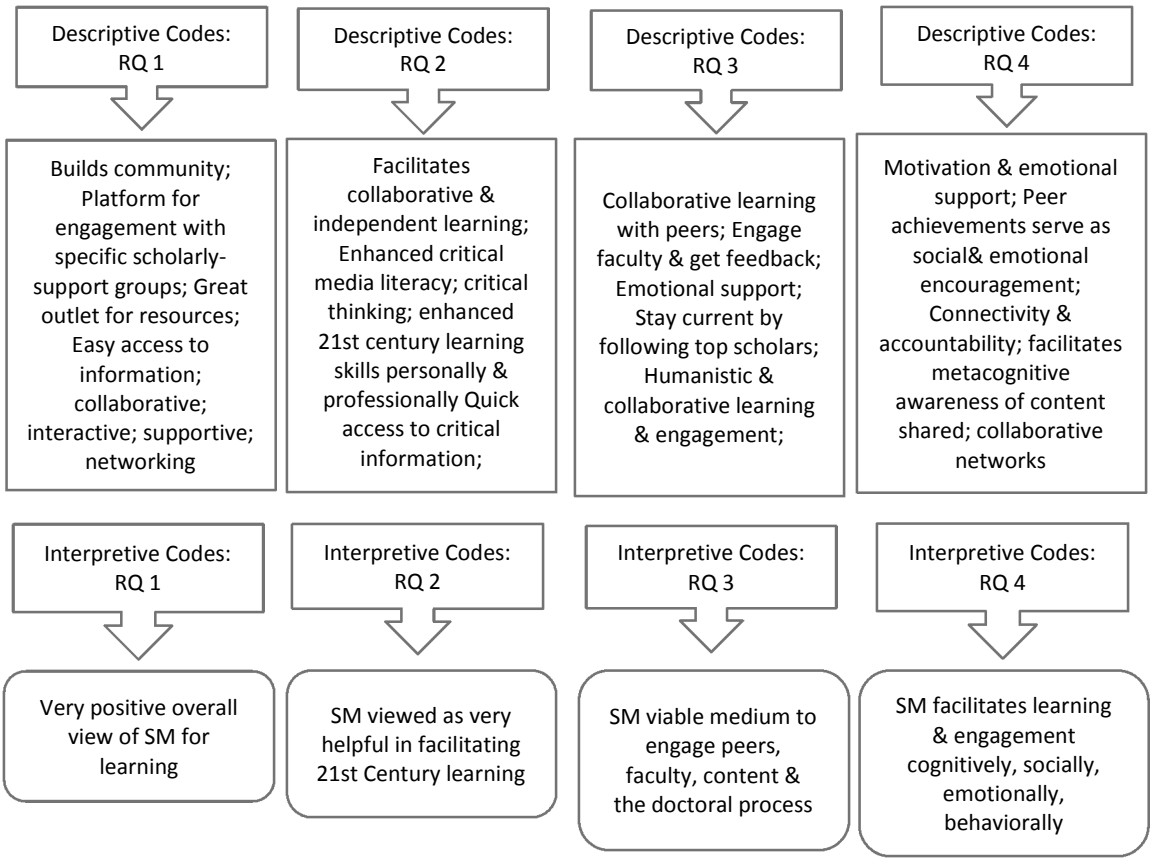
1. Interviews were initially transcribed using Dictanote, an online audio transcription service.
2. After this initial transcription, I cleaned and verified each transcription by listening to the audio recording and comparing it to the transcription, correcting any discrepancies between the two as needed.
3. Next, I used NVivo 12 to identify possible descriptive codes. I used the CoLeEn conceptual framework and the research questions as the lens through which I could engage the data to identify descriptive codes.

4. I clustered the descriptive codes to generate notes and comments to form interpretive codes or categories.
5. I then used the Review and Comment feature in Microsoft Word to move from interpretive codes to overarching themes based on the CoLeEn conceptual framework and participants' responses to the research questions.

It is worth noting here that the process of moving from descriptive codes to overarching themes was not a linear process; instead, it was more recursive in that I often moved back and forth between all three stages to clarify and confirm overarching themes. As King and Horrocks (2010) noted, "in reality, carrying out an analysis does not progress in a sequential manner. There is often the need to cycle back and forth between stages" (p. 152). In identifying the descriptive codes, I focused on key terms participants used to characterize their views and experiences with social media during the doctoral process. As I transitioned from descriptive to interpretive codes, my goal was to make sense of (interpret) minority doctoral students' descriptions of their views and experiences with social media while engaged in the doctoral process. Descriptive and interpretive codes (see Figure 2) were identified for each of the four research questions during Steps 3 and 4 of the data analysis process.

Figure 2

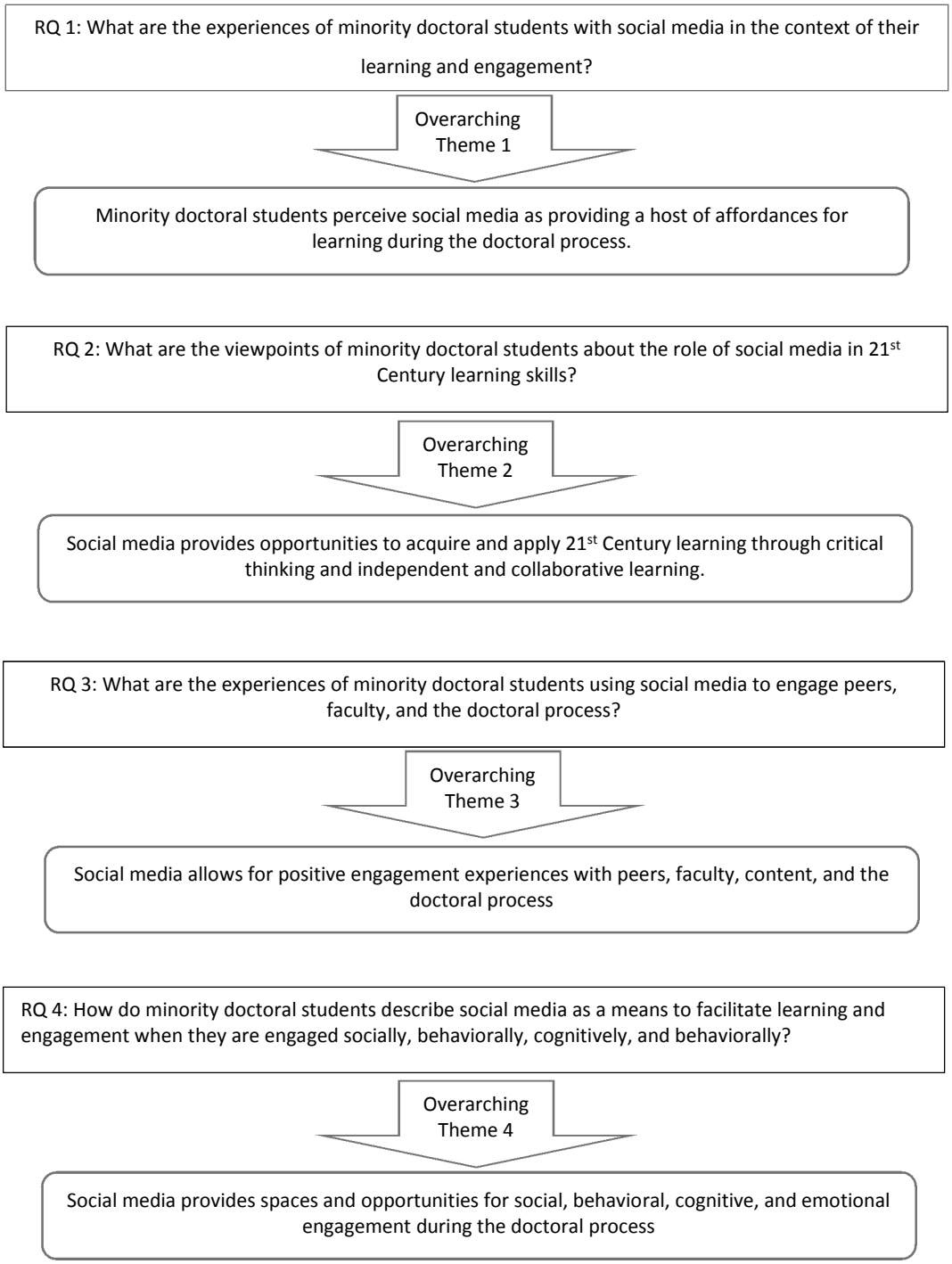
Descriptive and Interpretive Codes



In making the transition from interpretive codes to overarching themes, King and Horrocks (2010) point out that the overarching themes should reflect the key concepts of the analysis and build on the interpretive codes but should also be characterized by "a higher level of abstraction" compared to the interpretive codes (p. 156). The overarching themes based on the interpretive codes in Figure 2 and the four research questions are provided in Figure 3.

Figure 3

Research Questions and Overarching Themes



Discrepant Case

There was one participant (P10) whose responses to some of the interview and research questions can be characterized as generally broad, indirect, and devoid of context. For example, in response to RQ 1 on doctoral students' perceptions of using social media for their learning during the doctoral process, P10 responded by sharing her experiences with social media use in a general way in terms of work: "The integration [of social media] has contributed so much in making work a bit more broken down and a bit more easier." The "work" P10 mentioned is related to her practice as a counselor and not her work as a doctoral student. P10 goes on to mention the convenience of Zoom meetings, Face Time, and the ability to connect with others online. P10's response in this situation clearly indicates a positive perspective of social media; however, the response is devoid of the doctoral context. It is worth noting here that P10's major is psychology, and she is a practicing counselor; therefore, this could be one reason why some of her responses may be more reflective of her work experiences with social media.

Regarding her experiences with using SM to engage peers, faculty, content, and the doctoral process (RQ 3), P10 provided the following: "For the peers, we have been (able) to maintain contact, even with the pandemic and also being able to keep each other posted in school, especially assignments." P10 continued by sharing the following on engaging faculty through SM: "In terms of the faculty, maybe in terms of the communication on things to do with how you're progressing, are your fees paid on time, such things that I've been able to communicate to me via email."

P10's responses are somewhat general, coupled with a lack of specifics and certainty in terms of her use of social media for engagement during the doctoral learning process. When asked about using social media as a means and medium that facilitates learning and engagement socially, cognitively, behaviorally, and emotionally (RQ 4), P10 shared: "Social media will assist in all these aspects in that it will be able to help people connect to each other, help people to share ideas, help people to know where one has reached in terms of Education." In this response, P10 spoke of the *potential* of social media instead of her *actual* experiences and used the third-person, instead of the first-person. This use of the hypothetical and third person instead of her own first-person experiences lack the specifics to fully answer the question. It is worth noting that despite P10's seemingly lack of specific examples regarding her social media experience during the doctoral process, some of her responses to questions related to views and perspectives of social media use during the doctoral process are consistent with comments made by other participants in this study.

Evidence of Trustworthiness

The concept of trustworthiness is an essential aspect of qualitative research, and the qualitative researcher must be intentional about taking the necessary steps to maintain trustworthiness throughout the research process. Trustworthiness is therefore critical to maintaining quality in qualitative research (King & Horrocks, 2010; Merriam & Tisdell, 2016). The four components of trustworthiness include credibility, transferability, dependability, and confirmability.

Credibility

Yin (2016) characterizes a credible study as "one that provides assurance that you have properly collected and interpreted the data, so that the findings and conclusions accurately reflect and represent the world that was studied" (p. 85). Credibility in qualitative studies has also been described as *internal validity* (Lincoln & Guba, 1985). Specific qualitative protocols were employed in this study throughout the data collection and analysis process to maintain and enhance credibility. I used *purposeful sampli*ng with specific criteria during the data collection process. I specifically focused on current and recently graduated minority doctoral students for the study. This purposeful sampling is one step to enhance credibility. I also used *data triangulation* in procuring data from participants from different institutions, both online and face-to-face learning contexts over a four-month period between March and June 2021. Using data from various sources is another qualitative approach to enhancing credibility (Merriam & Tsdell, 2016; Ravitch & Carl, 2021).

I also used *thick description* of the data collection and analysis process to further enhance credibility. Thick description in qualitative studies includes detailed descriptions of the phenomena and context under study so readers can make the connection between the data collected by the researcher and conclusions drawn (King & Horrocks, 2010; Ravitch & Carl, 2021). I employed the qualitative practice of *reflexivity* throughout the research process. Reflexivity in qualitative research focuses on the role of the researcher in the data collection process. For example, Ravitch & Carl (2021) identify *researcher memos, research journal*, *dialogic engagement*, and *researcher interviews* as specific

reflexivity strategies that the qualitative researcher can apply during the data collection process (Ravitch & Carl, 2021, p. 107). In this study, I kept a research journal that documented my thoughts, reactions, questions, and concerns. For example, as a Black minority doctoral student, I identify with some of the participants in this study and had to be constantly mindful of this and the potential for *researcher bias,* particularly during the data collection/interview sessions. Furthermore, I used memos during the data collection process, commenting on observations, similar or common patterns in responses to research questions, and participants' feelings, and attitudes.

Finally, I carefully analyzed potential *discrepant cases*. Addressing discrepant cases is yet another means of enhancing credibility in qualitative studies (Merriam & Tisdale, 2016; Patton, 2015).

Transferability

The concept of *transferability*, also referred to as external validity (Lincoln & Guba, 1985) has to do with the extent to which the results of a research study can be generalized to other contexts (Merriam & Tisdell (2016). I used purposeful sampling and thick description of the data collection and analysis process as two specific strategies designed to provide an accurate description for the context of my study, and thus enhanced transferability.

Dependability

Analogous to the concept of reliability in quantitative research, *dependability* in qualitative studies has to do with the "stability of the data" (Ravitch & Carl, 2021, p. 171). The general qualitative research design features of this study, including use of the

CoLeEn conceptual framework, the derived research questions, data collection and analysis process contribute to dependability. Furthermore, the use of triangulation and thick description contributes to increased dependability. Furthermore, I provided a rational explanation for the choices made throughout the research process.

Confirmability

Confirmability is the extent to which the findings of a study can be confirmed (Ravitch & Carl, 2021). A central goal of confirmability is "to acknowledge and explore the ways that our biases and prejudices map onto our interpretations of data and to mediate those to the fullest extent possible through structured reflexivity processes" (Ravitch & Carl, 2021, p. 171). I used memos, and a journal to document my biases insights/interpretations and triangulation in this study. Furthermore, engagement with, and feedback from my dissertation committee members throughout the research process contributed to enhanced confirmability.

Results

The purpose of this general qualitative study was to explore minority doctoral students' experiences with, and perceptions of social media in terms of learning and engagement during the doctoral process. Descriptive codes, interpretive codes, and overarching themes were acquired inductively based on analysis of participants' responses to the research questions.

RQ 1: What are the experiences of minority doctoral students with social media in the context of their learning and engagement?

Theme 1: Social Media Provides a Host of Affordances for learning and Engagement During the Doctoral Process

There was consensus among participants in their perceptions of social media as having many benefits during the doctoral learning process. Key words used by participants regarding their perceptions of social media include *information, resource, engage, collaborate, research, access, connect, space, network, acceptance, community, and support.* These affordances are categorized into two subthemes with some overlap:

Subtheme 1

Participants describe social media as a medium to access information and resources, and to engage, and collaborate with peers and faculty during the doctoral process. For example, P11 stated the following regarding Twitter in terms of engagement and collaboration:

> I've seen Twitter used more like, in the context of when you're attending a conference and people can … share short clips of whatever the presentation or whatever is going on so you can create engagement because if it's something of interest to you, then you can just follow the hashtag.

Some participants point to the benefit of acquiring resources through social media not commonly or readily available through their doctoral programs. For example, P8 stated,

> I would say probably some of the best resources I've gotten during my doctoral studies outside of my department has been on Twitter. … And so, there is this whole side of Twitter we call *academic Twitter* where people put, like how to write a literature review, like things that I never formally have been taught, people

> kind of share resources that they use in their classes or that they've written themselves on their blogs.

P8 goes on to share how the collaborative affordance of Twitter has helped to shape her identity as a scholar:

> It has really introduced me to just how to be a public-facing scholar. And so, I see a lot of people share a thread of their articles, they're like, hey this is the article I just published. Here's what led me to this question. Here's my summary of the findings.

Some participants view social media as a supplemental resource for their doctoral program, a way to build community through collaboration, and are strategic and intentional when engaging social media. For example, P6 shared her perception of, and engagement with Twitter, Facebook, and YouTube, respectively, in the following way: "So, for me, I see [social media] as a supplemental resource to what I have in my program currently. So, I actively use social media. I use Twitter for my doctoral engagement." Regarding Facebook, P6 shared,

> And so I see that as a way to build community outside just my program. … and then, my other media platforms, like YouTube, I use those to hear people's experiences when they talk about their experiences like shortcuts that they use. So in general I think it's just a supplemental resource to build community in congruence to the community I already have in my doctoral program.

In addition to viewing social media as a medium to access information and resources, and to engage, interact, and collaborate with peers and faculty during the doctoral process,

participants also perceive social media as a space in which they can feel accepted and get support from peers in the doctoral process.

Subtheme 2

Participants describe social media as a space to gain a sense of acceptance and support from peers as well as a means of building community during the doctoral process. In terms of social media being a space for support and acceptance, P8 attributes her positive attitude toward social media use during the doctoral learning process based on her experiences with social media support groups:

> I see I'm in a lot more like scholarly focused support groups where people share, 'hey, I just graduated with my Ph.D., I can do it, you can do it too!' And so I've seen those support networks, as well as like Ph.D. coaches who share resources.

In addition to participating in scholarly support groups on social media, P8 goes on to say that SM gives her the opportunity to connect with individual scholars she can readily identify with in terms of race, gender, and areas of research interest- connection that is not often possible for doctoral students from minority communities:

> I feel like I can really curate the scholars that I follow or even just the information I follow itself, where I think like in the classroom or just in small talk maybe in my department that there is like less activity around it. So, I follow like a lot of Black women scholars who are at other institutions.

Some participants (P7, P12) who were initially reluctant to engage social media during their doctoral learning report a change in attitude and a willingness to use social media. For example, P7 noted how because of her private personality she was a bit more guarded

about engaging SM; however, she shares how her perceptions of social media use during the doctoral process has evolved:

> What I'm seeing in my doctoral journey is that it has provided like a sense of community, and a sense of like acceptance that I didn't know I needed. There's things in the doctoral journey that you don't really know until you're in it and you need support in that, and so like I've been able to become part of groups like doctoral mom groups… you feel like wow, other people are experiencing and having some of the same positive and negative feelings in this journey as me in a community that I wouldn't have access to if it wasn't for social media.

Along the lines of social media as a space for acceptance, support, and community building for MDS, P9 states: "I found that a lot of people of color, black, brown, Asian, they actually can use this as an outlet to talk about certain topics, certain issues that aren't normally discussed in the academy."

Two participants (P5, P12) mentioned some concerns about using social media, with participant 5 having a negative or "ambivalent" attitude toward social media in general. For example, P5's negative outlook on social media in general is evident in the following exchange:

> P5: I'm kind of ambivalent about it to tell you the truth.

DB: How so?

> P5: Well, aside from going to school and being an online student, and so forth. But before that, I was, when I was a newbie at using the computer, I really didn't

> know anything, and I think I got like hacked a couple of times and I had two viruses, and so that triggered me to start research on my own about security.

P5 goes on to say, "With that, and then with the issues that they have with Twitter and Facebook and all the corruption with the, you know, the information I get, fake news is what I'm trying to say." P12 expressed an aversion to engaging Facebook as evidenced in the following: "I haven't done a lot of Facebook because I've always steered clear of Facebook, so I haven't done any groups; I've seen the option to do groups, but I have not actually done any." When I informed P12 that I was able to procure some participants for my study via SM, specifically, Facebook Groups, P12 made the following statement:

> I may very well sign up for that like this evening because I'm going to do an interview, in my research as well, and I don't have a large enough participant pool in the school's participant pool, so I need to use another source, and I kept on saying that I do not want to get on Facebook, but if you're telling me that there are some opportunities there, then yeah, I'm gonna look into that this evening.

It is worth noting at this point that participants in the study ranged in age from 25 to 51, with an average age of 36.25 years. One interesting observation is the two participants who expressed ambivalence toward social media (P5) or tried to "steer clear" or avoid engaging Facebook (P12) were the two oldest participants, age 51 and 50, respectively.

This observation is consistent with the relevant literature that indicate older students in general tend to have less enthusiasm for, and experience in engaging SM than their younger peers. Despite P5 and P12's perceptions of, and initial reluctance to use

SM, specifically Facebook during their doctoral learning, both participants seemed open and amenable to engaging the platform as they continue their doctoral journeys.

RQ. 2: What are the viewpoints of minority doctoral students about the role of social media in 21st Century learning skills?

Theme 2: Social Media Provides Opportunities to Acquire and Apply 21st century Learning Skills Through Critical Thinking and Independent and Collaborative Learning.

All participants reported that social media served to help them acquire and use 21st century learning skills during their doctoral learning. Participants used key concepts such as: *critical thinking skills; critical media literacy; opportunities to apply and use 21st century learning skills personally and professionally; facilitates both independent and collaborative learning; and allows for access to new information in a timely way*.

Critical Thinking and Critical Media Literacy

Two participants (P1, P2) mentioned critical media literacy and critical thinking in the context of 21st century learning skills during the doctoral learning process. For example, P1 shared:

> I mean the first thing that comes to mind is just learning what is called media literacy. Learning how to actually understand the information that's being portrayed, who's backing it? Is it legitimate? How to do all of that? I think more so than my doctoral program, that's what social media has really drilled into me, It's so easy to share without verifying information. That, I think, is probably the biggest thing that I've learned.

Like P1, P2 also mentioned critical thinking mindset in terms of social media use and 21st century learning:

> "I was able to know, how other people view a certain topic, what they have as insights to a certain topic and I kind of like visualize and analyze it critically."

P2 continued:

> "So getting to hear through SM what other people think and getting to also air out my own views has also created a kind of collaboration and enabled me to think critically." Social media provides participants the opportunity to acquire and apply 21st century learning skill of critical thinking and critical media literacy.

Acquire and Apply 21st Century Learning Professionally and Personally

Participants also report that social media provides opportunities to not only acquire, but to also apply 21st century learning as doctoral students personally and professionally.

Two participants (P7, P10) shared about the pervasiveness of 21st century learning skills through SM not only for their studies but also in their personal lives. For example, P7 noted how she regularly uses SM to acquire and use 21st century learning skills personally and professionally:

> "…I would say I probably use YouTube the most in that, I do use, when I think about like my dissertation work and my doctoral journey, I use a lot of the groups to like get either resources…"

P7 goes on to share how the application of 21st century learning skills through social media has become widespread not only in her doctoral studies but also in her personal life:

> " I feel like I use it, this 21st century learning skills, even at home, where like I use it for recipes, learn how to cook, like, I use it a lot…"

Similarly, P10 who is considered as a discrepant case also reported how the application of 21st century skills via social media has helped her to communicate and connect with peers and faculty in her doctoral journey and even served to enhance her connection with her own children. She states:

"…good communication with my faculty, …my classmates…and I feel like I was even able to communicate more with my children because they're so much into technology."

In addition to critical thinking in the context of acquiring and applying 21st century learning skills, participants also point to the importance of collaborative learning and establishing network connections.

Collaborative Learning Through Social Media Connections

Participants reported how social media engagement during the doctoral learning process facilitated collaborative learning and connections through networks. The following comments by P8 reflect the importance of social media connections and networks as well as critical media literacy in the context of 21st century learning in her doctoral journey:

> I would say that for me, the communication in network aspect, I feel like… social media kind of forces you to really think about, if you're really a conscious user,

> how your words are coming across and how they may be perceived by other people.

In terms of applying 21st century learning skills, P6 shared her strategic approach in using Facebook and Twitter to communicate with and learn from both faculty and peers alike. She highlights the following affordances when engaging faculty on social media:

> . …they [Faculty] often give tips and strategies as far as like self-care, or… how to effectively communicate through your writing and how to choose like an advisor…..And so, I've been able to apply what I've learned from those conversations to my journey itself.

P6 goes on to share how she uses Facebook to engage her peers:

"…I engage more in conversations on Facebook than I do on Twitter; It's more like other people who are in the same journey. I use what I learn from both platforms, from both groups of people." P6's statement points to a differential approach on how participants as doctoral students from minority communities engage faculty and peers, respectively. Specifically, students generally tend to follow faculty on social media *passively,* i.e., reading what faculty have posted on social media but not necessarily providing written responses. However, when engaging their peers on social media, participants' engagement can be characterized as more *active* when compared to their engagement with Faculty. One reason for this difference in engagement may be partly attributable to students' perceptions of the hierarchical power difference between themselves and faculty. Another reason could be the inherent structural differences in Twitter and Facebook's platforms. The acquisition and application of 21st Century

learning skills through social media appear to play a significant role for participants during the doctoral process. Communicating, collaborating, and networking with groups and individuals, and simply having contacts – knowing who, knowing where, and how to receive help as well as helping peers highlight the benefits of 21st century learning through SM for study participants.

RQ 3: What are the experiences of minority doctoral students using social media to engage peers, faculty, and the doctoral process?

Theme 3: Positive Engagement Experiences with Peers, Faculty, and the Doctoral Process.

Some key and recurring concepts shared by participants regarding their use of social media to engage peers, faculty, content, and the doctoral process include: *Facilitates collaborative learning; builds camaraderie among their peers; Allows for increased engagement with peers, faculty, and the doctoral process; Allows for access to the most recent ideas and resources within disciplines;* And, *Has taken on increased importance in communication, collaboration, and learning in light of the COVID-19 pandemic.*

Engagement with Peers, Content, and the Doctoral Process

In terms of engagement with peers through social media, participants generally tend to connect with and engage peers within their doctoral program. For example, P3 shared:

"…well, it's more [with] peers from the doctoral program that I'm participating in." P6 similarly added:

"…I've been able to connect with them, especially on Facebook and Twitter, but more so about their personal lives."

P6 identifies some of the benefits of connecting with her peers on social media during the doctoral process:

> I've been able to connect with them [peers] especially like on Facebook and Twitter… it kind of helps us have like more of a holistic relationship in the doctoral program, and so it kind of helps to seeing people are living real lives in this process. And then it encourages me at least to continue to move forward.

Some participants (P1, P6, P7, P8) engage with peers in their doctoral program as well as peers outside of their program, for example, P1 shared:

"Well, I've used Facebook this year to find co-writers on proposals, …that's currently under work so I'm grateful for that." In addition to connecting with peers in her doctoral program, P7 shared:

"…but like peers at other institutions has been a way to stay connected in conversation." Participants' engagement with peers within their respective doctoral programs can be described as both personal and academic [professional] regarding content and the doctoral process. Their engagement with peers outside of their own doctoral programs tend to be less personal and more focused on content and the doctoral process. For example, P7 highlights the value of collaborating and interacting with peers in accountability groups on social media in terms of engaging content and the doctoral process:

> "…Social media keeps us connected through like *writing accountability groups* or *writing critique groups* where we can keep each other accountable to making progress towards our dissertation work…"

P8 shared the following on engaging peers:

> As far as peers, I would say, I'm really close to my graduate cohort, but being on social media has allowed me to engage not only with other graduate students who study sociology but also other graduate students across disciplines and so I follow a lot of psychologists and political scientists as well…And so it's been really helpful, especially during COVID.

P8's point about how the COVID pandemic and the movement of meetings, classrooms, and conferences from face-to-face to virtual spaces have resulted in increased social media use is similarly echoed by P11:

> But you know, with COVID it's different because you're not physically in the same space like you would be before …So I have classes with individuals that are in Nigeria, that are in London, that are in China…so, on some levels it's like using social media to connect with them.

In terms of engagement with the doctoral process, participants point to specific social media groups, blogs, and podcasts that have been helpful. For example, P11 shared:

> "…Social media allowed me to find the podcast *Black in Grad School*. It was interesting because that podcast has a whole community in which you can participate."

P8 provides one example of a social media group she has connected with:

"…So there's this group of Ph.Ds. who started this Twitter page… *First Gen Doc.* So every month they have conversations that are relevant to first generation doctoral students. And so, I'll go in…..and participate in those conversations." One participant (P9) was inspired by Instagram pages she had been following that it led her to create her own educational page on Instagram. P9 stated:

"…I started my own kind of Instagram educational page…I was inspired by the *Know your Caribbean…Brown History*, and all the pages I follow." Participants' engagement with their peers on social media has been positive and helpful during the doctoral learning process.

Engagement with Faculty

Participants report that their level of engagement with faculty is less than their level of engagement with their peers; however, some participants indicated that social media provides opportunities to connect, engage and follow faculty. P1 pointed out that her engagement on social media with faculty has served to bridge the distance between herself as a doctoral student and faculty, as well as to change her perspective of faculty as evidenced in the following:

> Faculty have always been something higher than me, like a status thing, …But I'm beginning to see faculty as people just like I am, with their own personal lives, their own personal flaws and we don't agree about everything. So I feel like Facebook is allowing me to, I don't know if it's to elevate myself or demote them to a level of peers, so it's a process.

P1's comments reflect one of the affordances of social media in that some participants perceive it as a way to *level the playing field* in terms of the interaction and dynamics among its users. This view is more conducive for learning, especially when compared with the more structured and formal dynamic between faculty and students in a traditional classroom environment. This sentiment of social media allowing for students to engage with faculty and students' perceptions of faculty as "people" is similarly reflected in the following comments by P8 on engaging faculty and the doctoral process:

> "…it makes them people in my eyes, so they're a lot more open…"

P8 continues:

"And so I think…seeing scholars that I admire as just human beings… helped me see the process." In terms of engaging faculty, P7, a faculty member herself, points out how SM is conducive to forming alliances and collaboration with other faculty and scholars beyond her own institution:

> I've been able to broaden my network outside of my university….which I think is the plus side of social media. I would say normally I'm an introvert – I don't really like to walk up to people and like 'hey, be part of my network,' but social media makes that really easy, because you just click a button and it sends it to a person. So I've branched out to people that I probably wouldn't have in person…

This particular affordance of social media, i.e., the inherent ease in which individuals, even introverts like P7, can connect, engage, and collaborate with strangers in the doctoral journey takes on even more importance for online learning contexts and particularly in the midst of the COVID-19 pandemic. P7 continues by sharing how she

uses social media to locate and collaborate with individuals with similar research interests. She provides the following specific example of a recent attempt to connect and collaborate with a faculty member from another institution:

> …prime example, yesterday, I ended up sending a LinkedIn request to the Vice Provost of Diversity Equity and Inclusion (DEI) asking her if we can spend 15 minutes, like connecting. I wanted to hear about her journey, and I also wanted to figure out how my work situate in what they're doing.

In addition to the social media affordance of the potential to connect with faculty, researchers, and scholars beyond the confines of their respective institutions, participants also point to the benefits of participating in social media groups when collaborating with peers during the doctoral process. P6, the only participant who reported being required by an instructor to use social media as part of the doctoral learning process, shared a specific example of how in one of her doctoral classes her instructor required that students use Twitter to engage prompts based on course-related literature, which lead to students subsequently connecting with the authors of those literature. It was the only instance, according to P6, where she actively engaged faculty on social media during the doctoral process and this was because her engagement with faculty was part of a class requirement. She notes that because of this experience, she plans to continue following faculty on social media even after she graduates:

> "So, I got a sense following faculty members while still in my graduate program, and I'll probably follow them, at least on Facebook after I graduate."

P6 continues:

"As far as content is concerned, I will follow conversations that are related to education, curriculum instruction, like top education scholars in the field so I can always stay relevant and current to what's going on. "

P8 provides the following comments relevant to social media engagement in terms of the doctoral process:

> On the doctoral process question, I think that I've seen a lot more people or scholars who were like way further, like tenured professors being really, it makes them people in my eyes, so they're a lot more…vulnerable… And so, for seeing other people or seeing scholars that I admire as just human beings…

P8's comments are similar to P5's noted previously on how participants view social media as a medium that helps to reduce the perceived distance between themselves and faculty.

Potential Social Media Drawback

As a doctoral student and faculty member, P9 points out what she perceives as one of the potential downsides of social media in academia:

> I'd say there's a little bit of a negative side to SM though in the academic realm. On Twitter, for instance, sometimes I can see academics get into kind of theory wars… And sometimes, how you say it affects their reputation like in certain instances it can affect certain people's reputation also within academia. But then on the flip side recently, there's been like a few black professors who haven't gotten tenure and there you see the support, the overflow of support.

P9's comments highlight one of the potential drawbacks of social media for faculty as well as students in terms of content that is posted and the potential for consequentially negative future outcomes in terms of advancing within the academy and job security. P9's observation also highlights the importance of what P8 previously referred to as critical media literacy and being a '"public facing scholar.'" In other words, although social media has the potential to be a means and medium for collaborative learning and engagement during the doctoral process and beyond, it also has the potential for negative outcomes for some of its users, particularly newer faculty in the academy, and current doctoral students from minority communities if used inappropriately. This awareness in terms of what is deemed appropriate or inappropriate is one of the important aspects of 21st Century learning skills.

RQ 4: How do minority doctoral students describe social media as a means to facilitate learning and engagement when they are engaged socially, behaviorally, cognitively, and emotionally?

Theme 4: Spaces and Opportunities for Social, Behavioral, Cognitive, and Emotional Engagement During the Doctoral Process

Participants identify several affordances social media provides in terms of social, cognitive, behavioral, and emotional engagement during the doctoral learning process. For example, P6 shared how she experiences emotional support (motivation) on Facebook through reading the posts of others and identifying emotionally with them:

> …So, I might see people post like, 'oh, I'm so tired, like 'oh this is so nerve-racking on Facebook. And so, I, in the moment, I'm probably feeling the same

> way, and so It gives me motivation to keep going because I'm like, it's part of the process.

Put another way, P6 gets emotional support on social media when she reads of and identifies with the struggles and challenges that fellow minority doctoral students are facing as they go through the process. P8 shared about the solitary nature of the doctoral process and the importance of emotional and social support – particularly for doctoral students from underrepresented communities:

> "Emotionally, yes. I think that social media is a really important means of engaging in the doctoral process because it is often… a really lonely and misunderstood process…. "

P7 shared how social media facilitates connectivity and accountability as well as motivation and encouragement behaviorally, cognitively, socially, and emotionally through writing and accountability groups:

> "Social media keeps us connected through writing accountability groups or writing critique groups where we can keep each other accountable towards making progress towards our dissertation work but also have a safe space to be in it."

P7 continues:

> "…everyone comes in, they put their monthly goals in a Google Doc, but then we meet weekly and do writing accountability…at the end of the month, we [have] a celebration of each other's successes."

Social media also allows for participants to experience social engagement with individuals and groups to build communities based on shared experience, race, gender,

and class that would, in many cases, not otherwise be possible during the doctoral process. These shared experiences serve to encourage participants through the doctoral process as reflected in the following comments by P9 and P8 respectively:

….through educational pages…I found that a lot of people of color, black, brown, Asian, they actually can use this [social media] as an outlet to talk about certain topics that aren't normally discussed in the academy."

Similarly, P8 shared:

"And so, I think that even if you have a closed cohort of people, it can still feel quite isolated especially if you are underrepresented in your field or in your department or even at your institution."

P8 goes on to add:

"So, I think that socially for me, I've been able to see other black women scholars who are pursuing similar work or pursuing academia…it helps me feel a lot less alone in the process of pursuing a Ph.D."

The comments by P9 and P8 point to the affordance of social media as a viable space for participants as doctoral students from underrepresented communities to connect socially, emotionally, cognitively, and behaviorally in ways not readily possible in the academy.

Based on participants' responses to the four research questions, four themes and two subthemes emerged.

- Theme 1: Participants perceive social media as providing a host of affordances for learning and engagement during the doctoral process. Two subthemes include

  - Participants perceive social media as a medium to access information and resources and to engage and collaborate with peers and faculty.
  - Participants perceive social media as a space to gain a sense of acceptance and support from peers and as a means of building community.
- Theme 2: social media provides opportunities to acquire and apply 21st century learning through critical thinking and independent and collaborative learning.
- Theme 3: Social media use allows for positive engagement experiences with peers, faculty, content, and the doctoral process.
- Theme 4: Social media use provides spaces and opportunities for social, emotional, behavioral and cognitive engagement during the doctoral process.

Summary

In Chapter 4, I reported the findings of this general qualitative study on minority doctoral students' experiences with, and perceptions of social media in terms of learning and engagement during the doctoral process. The CoLeEn conceptual framework, derived from Kereluik et al. (2013) 21st century learning framework, Pittaway's (2012) engagement framework and Siemens (2005) connectivism theory was designed to capture the key constructs of connectivism, 21st century learning, and engagement, respectively for the study. Four research questions were derived based on the CoLeEn conceptual framework. Participants' responses to the research questions highlight the various affordances of social media as a means of facilitating learning and engagement and the psycho-social well-being of underrepresented minority doctoral students during the

doctoral learning process. In Chapter 5, I provide the interpretation of the findings, the limitations, implications, and recommendations of the study.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this general qualitative study was to understand the learning and engagement experiences of minority doctoral students' social media use during the doctoral process. This study was conducted to ameliorate the existing gap in the relevant literature on social media use to facilitate learning and engagement during the doctoral learning process. The findings of the study correlate with the central research question of the study that sought to determine the learning and engagement experiences of minority doctoral students using social media during the learning process. Minority doctoral students in this study reported positive learning and engagement experiences through social media during the doctoral process.

Interpretations of the Findings

Interpretations of the study are guided by four themes and two subthemes. First, study participants perceive social media as a medium to access information and resources and to engage and collaborate with peers and faculty, as well as a space to gain acceptance and support from peers, and a means of building community during the doctoral process. This theme confirms and builds upon the work of Pechenkina and Aeschliman (2017) on students' perceptions towards social media during the learning process. social media use allows for the acquisition and application of 21st century learning through critical thinking and independent and collaborative learning. This theme confirms and builds on the work of Greenstein (2012) regarding 21st century learning. Third, participants point to positive engagement experiences with peers, faculty, content, and the doctoral process. This theme confirms the findings of Herndon-Stallings (2018)

and Seaward (2020). Finally, social media provides spaces and opportunities for social, behavioral, cognitive, and emotional engagement during the doctoral process. This finding confirms the work of Mwangi et al. (2018) and the notion of social capital theory in the work of Mcloughlin and Lee (2014).

For the first theme of accessing information and resources as well as a space to gain acceptance and build community during the doctoral process, participants point to the social media affordance of efficiently obtaining updated information and resources. Participants report that they can obtain the most recent information and resources through social media especially when compared to their local libraries. This finding is supportive of Siemens (2005) connectivist learning theory. Participants also reported that social media provides spaces in which they can feel accepted and receive support from their peers as well as build community – particularly as underrepresented minorities in the doctoral process. These communities on social media provide spaces for participants to engage in topics that would be difficult for them to engage within the walls of the academy, a finding that is consistent with the work of Mwangi et al. (2018).

Regarding the second theme on social media and the acquisition and application of 21st Century learning, participants point to critical thinking, critical media literacy, and independent and collaborative learning through social media. This theme confirms the findings of Seaward (2020) and Luo and Xie (2018) that social media use stimulate collaboration and enhance learning. These skills are indispensable for learners at all levels, and even more so for doctoral students.

For the third theme, participants characterize their social media engagement experiences with faculty, peers, content, and the doctoral process as positive. Study participants highlight the supportive value of social media engagement, particularly during the COVID-19 pandemic in which classes were conducted virtually. Some participants also pointed to the humanistic and collaborative learning and engagement affordance of social media in contrast to learning by individually reading a journal article or book. The value of social media sites such as Facebook and Twitter in providing opportunities to connect and collaborate with peers at other institutions to form accountability and writing groups. These collaborative engagement experiences were important for participants in engaging the content as well as the doctoral process. Minority doctoral students in this study also reported the benefits of connecting with faculty. Participants reported that social media allows for easier connections with, and access to faculty and that social media engagement with faculty served to make faculty seem more "human." Participants point to the inherent ease of engaging faculty through social media during the doctoral learning process, particularly when compared to meeting face-to-face. social media engagement also provides opportunities to identify, connect, and collaborate with other faculty on areas of mutual research interest. By following faculty and scholars on social media, participants point out how this type of engagement helps them stay current in their disciplines and for broadening their networks. This finding is not confirmed in the relevant literature.

For the fourth theme, participants shared how Social media provides spaces and opportunities for social, cognitive, behavioral, and emotional engagement during the

doctoral process. Participants report that social media engagement provides a space for students, scholars, and researchers to be vulnerable when compared to in-person work environments. This finding is not confirmed in the relevant literature. All the participants reported the importance of social media groups to build camaraderie, provide social, emotional, and behavioral support during the doctoral learning process. Participants also pointed out how these social media groups serves to mitigate the inherently solitary nature of the doctoral learning process. Participants also expressed the importance of connecting with diverse social media groups of peers in terms of race, gender, class and experience, and how this diversity serves as a means of social, emotional and behavioral support and encouragement during the doctoral process. This finding confirms McLoughlin and Lee's (2014) work and is consistent with Mwangi et al.'s (2018) study that showed social media provides counter-spaces for minority students in higher education to articulate their views on systemic issues in academia. Some participants report that their experiences with these groups would not be otherwise possible outside of social media. The CoLeEn conceptual framework used in this study reflects an original contribution and is meant to be a lens through which the three-part constructs of social media connection, learning, and engagement can be analyzed.

Finally, although all the participant in this study reported positive social media engagement experiences during the doctoral learning process, two participants shared potential drawbacks of social media in terms of emotional engagement. These participants identified the "theory wars" between academics and the negative experiences of some doctoral students and how these can have a negative emotional effect on current

doctoral students. This particular finding is not confirmed in the relevant literature. These participants however, were quick to note that the benefits social media use during the doctoral process far outnumber any negative downsides.

Limitations of the Study

Since there are inherent limitations in all qualitative research studies (Merriam & Tisdell, 2016) the qualitative researcher needs to employ necessary steps to address potential limitations. For this general qualitative study, I focused on the qualitative components of trustworthiness which include credibility, transferability, and confirmability. Furthermore, I kept written notes and a journal throughout the research process to mitigate potential ethical issues. Despite these steps, there are potential limitations to this study.

First, results are based on participants' responses to semi-structured qualitative interview questions and not on observed behavior. Furthermore, the subjective interpretation of participants' responses to the interview questions by the qualitative researcher could also be a limitation (Ravitch & Carl, 2021).

Another limitation is the participant sample size. Twelve participants were selected for this general qualitative study. A larger sample size could potentially provide additional data. Related to this limitation, all the participants in this study were female. A lack of male participants could limit the findings. The social media experience and perspectives of male participants could also shed additional light on the minority doctoral experience with SM engagement and learning during the doctoral process

Recommendations

The following recommendations are provided for future studies:

- future studies that explore the phenomena of SM learning and engagement among other demographics and nationalities including Non-native speakers of English
- research studies on the perception and experiences of SM learning and engagement from the perspective of teachers in higher education
- longitudinal studies that track the role of SM learning and engagement and degree completion in higher education contexts
- studies on expanding and integrating the use of SM and in the college classroom and curriculum

Implications

There are several implications for social change in this study. First, from a pedagogical perspective, this study could contribute to enhancement of teaching practice in higher education courses by encouraging teachers to consider taking advantage of the affordances of social media by intentionally and proactively incorporating a social media component in their courses. This study and the relevant literature on social media learning and engagement point to the value of 21st century learning through social media including critical thinking and critical media literacy point to the potential for enhanced student performance when social media is used in the learning process.

This study found that the use of social media in the learning process – specifically in higher education contexts, provides a space for students from underrepresented

communities to learn, navigate the doctoral learning process, collaborate with peers and are given the freedom to express true feelings about important issues and to simply be themselves. This freedom, coupled with collaborative peer support and encouragement could potentially lead to higher performance and success for these students.

Finally, the affordance of enhanced social, cognitive, behavioral, and emotional engagement through social media in the learning process could lead to increased outcomes not only in terms of minority students' academic performance in the classroom but also improvements in their quality of life outside of the classroom.

Conclusion

In this study, I sought to understand the SM learning and engagement experiences of minority doctoral students during the learning process to ameliorate a gap in the research literature. The findings point to positive learning and engagement affordances of SM use during the doctoral learning process and confirms and adds to the extant literature. It is hoped that the findings of this study will be helpful for current faculty who work with minority doctoral students as well as for current doctoral students from underrepresented communities recognize potential of SM engagement during the doctoral learning process.

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Appendix A: Interview Guide

Phenomenon: The learning and engagement experiences of minority doctoral students through social media during the doctoral process

Central Research Question: What are the learning and engagement experiences of minority doctoral students using social media during the learning process?

Interview Approach: Standardized open-ended structured and and semi-structured questions (Patton, 2015; Salmons, 2015)

Opening

Hello_____

First, I would like to take the opportunity to thank you for taking the time to share your experiences with me as it relates to social media, learning and engagement in the doctoral process. I do believe that your experiences will provide important insights into this complex and emerging phenomenon in the teaching and learning process.

The purpose of this online interview is to obtain an in-depth understanding of minority doctoral students' experiences with social media in terms of learning and engagement during the doctoral process. You have been provided an informed consent form to sign as an indication of your willingness to participate in this interview. The interview will take about 50 minutes and will be recorded.

The term 21st Century learning is defined as: The ability to apply knowledge in a variety of ways and in a variety of contexts. Some examples of the skills that reflect 21st Century learning include the ability to "think critically, access, retrieve, analyze,

synthesize, evaluate, and communicate knowledge and information through the use of digital technology and media effectively and efficiently" (Greenstein, 2012, p.9).

Interview Questions

1. What is your view on the integration of SM in the doctoral learning process?
2. Could you tell me more?
3. What is your view of using Facebook and Twitter as part of the doctoral learning process?
4. How would you describe your experience with SM in acquiring and applying 21st Century learning during the doctoral process?
5. Can you share some specific examples?
6. What were your experiences with Facebook and Twitter?
7. How would you describe your experiences with SM to engage peers, faculty, content, and the doctoral process?
8. How have these experiences shaped your view of SM, learning and engagement during the doctoral process?
9. What is your view of SM as a means of facilitating learning and engagement when you are engaged in the doctoral process socially, behaviorally, cognitively, and emotionally?/Can you share some examples?
10. Can you tell me whether your use of SM was required or voluntary, formal or informal?/How would you describe your feelings about this?
11. Do you have any questions for me?

Closing

I would like to thank you for providing responses to the above interview questions. Your answers are important in contributing to the knowledge of social media, learning and engagement in higher education contexts. Should you have any further questions, please do not hesitate to contact me by phone (XXX-XXX-XXXX) or e-mail: XXXX@XXXX.

Appendix B: Demographic Questions

1. Gender: Male _____ Female _____ Other (Please specify) _____
2. Age _____
3. Race/Ethnicity _____
4. Major & Specialization _____
5. Doctoral Stage: Prospectus _____ Proposal _____ Approved Proposal _____

   Final Stage _____ Graduated (Please include date) _____