

GOING WHERE STUDENTS ARE: COMPARING FACULTY AND
STUDENT USES AND PERCEPTIONS OF SOCIAL
NETWORKING IN HIGHER EDUCATION

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ABSTRACT

Often in education, the phrase “meet students where they are” is used as an approach to meet ever-changing needs of students. As the popularity of social networking increases, specifically among college students, the question arises: should colleges and universities utilize social networking sites (SNS) as a supplemental educational tool? This study explored this question by using survey items based on Rogers’ (2003) Diffusion of Innovation attributes to compare faculty and students’ current rate of adoption of using SNSs and their perceptions of the advantages and disadvantages of using them as tools to enhance teaching and learning.

The population consisted of School of Education faculty and students at a small, southern university. Quantitative data (from a Likert-scale survey) and qualitative data (from open-ended survey questions, a student focus group, and faculty interviews) revealed that less than half of faculty and most students are open to the notion of using SNSs for educational purposes. For faculty adopters, perceptions of the innovation-attribute constructs of compatibility, complexity, and observability were not significantly different from the perceptions of nonadopters, but relative advantage and trialability were significantly different between adopters and nonadopters. These results indicate that only the constructs of relative advantage and trialability, as described by Rogers (2003), helped determine faculty adoption decisions. For student adopter and nonadopter groups, results were not significantly different for perceptions of trialability, but they were different for perceptions of relative advantage, compatibility, complexity, and observability. Thus, results indicate that all innovation attributes described by Rogers (2003) except trialability

contributed to students' adoption decisions. This study also discovered the faculty and students' perceived benefits (i.e., communication and online discussion) and disadvantages (i.e., privacy, confidentiality, and distraction issues) of using SNSs in education. The study concluded that less than half of faculty's and most students' willingness to adopt SNSs for educational purposes is tempered by their concerns about privacy and confidentiality.

DEDICATION

This work is dedicated to the loving memory of my great-aunt, affectionately known as grandma, Virginia Brown Person. She always showed undying love and support for me and my academic pursuits. Though she has transitioned, her love and teachings still remain. I know she is smiling down on me with a proud spirit.

I would also like to dedicate this work to my sons, Landon and Tyson. As I was always told, you can do anything you want to with hard work and commitment. Your future is bright and filled with countless possibilities. Believe in yourself and follow your dreams.

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CHAPTER I

INTRODUCTION TO THE STUDY

An oft-heard phrase in education has become both a directive and a duty for educators: “We must meet students where they are.” This phrase refers to an obligation to meet students’ needs by matching instructional methods to their levels and preferences. In this era of rapid technological innovation and change, many students have embraced the use of social networking sites (SNS), such as Facebook, and spend much of their time in its virtual spaces. Despite its popularity with college students, it has been unclear if university faculty educators feel that SNSs are appropriate places to go to meet their students’ needs. Thus, this study explored this question by comparing faculty and students’ current rate of adoption of SNSs and their perceptions of them as tools to enhance teaching and learning.

Background on the Problem

Social networking has become both a primary mode of communication and one of today’s most-discussed and controversial topics. The use of SNSs has widened from the general public to companies, entrepreneurs, and even news media outlets. In a relatively short time, SNSs have changed the way our society communicates, as well as what we discuss (Qualman, 2012).

Boyd and Ellison (2008) defined SNSs as

web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system. (p. 211)

While the popularity of using SNSs has increased, the study proposed here focused specifically on the adoption of SNSs by students and faculty in higher education.

Though SNSs have attained remarkable popularity, Facebook has become the most popular, particularly among people of ages 17 to 25 (Melber, 2008). Kilpatrick (2009) asserted that the number of older users is increasing rapidly, but more than 90% of college students have a Facebook account (Haywoode, 2010; Loveland, 2011). Thus, the substantial number of college students using this technology has compelled many educators to wonder if there are potential benefits for the use of Facebook to support education.

According to Santovec (2006), colleges and universities can use Facebook to “engage students academically and build relationships with faculty” (p. 15). As retention has become a focal point for many universities, several studies have suggested methods for universities to manage retention more effectively. John N. Gardner, founder and senior fellow of the National Resource Center for The First-Year Experience and Students in Transitions, has visited many campuses, proposing to student-affairs professionals that involvement and sense of connectedness are associated with increased student retention (Bain, Gandy, & Golightly, 2012; Barefoot et al., 2010). Eberhardt (2007) suggested that one way to achieve this "sense of connectedness" is with SNSs. “Online social networking can benefit students by facilitating an initial sense of connection and community” (p. 20).

Adoption of any technologies in education has been a longstanding problem, and that is especially the case in higher education (Kleiner, Thomas, & Lewis, 2007). According to Truong (2014), there are more than 40 million college aged (18-24) registered Facebook users, which is less than 5% of total Facebook users. Yet, it remains unclear if a similar number of college faculty members have adopted Facebook or any SNS. Also, if higher education is to garner any instructional benefit from Facebook's popularity, faculty must be willing to consider adopting it specifically for educational purposes. Rogers (2003) asserted that adoption of an innovative idea or strategy is dependent on potential adopters' perceptions of the innovation's defining attributes. Therefore, if faculty have positive perceptions of Facebook's attributes, they are more likely to adopt it, according to Rogers' (2003) theory. Likewise, the use of SNS in K-12 has become controversial, but it has not yet been established if the pros outweigh the cons of its use in education (M. Davis, 2010).

To date, very little research has been conducted on the notion of integrating SNSs, such as Facebook, into the classroom experience. This study seeks to fill in some of the gap in our knowledge about social networking sites (SNSs) in higher education by comparing how receptive faculty and students are to exploring the instructional benefits of SNSs. To determine the degree of current and potential adoption, this study will focus on measuring faculty and student perceptions of Facebook attributes and uses through the lens of Rogers' (2003) diffusion of innovation theory.

Statement of the Problem

The increased use of SNSs among college students has engendered questions about how they use these sites. While it is understood that college students use SNSs for personal reasons,

some researchers have concluded that they also use SNSs, particularly Facebook, for educational purposes (Bosch, 2009; Madge, Meek, Wellens, & Hooley, 2009; Mendez, Le, & De La Cruz, 2014; Selwyn, 2009). However, little is known about educators' use of SNSs or their willingness to use them for educational purposes.

Rationale for the Study

Since the advent of SNSs, millions of people have become avid users. There are over 100 such sites (e. g., Myspace, Friendster, Facebook, Twitter, and Instagram) that support diverse interests. "Some sites cater to diverse audiences, while others attract people based on shared interests, political views, or activities" (Boyd & Ellison, 2008, p. 210). Becoming a registered user requires one to create a personal profile that describes their characteristics and interests. Once the profile has been created, users are encouraged to connect to people to establish an "online relationship" based on communication and sharing. "Beyond profiles, friends, comments, and private messages, SNSs vary greatly in their features and user base. Some have photo-sharing or video capabilities; others have built-in blogging and instant messaging technology" (Boyd & Ellison, 2008, p. 214).

Based on their definition of SNSs, Boyd and Ellison (2008) observed that SixDegrees.com, introduced in 1997, was the first SNS. However, Classmates.com (Classmates, 2011) was launched in 1995 as a site that allows its users to identify and communicate with classmates from high school and/or college, coworkers, and acquaintances from their military experience; it also may be seen as a pioneer SNS. Though several SNSs exist, Facebook remains the most popular site (eBizMBA, 2014). It was created by Harvard student Mark Zuckerberg, to "digitize the legendary freshmen year ... and allow students to not only gawk at one another's

photos but to flirt, network, and interact” (Hirschorn, 2007, p. 150). Its immediate popularity led Zuckerberg to expand the use to other colleges, then eventually high schools and beyond (Hirschorn, 2007). Simply put, Facebook was originally intended to connect people with other people on a social basis.

As social networking use has increased, questions have arisen about its implications for higher education, particularly to college students. While some colleges and higher educational professionals have been slow to adopt this technological advancement, others have welcomed this challenge with enthusiasm. For instance, ‘innovation’ is not a term that comes to mind when one thinks of the library. However, Farkas (2007) contends that libraries have a history of meeting students where they are. She maintains that “while most libraries have their own websites, some are also starting to push their services to the online sites at which patrons congregate” (p. 27). Specifically, the director of the Crossett Library at Bennington College, Oceana Wilson, has created a Facebook profile to represent the library. She uses the “wall” feature to ask students their opinion on books and videos that could be added to the library’s collection (Farkas, 2007). Similarly, Chu and Du (2013) found that many academic libraries, nationally and internationally, use SNSs to support their work. Though Facebook and Twitter were found to be the most commonly used SNSs for academic libraries, these tools were used for marketing and publicity, interacting with students, and enhancing reference services.

This online phenomenon has not only opened up more communicative outreach for libraries, but also for higher educational professionals. A Facebook project at Southern Illinois University found that 100% of students polled used Facebook on a daily basis (Campbell, 2008). Additionally, Campbell discovered that Facebook frequently replaces the use of traditional email. Campbell asserts, “It’s not that email is becoming an obsolete tool for communication with

students, but it's definitely becoming less effective" (Campbell, 2008, p. 61). Such discoveries have influenced the decision for university professionals to create Facebook accounts. For example, the College of Business of Southern Illinois University created a Facebook group for its students and alumni. Essentially, the College of Business Facebook group enables its friends to "receive school news and communicate easily with students, faculty, alumni, and others in the school community" (Campbell, 2008, p. 60). Considering its steadily-growing adoption among students, the question arose: should educators and administrators join this "Facebook phenomenon" and encourage other academicians to meet students where they are and find ways to use SNSs to facilitate students' learning experience? If they do, what obstacles and issues will they face in this endeavor?

Significance of the Study

Hargittai and Hsieh (2010) suggested that people who use SNSs have "started to integrate them into their everyday lives as a common daily practice" (p. 516). As social networking is significantly changing how people connect and interact with one another, education must consider adapting to this change. Understanding SNS's relevance to higher education and its impact on education is pertinent to instruction and how students and instructors will interact. Thus, this study may be at the forefront of higher educational research as it concludes on the perceptions and efficacy of faculty and students use of social networking sites in education.

Theoretical Framework

The increasing popularity of SNSs among college students suggests its potential to enhance teaching and social and active learning. Constructivist theorist, Vygotsky (1980),

proposed that learning is a social process and that it occurs through interactions and information sharing. However, the popularity of instructors' use of virtual social spaces does not appear to have increased as rapidly as it has for students.

This study employed Rogers' (2003) diffusion of innovation theory as a theoretical framework to better understand faculty and students' adoption of SNSs for educational purposes. Rogers (2003) discovered that individuals' willingness to adopt innovations differs, and the attributes of the innovation explain much of the differences in adoption patterns. He proposed that important innovation attributes are: relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003). Using the diffusion of innovation theory not only allows better understanding of the rate of adoption for faculty and students' use of Facebook, it could uncover specific factor(s) that impact current and future adoption.

Purpose of the Study

The primary purpose of the proposed study was to compare the perceptions of faculty and students' current rate of adoption of SNSs in higher education as well as their perceptions of SNSs as tools to enhance teaching and learning. A secondary purpose was to determine factors that influence these rates of adoption. Social networking has been quickly adopted by millions, particularly young people (Lenhart & Madden, 2007). Yet, it is unclear if the same is true for university faculty. Although faculty may have social networking accounts, it is uncertain if they are willing to expand their use of these tools to include instructional purposes. Though studies have shown that social networking tools can supplement educational activities by creating opportunities for student collaboration, active student participation, and information sharing

(Ajjan & Hartshorne, 2008), empirical research on social networking in higher education remains limited. Additional information on this topic is urgently needed.

Definitions of Terms

Terms that will be used throughout this study are defined here. These are intended to provide readers with information helpful to understanding the study's focus and findings.

Compatibility: The degree to which an innovation is perceived congruent with the potential adopters existing values, past experiences, and needs (Rogers, 2003).

Complexity: The level to which an innovation is perceived as being difficult to understand or use (Rogers, 2003).

Distance education: "Institution-based, formal education where the learning group is separated, and where interactive telecommunications systems are used to connect learners, resources, and instructors" (Schlosser, Ashland, & Simonson, 2002, p. 1).

Educational technology: "A combination of the processes and tools involved in addressing educational needs and problems, with an emphasis on applying the most current tools: computers and other electronic technologies" (Roblyer & Doering, 2013, p. 6).

Generation Next: "Americans between the ages of 18 and 25 years old" (Kohut, Parker, Keeter, Doherty, & Dimock, 2007, p. 1)

Facebook: A social utility that allows people to stay connected with family and friends (Facebook, 2014a).

Observability: The degree to which potential adopters are able to see the results of an innovation before adopting it (Rogers, 2003).

Relative Advantage: The degree to which an innovation is perceived as advantageous by its adopters and potential adopters (Rogers, 2003).

Social networking sites (SNS): Web-based services that allow individuals to create a profile and share a connection with other identified users (Boyd & Ellison, 2008).

Trialability: The degree to which an innovation can be experimented with on a trial basis prior to adoption (Rogers, 2003).

Research Questions

The purpose of this study was to explore faculty and students' current adoption of SNSs and their perceptions of uses as resources to enhance teaching and learning. In order to study the SNS phenomenon and its adoption in education, the study employed an explanatory sequential mixed-methods approach to data collection. The study focused on the following research questions.

Research Question 1: Rates of SNS Adoption

The study asked, are faculty and students adopting SNSs at comparable rates, either for personal or educational uses? This question focuses on comparing faculty and students' use of SNSs for either personal or educational purposes. Past studies have found that college students use SNSs for social purposes, while more recent studies have sought to examine the use of SNS from an educational perspective. Studies conducted by Stern and Taylor (2007) reported that students use SNSs to send messages to friends and view images, and Zhao, Grasmuck, and Martin (2008) found that students use SNSs to make new friends. Conversely, Bosch (2009), Madge et al. (2009), Selwyn (2009), and (Arteaga Sanchez, Cortijo, & Javed, 2014) found that

students use SNS to talk about coursework with classmates and share notes. However, fewer studies have identified faculty use of SNS. Moran, Seaman, and Tinti-Kane (2011) reported that although over 90% of higher-education faculty members are aware of SNS, not as many actually use the sites. Moran et al. (2011) also found that faculty members are more likely to use SNS for personal than educational use. Thus, this study is designed to provide more empirical evidence, as measured by self-reported responses to questions about their current uses of SNS. For the purposes of this study, the formally-stated research question was: Is there a significant difference between faculty and students' self-reported rates of adoption of Facebook for personal and educational use?

Research Question 2: Innovation Attributes and Adoption Rates

Do faculty and student perceptions of innovation attributes (i.e., relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003)) help explain their willingness to use SNSs for educational purposes? This question addresses the factors that affect student or faculty adoption of SNS uses for education. Again, diffusion of innovation theory explains the rate of adoption of new ideas and technology (Rogers, 2003). Several studies have applied the diffusion of innovation theory to other technological innovations, but few have applied the theory to the adoption of SNS. Folorunso, Vincent, Adekoya, and Ogunde (2010) administered a survey to students of the University of Agriculture in Nigeria designed to understand how the five innovation attributes affect their attitude towards using SNS. They found that compatibility, observability, and trialability had a positive impact on the students' attitude toward using social networking sites, whereas relative advantage and complexity did not indicate a positive attitude. However, this study did not seek to understand faculty attitudes

toward using SNS. Given the lack of research that seeks to apply diffusion of innovation theory to social networking and the attitudes of faculty and students, this study sought to present evidence, as measured by responses to self-reported Likert-scale statements, to address the following question: Do either faculty or students' willingness to use SNSs for educational purposes correlate with their perceptions of innovation attributes (i.e., relative advantage, compatibility, complexity, trialability, and observability), as measured by responses to Likert-scale items that measure these perceptions?

Research Question 3: Perceptions of SNS Advantages

Do faculty and students perceive similar advantages of using SNS for educational purposes? Prior research reveals students' perceived values of using SNS for educational purposes (Bosch, 2009; Madge et al., 2009; Ophus & Abbitt, 2009; Selwyn, 2009), but fewer studies focus on the perceived values of faculty (Moran et al., 2011). If the trends in comments in response to this question are generally the same, the results may indicate that faculty and students have similar perceptions of using Facebook to support education. However, if responses to this question tend to be different between student and faculty groups, the results will reveal that faculty and students do not see the benefits of using Facebook to supplement instruction in a similar way. Consequently, the formal question to pose is: Are there similar or different trends in faculty and students' perceptions of the benefits of using SNSs to support education, based on content analysis of responses to open-ended survey questions and to questions posed to a focus group and to interviewees?

Research Question 4: Perceptions of SNS Disadvantages

Do faculty and students perceive similar disadvantages of using SNS for educational purposes? When discussing the negative aspects of using SNS to support education, privacy has been the primary concern for both faculty and staff (Madge et al., 2009; Moran et al., 2011; Ophus & Abbitt, 2009). However, as social networking has become increasingly popular among higher education professionals and students, privacy concerns may diminish. On the other hand, the increasing use of SNS could potentially present additional or different challenges for faculty and students. This study sought to provide evidence, as evaluated from responses to open-ended questions, to address the following question: Are there similar or different trends in faculty and students' perceptions of the challenges and problems in using SNSs, specifically Facebook, to support education, based on content analysis of responses to open-ended survey questions and to questions posed to a focus groups and to interviewees?

Summary of Background

This chapter introduced background on social networking, particularly with respect to its popularity and controversial use in education, and discussed why study in this area is needed. The primary purpose of the study was to compare current faculty and student adoption rates of SNS, either for personal or educational uses. A secondary purpose was exploring the factors that may impact their adoption, based on Rogers (2003) diffusion of innovation theory.

CHAPTER II

REVIEW OF LITERATURE

Social networking has rapidly become a pervasive means for people around the globe to connect with each other for educational and economic reasons, as well as social ones. The study focused on adoption of SNSs by educators and students and sought to provide evidence to further study in this field by addressing the following research questions: Are faculty and students adopting SNSs at comparable rates, either for personal or educational uses? Do faculty and student perceptions of innovation attributes (i.e., relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003)) help explain their willingness to use SNSs for educational purposes? Do faculty and students perceive similar advantages of using SNS for educational purposes? Do faculty and students perceive similar disadvantages of using SNS for educational purposes?

Overview of Literature

Though educational policy initiatives advocate the use of innovative and collaborative technologies, the use of some of these technologies in education remains controversial. Some schools have banned the use of one such technology that has seen growing popularity throughout society: SNS (Estrada, 2010; National School Boards Association, 2007; Ramaswami, 2010). To provide insight on this controversy and supply background for further study of SNSs in education, literature is summarized here on the evolution and current uses of the Internet in K-12

school systems and higher education. This review also addresses the background and history of SNSs, such as Facebook, and their uses in education. Finally, to provide a theoretical basis for the study, this review gives background on diffusion of innovations theory and research.

Evolution of the Internet in Education

During the 1970s, the advent of microcomputers changed the face of educational technology (Roblyer & Doering, 2013). However, the development of the World Wide Web in 1993 changed technology in education and led to its current use in education (Roblyer & Doering, 2013). As technological advancements continued to improve and alter the way people communicate (i.e., email, videoconferencing), the need to make modifications in education increased. Thus, the Internet has inevitably established a relationship between education and communication technology (Ozkan, 2010). This relationship and increased access to online resources and varying styles of communication have led to the creation of distance education as used in virtual schools.

Current Uses of the Internet in K-12 Education

The use of the Internet has reached beyond the office and has become just as valuable and useful as textbooks in education. As the Internet and use of technology entered schools, educators were challenged to use it to support learning, particularly to supplement face-to-face instruction. Early emergence of technology in education raised concerns with teachers as they questioned the role of computers in the curriculum (Fuller, 2000) and feared being replaced by computers (Loveless, 1996). However, the popularity of the Internet throughout society resulted in its widespread use in education. Roblyer and Doering (2013) discussed four current uses of the

Internet in education: (1) student research, (2) online course material, and (3) web-based learning, and (4) virtual courses and programs (p. 227).

The advent of the Internet has given students faster access to massive amounts of information rather than having to peruse multiple printed texts. The days of using encyclopedias for research seem primitive to Generation Next. Not only do “students use the Internet to search for materials and information to support their research and production work” (Roblyer & Doering, 2013, p. 227), but the Internet has become a commonly used way for students to learn new information (Cennamo, Ross, & Ertmer, 2009).

With assistance, educators can facilitate student research to learn. Dr. Bernie Dodge and Tom Match of San Diego State University created WebQuests, a format by which students utilize the Internet to complete learning tasks (Cennamo et al., 2009). According to Dr. Bernie Dodge (as cited in QuestGarden, 2011a), WebQuests were developed to “create lessons that make good use of the web (sic), engage learners in applying higher level thinking to authentic problems, and use everyone’s time well” (para. 2). Educators can create their own WebQuests or access the WebQuests available online. Thus, many teachers have embraced this technological innovation to facilitate student research and learning, and this model has spread beyond the United States (QuestGarden, 2011b).

To further engage students in learning and assist with comprehension, teachers often use online materials. The most common example of online material is online tutorials (Roblyer & Doering, 2013). Online tutorials are designed to introduce new material, offer an opportunity for learners to practice, and provide an assessment of learning (Cennamo et al., 2009). For example, the Internet4Classrooms site offers online tutorials designed to assist teachers with classroom instruction and students with subject matter assistance at home (Internet4Classrooms, 2010).

Internet4Classrooms (2010) provides online resources for grade levels, Pre-Kindergarten to Eighth Grade, on all subjects (i.e., language arts, social studies, mathematics, and science). It is important to note that some online tutorials are interactive, while others are non-interactive. For example, Algebasics is a non-interactive, online tutorial that assists students in learning basic algebra. Algebasics has 16 sections covering such topics as basics of algebra, equations, rational expressions and equations, polynomials, etc. For each of these sections, learners can view tutorials detailing how to solve several problems. Hence, online technologies can help students learn and enhance instructional opportunities for teachers (Roblyer & Doering, 2013).

The terms distance education, e-learning, Web-based instruction, distance learning, and online learning have often been used interchangeably to explain this nontraditional instructional methodology. However, Schlosser et al. (2002) has what is perhaps the most comprehensive definition of distance education: “Institution-based, formal education where the learning group is separated, and where interactive telecommunications systems are used to connect learners, resources, and instructors” (p. 1). Additionally, Schlosser et al. (2002) suggested that four factors are significant to their definition. First, distance education must be institutionally based. Secondly, the teacher and learner must be separated by geography, time, and knowledge. Thirdly, interactive telecommunications must be accessible for the learners to interact with one another, resources, and the instructor. Finally, the instructional environment and resources must facilitate the learning experience. Thus, distance education has not just changed the interaction between student and teacher, but has changed the role of the instructor and given learning an opportunity to “escape the physical boundaries of the classroom and school ...” (Roblyer & Doering, 2013, p. 224).

There are several delivery methods used in distance education. These include the following (or a combination of): (a) correspondence courses via postal mail and/or fax; (b) pre-recorded audio or video; (c) broadcast radio; (d) audio conferencing telephone systems; (e) broadcast television via microwave or satellite link; (f) web-based (or online) course management systems; (g) teleconferencing, and/or (h) videoconferencing (Roblyer & Doering, 2013). The two most commonly used delivery methods are Web-based (online) courses and video courses or telecourses, according to Roblyer and Doering (2013).

Distance education provides school districts with an opportunity to offer a more diverse group of courses (core and noncore), which has increased interest for online education nationwide. According to the National Center for Education Statistics, reported by Zandberg and Lewis (2008), during the 2004-2005 academic year, approximately 37% of public school districts had students enrolled in distance education courses. Interestingly, of all the public schools with students enrolled in distance education, roughly 72% were high schools. “Between 2002-03 and 2004-05, the number of enrollments in technology-based distance education courses increased 60 percent overall, from enrollments in an estimated 317,070 enrollments in 2002-03 to 506,950 enrollments in 2004-05” (Zandberg & Lewis, 2008, p. iv). However, the National Center for Education Statistics reported an increase of distance education use for the 2009-2010 academic year (Queen & Lewis, 2011; U.S. Department of Education, 2012). During the 2009-2010 academic year, the number of public school districts with students enrolled in distance education courses increased to 55% (Queen & Lewis, 2011). As the number of public school districts offering distance education increased, so did the number of students enrolled in distance education courses. In the 2009-2010 academic year, more than 1.8 million students were enrolled

in distance education courses, of which an estimated 74% were high school students (Queen & Lewis, 2011; U.S. Department of Education, 2012).

Assessments of distance education courses are as important as for traditional, face-to-face courses. Consequently, the U.S. Department of Education released a meta-analysis study, reported by Means, Toyama, Murphy, Bakia, and Jones (2009), comparing online learning to face-to-face learning. The study found that students enrolled in online courses performed slightly better than students enrolled in traditional, face-to-face courses (Means et al., 2009). The success of technology-based distance education is measured by the course completion status. At the conclusion of the 2004-2005 academic year, of the 506,950 students enrolled in technology-based distance education courses, approximately 66% completed their course(s) with a passing grade while only 6% completed their course(s) without a passing grade (Zandberg & Lewis, 2008). Though the offering of distance education has increased during the 2009-2010 academic year, the success of completion did not experience the same increase. For example, in Minnesota during the 2009-2010 academic year, full-time online students completed only 63% of the courses they started (Lemagie, 2011). Additionally, nearly one-quarter of the “online” seniors dropped out of school by the end of the school year (Lemagie, 2011). In their review of performance data from K12, Inc., a large virtual course provider, Miron et al. (2013) reported that “the on-time graduation rate for the fulltime virtual schools was less than half the national average: 37.6% and 79.4%, respectively” (p. 12).

The popularity of distance education courses led to the establishment of virtual schools. Virtual school is a K-12 phenomenon that offers courses and diplomas “either mostly or completely online” (N. Davis & Roblyer, 2005). Though this phenomenon emerged in 1994, it has experienced extraordinary growth (N. Davis & Roblyer, 2005; Dillon & Tucker, 2011), with

now approximately 311 full-time virtual schools open during the 2011-2012 academic year (Miron et al., 2013). However, the Florida Virtual School (FLVS), founded in 1997, has become a national leader in providing online instruction for K-12 students (Barbour, 2014; Paige, Hickok, & Patrick, 2005), which encouraged other states to establish virtual schools. According to a 2007 report (Florida TaxWatch, 2007), the half-credit enrollment for Florida Virtual School (FLVS) was 77 in 1997, but that number had increased to 113,900 by 2007. However, by the 2010-2011 school year, the half-credit enrollment had increased to over 122,000 students (Florida TaxWatch, 2007). There are more than 40 states with state virtual schools or state-led initiatives (Watson, Murin, Vashaw, Gemin, & Rapp, 2012). Nevertheless, virtual schools offer a “nontraditional” alternative to education for K-12 students, and Florida TaxWatch (2007) inferred that FLVS is a program that has enhanced student achievement. Though when compared with non-FLVS from academic year 2008-09 to 2012-13, FLVS produced at similar outcomes but at a lower cost (Barbour, 2014; Paige et al., 2005).

While distance education has made its mark in the K-12 school systems, so has the use of digital media and technology in the classroom. Vockley and Lang (2011) conducted a survey to fully comprehend the commitment K-12 teachers have to media and technology use for instruction and student engagement. As one would probably assume, the survey revealed that the Internet has become the primary source for media-based instruction as teachers use it for “finding, retrieving, using, and managing digital media-including interactive games, activities, lesson plans, and simulations” (Vockley & Lang, 2011, p. 2). Furthermore, teachers who stream or download video content has increased from 55% to 76% in three years. This increase has been attributed to teacher’s views on its benefits, as many of them agree that video content stimulates classroom discussions (68%), improves motivation (66%), and is favored by students (61%).

Additionally, they agree that video content increases teachers' effectiveness (62%) and creativity (66%).

As much as the use of digital media and technology has increased, many budgets allocated to digital media and technology has decreased (Vockley & Lang, 2011). There are approximately 54% of K-12 schools that subscribe to fee-based multimedia, which is down from 2009 and 2008; 60% and 65% respectively. Consequently, because teachers are committed to their profession and the benefits of media and technology as an instructional resource, many of them spend a significant amount of time using free educational resources or those they have purchased with their own money. In fact, the teachers reported that they spend 35% of their time using free educational resources and 25% using educational resources they purchased themselves (Vockley & Lang, 2011).

Current Uses of the Internet in Higher Education

Institutions across the country have acknowledged the Internet's significance as an instructional tool. In fact, the Internet has made it feasible for users to communicate with each as well as have access to massive amounts of information regardless of their location. "The Internet has become an essential part in education institutions since it plays a vital role in meeting information and communication needs of students, teachers, and institutions" (Rehman, Hunjra, Safwan, & Ahmad, 2010). Similar to K-12, the Internet is used for student research (Rehman et al., 2010). The Internet has been, and continues to be, used by teachers and students to conduct research, supplement face-to-face instruction with distance education, social bookmarking, and podcasting.

The establishment of the Internet has significantly changed how teachers and students access information. The Internet has given students and teachers access to library resources without having to enter the library. The Internet has even altered how its users conduct research. According to Purcell, Brenner, and Rainie (2012), when Internet users were asked which search engine they access most often, Google was the most used with an 83% response rate. Yahoo was named the second most used search engine accessed with a 6% response rate.

Rehman et al. (2010) conducted research to measure students' attitude concerning Internet use and found they believe the Internet is easier to use than the library. As majority of the students noted that they feel comfortable accessing and using the Internet, nearly 90% of the respondents agreed that using the Internet is essential for educational projects. Not only did their study indicate that students use the Internet for educational and research purposes, but they found the Internet to be more informative than their professors. Despite students' positive attitudes toward the use of the Internet, Rehman et al. (2010) suggests that universities inform students of benefits of Internet use and "highlight the use of Internet research techniques and course materials should be situated on the Web to facilitate access by students" (p. 51).

Distance education has become the fastest growing form of instructional delivery in higher education (Wasilik & Bolliger, 2009) and has proven to be a successful method of such delivery. According to Parker, Lenhart, and Moore (2011), more than 75% of colleges and universities offered distance education courses. During the 2007-2008 academic year, approximately 20% of undergraduate students had completed at least one distance education course (Radford, 2011). This percentage is an increase from the 2003-2004 academic year, which was 16%. However, the participation in distance education degree programs (taught entirely

online) decreased from 5% in 2003-2004 to 4% in 2007-2008 (Radford, 2011). As online course delivery has increased, so has the school systems' interest in its effectiveness for student success.

The Chancellor's Office of the California Community Colleges has consistently reported completion rates for distance education (Scott, 2011). For the California Community Colleges, distance education successful completion is considered a grade of "C" or better. For the 2009-2010 academic year, the completion rate for distance education courses was 57%, which was a slight increase from four years prior (53%). Interestingly, during the same academic year (2009-2010), the completion rate for traditional, face-to-face courses was 67% (Scott, 2011). Again, this completion rate was a slight increase from the 2005-2006 academic year, which was 64%. "This success rate can be attributed to better instructional design and increased familiarity with distance education instruction by students. As more students took DE [distance education] courses, their ability to perform in the new delivery method improved" (Scott, 2011, p. 11).

As many colleges and universities are concerned with retention rates, the challenge to retain students enrolled in distance education courses or programs has become a concern for universities. The California Community Colleges compared the retention rates of distance education courses with that of traditional, face-to-face courses. For both traditional, face-to-face courses and distance education courses, students who dropped the course with a "W" are not retained (Scott, 2011). In 2009-2010, the retention rates for distance education courses was approximately 78%, while the retention rate for the traditional, face-to-face courses was nearly 85% (Scott, 2011). Both of these rates were an increase from the 2005-2006 academic year, 76% and 83% respectively. Scott (2011) contended that the high distance education retention rates can be attributed to positive student-faculty relationships. Distance education professors are expected to integrate retention efforts into their courses and urge student participation. Other strategies

contributable to retention include, but not limited to: “(a) assigned advisor for distance education students; (b) embedded tutors; (c) faculty training; (d) mandatory regular student contact; and (e) early assessments” (Scott, 2011, p. 31). These reports of success support Wasilik and Bolliger’s (2009) assertion that universities offer online courses for reasons such as improved student success and rise in degree completion.

As the cost of higher education continues to rise, so does the cost of college textbooks and other material (Falc, 2013). However, with millions of undergraduate students taking at least one online class (Allen & Seaman, 2013), online technologies have made it possible for these students to access costly textbooks and supplemental material as a less expensive alternative (Falc, 2013). The advent of social bookmarking has been tagged as a resource to easily access information. According to Millen, Jonathan, and Bernard (2005), social bookmarking “allow individuals to create personal collections of bookmarks and easily share their bookmarks with others” (p. 30). Since the introduction of del.icio.us, a social bookmark manager, one of the enhancements has included allowing users to organize their collection into meaningful labels (Millen et al., 2005). Additionally, users can view other users’ bookmarks marked as “friends” (Bryant, 2006).

Internet use has not just changed higher education in the United States, but has challenged institutions across the nation to consider its use for teaching and research purposes. Bhatti (2010) asserted that the Internet has made teaching and research for faculty of Pakistani academic institutions more challenging. Though Bhatti (2010) understands the Internet’s potential uses for Pakistani faculty and the need to provide better services, he conducted a study to explore the extent to which the faculty of the Islamia University of Bahawalpur used the Internet. Of the 100 faculty who responded to Bhatti’s (2010) study, 57% sought information

from the Internet for teaching purposes, while 64% used the Internet for research purposes. Interestingly, 32% of these faculty members spent approximately 8 to 10 hours per week using the Internet, while 20% spent nearly 10 to 15 hours per week using the Internet. Despite the fact that more than 50% percent of the survey respondents utilized the Internet for teaching or research purposes, 70% blamed a shortage of computers and slow speed for the difficulty while seeking information using the Internet. Although the study highlighted some definite improvements needed to improve the technological infrastructure of the Islamia University of Bahawalpur, it illustrated the pervasive change the Internet has had in higher education abroad.

The current trends of the use of technology in higher education have also reached Asia and Oceania. According to Latchem and Jung (2010), an experienced consultant of open and distance learning and professor of education technology and communications, respectively, Asia has 70 open universities which has been marked as having the largest adult online and distance student population in the world. More than 10% of China's college students participated in online education. In fact, these technological advancements have overcome barriers created by cultural traditions. For example, videoconferencing has permitted Saudi Arabian women to have male instructors without being in their presence (Latchem & Jung, 2010). There is no question that technology has made education more accessible and has crossed geographical and cultural boundaries.

For years, technological developments and electronic devices have been implemented for classroom; from radio to television to the Internet. However, within the past decade podcasting has become one of the most used technological advancements. Apple Computer launched the iPod in October of 2001, a portable media player (Apple, 2011). As entities became familiar with the benefits and potential uses of downloading, podcasting became popular. Lazzari (2009) said

that podcasting is a “method for distributing digital video and audio contents over the Internet” (p. 27). However, by 2003, podcasting had become a key function in education (Riddle, 2010). While podcasting has been used in education for several years, its use became increasingly popular when Duke University distributed iPods to its 1,650 freshmen in 2004 (Read, 2005). Duke’s technology center facilitated focus groups and conducted interviews about the use of the iPods and found that approximately 75% of the students surveyed responded that they used their iPod for at least one course. Students also reported that this technology allowed them to listen to lectures at their convenience. Students and faculty alike found that the use of the iPods enhanced student learning (Riddle, 2010). Additionally, the results of Duke’s experience defends Fisher & Baird’s (2006) contention that podcasting “provide students with the ability to learn on-demand based on their own learning styles” (p. 22).

History and Background on Social Networking Sites (SNS)

SNSs have changed the way people get connected and stay connected to one another (New Media Consortium, 2014). Social networking sites have existed for nearly 20 years, but in recent years they have become increasingly popular (Kane, Alavi, Labianca, & Borgatti, 2014). Although SNSs serve different purposes, in 2011 the top SNSs for general interest were Myspace, Ning, Twitter, and Facebook (Ferner, 2011).

Myspace launched in 2003 allowing its users to create profiles, express themselves, and interact with friends (Bosworth, 2005). During the 2005-2006 year, the user profiles increased from approximately 2 million to 80 million (Randon History, 2008). Despite its popularity, Myspace was concealed by the rapid fame of Facebook and Twitter. According to Arango (2011), Myspace lost more than 9 million users in one year. Consequently, it was important for

executives of Myspace to rebrand in an effort to stay afloat. Michael Jones, the president of Myspace, shared with a New York Times journalist, that Myspace users were accessing the site primarily to listen to and discuss music (Helft, 2010). Thus, Myspace (2014) is now a social platform “built to empower all artists—from musicians and designers to writers and photographers—helping them connect with audiences, collaborators, and partners to achieve their goals” (para. 1).

In 2005, Ning publicly launched the Ning Platform with 20 or more simple social applications with approximately 40,000 simple applications created within the first 16 months (Ning, 2014). Ning (2014) is the world’s largest platform for creating social communities and websites” (para. 1). Unlike other Social Networking Sites, Ning gave its users the autonomy to create their site’s appearance and its functions (Educause, 2008). Interestingly, while many educators have a concern about using SNSs for educational purposes because of privacy, Ning provided instructors an advantage that Facebook and Myspace do not (Educause, 2008).

Ning provides an avenue for instructors to take advantage of social Networks in a neutral setting, offering functionality and an experience that are familiar and comfortable to students. By creating social networks around academic topics, or even about specific projects for a course, an instructor can facilitate a strong sense of community among the students, encouraging personal interactions that can lead to the creation of new knowledge and collective intelligence. (p. 2)

Twitter, founded by Evan Williams, Jack Dorsey, and Biz Stone, launched in 2006 (Twitter, 2014c). Twitter (2014a) as a social platform that “helps you create and share ideas and information instantly, without barriers” (para. 1). Nearly two years after Twitter was launched, there were 1.3 million registered users (Mashable, 2011). During 2012, the number of users had increased to nearly 500 million registered profiles (Mediabistro, 2012), with its users sending more than 175 million tweets every day. Twitter allows its users to connect with people,

businesses, and organizations by “tweeting” a response to one simple question, “What’s happening?” Each tweet can only be 140 characters in length (Twitter, 2014b). Similar to Facebook, Twitter has developed mobile applications that allow iPhone, iPad, Blackberry, Windows7, and Android owners to experience Twitter on the go (Twitter, 2014b). As of 2014, the most recent usage statistics were as follows:

- 271 million monthly active users;
- 500 million tweets are sent per day;
- 78% of Twitter active users are on mobile;
- 77% of accounts are outside the U.S.;
- Supports more than 35 languages (Twitter, 2014b).

Although there are many social network sites, Facebook has become the most popular site (Hurt et al., 2012; Prescott, 2014) and the social networking site of choice among college students (Backer, 2010; Cheung, Chiu, & Lee, 2011; Green & Bailey, 2010; Hart & Steinbrecher, 2011; Thompson, 2007). According to Facebook (2014d), Facebook is a social platform that allows people to connected to family and friends (Facebook, 2014a). Just as several SNSs were started to target a specific demographic, Facebook was designed to “support college networks” (Boyd & Ellison, 2008, p. 218). Facebook was launched in 2004 by Mark Zuckerberg (Facebook, 2014c). Initially, it was accessible to only Harvard students (Cassidy, 2006). However, as it became popular among Harvard students, Zuckerberg opened it to other schools requiring those users to have a university email address (Boyd & Ellison, 2008).

According to Phillips (2007), high schools could register for Facebook accounts in September 2005. In October, it began to reach United Kingdom universities (Phillips, 2007). Interestingly enough, during the following year, this Facebook phenomenon was opened to

anyone with a registered email address (Facebook, 2014c). Facebook (2014a) has a mission to “give people the power to share and make the world more open and connected” (para. 1). Its usage has increased to

- 829 million daily active users;
- 654 million mobile daily actives users;
- Approximately 81.7% of the daily active users are outside the U.S. and Canada (Facebook, 2014b).

In 2005, it was reported that roughly 8 million students at both high school and college levels were registered Facebook users (Lashinsky, 2005). However, as of 2009, the high school and college student population had increased to approximately 13 million (Corbett, 2009). “It seems like everywhere we go on our campus where students are using computers, we see at least one student logged on to Facebook” (Green & Bailey, 2010, p. 20).

According to Pascarella and Terenzini (1991), faculty who create informal relationships with their students are perceived to be the most effective. As Pempek, Yermolayeva, and Calvert (2009) observed that students spend between 10 and 60 minutes on Facebook per day, it is important to study if there is a potential for it to recreate or add value to an environment that encourages faculty-student relationship building and engages students academically.

Current Issues with Using SNSs in Education

With more than 5 million high school students registered (Corbett, 2009), it was expected that Facebook, and perhaps other SNSs, would reach the educational realm. Lenhart, Purcell, Smith, and Zickuhr (2010) found that approximately 73% of teens, ages 12-17, have used a social networking site. As expected, this percentage has increased over time; 65% in 2008 and

55% in 2006. Further, Grunwald Associates LLC found that “approximately 60% of students who use social networking talk about education, and more than 50% talk about specific schoolwork” (National School Boards Association, 2007, p. 1). Similarly, Green and Bailey (2010) had a discussion with an eighth grader and learned that many eighth graders create Facebook groups and pages to post homework assignments and answers. Yet, the idea of using SNSs for educational purposes is varied.

Some school districts and educators have embraced this new technology, while many school districts prohibit the use of SNSs in schools, particularly concerned about student’s privacy, safety, and the necessity to protect them from online predators (Karlin, 2007). In New Jersey, a middle school principal sent an email to parents insisting that they get their children off of Facebook (Bauerlein, 2010). He adamantly expressed his opinion that there is no reason for a middle school student to be on a social networking site (Bauerlein, 2010). In fact, during his interview with Good Morning America’s anchor, George Stephanopoulos, he declared that students do not need computers in their room because 90% of their homework does not require computer use (Bauerlein, 2010). While most concerns adults have with SNSs are focused on online predators, the New Jersey middle school principal addressed a greater concern. “The threat to your son or daughter from online adult predators is insignificant compared to the damage that children at this age constantly and repeatedly do to one another through social networking sites...” (Bauerlein, 2010, p. 1). In fact, his statement is consistent with a report published by the Internet Safety Technical Task Force (as cited in Livingstone and Brake, 2010) which found that the “risks to children from adult sexual predators on social networking sites are very rare” (p. 80). Consequently, his staff has spent time teaching responsible social networking

use to students, but parents are not as informed and some oblivious to the fact that their child has a Facebook account (Bauerlein, 2010).

The overwhelming concern with privacy is not an isolated issue for the K-12 school system. Higher education administrators and faculty share a similar concern. As aptly stated by Santovec (2006), students who expose themselves excessively on SNSs are more at risk to become victims of crime. Santovec (2006) provided examples of incidences where campus personnel or campus security has used photos posted on SNSs “to identify underage drinkers after- or even during-residence hall parties” (p. 3). Additionally, Lucy Billings-Jones, Career Services Coordinator, discussed the trend of companies and organizations searching SNSs for background information on potential interns and/or employees. Billings-Jones revealed that “raunchy photos and explicit comments posted on SNSs have been the demise of students receiving internships or full-time employment” (personal communication, February 9, 2010).

Sickler (2007) conducted research about Facebook, particularly asking college students about Facebook. When asked about their reaction to Facebook’s membership opening to the world, one student disagreed with Facebook’s decision. “When you hear about employers using Facebook as a resource when they are considering someone for employment, it definitely has lost its appeal to me” (Sickler, 2007, p. 1). Some students were adamant that having college professors and administrators on Facebook infringes on their privacy (Sickler, 2007).

Similarly, Madge et al. (2009) conducted a study of undergraduate students at a British university to explore how students’ pre-registration engagement with university Facebook group influences students’ post-registration Facebook engagement. It became clear during evaluation of the data that Facebook was significant in aiding students’ transition to the collegiate experience. Interestingly, students reported that they have informally used Facebook to “organize group

meetings for academic project work, revision and coursework queries” (Madge et al., 2009, p. 148). While it was reported that students access Facebook more for social purposes, there was not an overwhelming number of students who felt that their engagement on Facebook affects their academic efforts. Indeed, approximately 25% of the students reported that their time spent on Facebook frequently affects their academic efforts, whereas 17% of the responded that their Facebook time never affects their academic efforts (Madge et al., 2009).

Students were also asked if Facebook could be utilized to enhance teaching and learning at the collegiate level. Forty-three percent of the respondents gave negative responses such as “Facebook and education should be kept strictly separate, Facebook is a place where people come to get away from work and its more for socializing and talking to friends about work than for actually doing work” (Madge et al., p. 149). Conversely, 53% of the respondents gave positive responses concerning the use of Facebook for learning and teaching. Moreover, the respondents offered suggestions for ways to use Facebook; “providing social and peered academic support for students in departments and revision opportunities and using Facebook to inform students of changes to lecture times” (Madge et al., p. 150). However, despite the aforementioned concerns of privacy and security, college students spend a considerable amount of time on Facebook and it may be the next best opportunity for students to interact with professors and each other about for educational purposes.

Current Research Findings and Future Research Needs

While there is very little empirical research on the use of SNSs in education, Roblyer, McDaniel, Webb, Herman, and Witty (2010), conducted a study to compare faculty and students’ perception of the use of Facebook for classroom support. They found that students are more

likely to agree to the use of Facebook as classroom support because of its convenience. Yet instructors are more likely to agree that the use of Facebook is not for education. Interestingly enough, neither the instructors nor students indicated privacy as a concern for the use of Facebook for classroom support (Roblyer et al., 2010). While students' overwhelming acceptance of Facebook is for social purposes, little is known about its adoption by students for educational purposes. Even less is known about Facebook's acceptance by faculty. The aforementioned study by Roblyer et al. (2010) indicated that "students seem much more open to the idea of using Facebook instructionally than do faculty" (p. 18).

While students seem to be more open to using Facebook for instructional purposes, many instructors agree that the use of Facebook is not for education (Roblyer et al., 2010). However, chemistry faculty members of Iowa State University (ISU) were challenged to facilitate a forum for students to discuss scientific topics (Schroeder & Greenbowe, 2009). In keeping with the standards of the National Science Teachers Association, the chemistry faculty desired a forum that would allow their students to discuss "how they know what they know and how their knowledge connects with larger ideas, other domains, and the world beyond the classroom" (Schroeder & Greenbowe, 2009, p. 1). After an unsuccessful attempt to incorporate WebCT as the means to facilitate this discussion, the faculty decided to incorporate Facebook as an alternative discussion tool. However, they questioned if students would use Facebook more frequently than WebCT.

Consequently, Schroeder and Greenbowe (2009) conducted a quantitative study designed to observe students' use of WebCT and Facebook as tools for discussing chemical concepts, which involved 128 students. In this study, researchers found that the Facebook posts totaled approximately 400% more than that of WebCT. Schroeder and Greenbowe (2009) were

surprised to find that the discussions on Facebook were more complex and students presented more detailed responses. Though this study revealed an increase in “outside the classroom” student communication, the researchers recommend a further comprehensive study detailing the value of Facebook as an educational tool.

Ophus and Abbitt (2009) conducted a qualitative study to determine the use of Facebook as supplemental study tool for students taking a biology content course at a comprehensive Midwestern university. The researchers administered a paper survey to 110 students inquiring about their Facebook use, specifically the frequency of use of Facebook, frequency of use when communicating with social groups (i.e., family, friends, instructors, other students), probability of participating in course-related Facebook activity, and their perceptions of Facebook as an academic tool (Ophus & Abbitt, 2009). Additionally, the survey participants were asked to detail probable advantages, disadvantages, or trepidations with using Facebook in college courses.

In addressing the frequency of Facebook use, 95.5% of the survey participants indicated that they use Facebook daily or numerous times per day. Interestingly, roughly 85% of the participants revealed that they have never communicated with their instructors via Facebook. However, 77.3% of the respondents admitted using Facebook to communicate with classmates. The greatest use of communication with Facebook was with friends. Consistent with the response with whom the participants communicate on Facebook, most students indicated that they are less likely to use Facebook to communicate with instructors, but more likely to communicate with other students. Additionally, Ophus and Abbitt (2009) found that the respondents are less likely to use SNSs for online discussions with students and faculty, but more likely to use SNSs to “access course notes and other materials, viewing course schedule, and joining a Facebook group for students in their courses” (p. 643). Overall, the participants

revealed a positive response to the use of Facebook in an educational setting, but privacy and potential for distraction were points of objection.

Barczyk and Duncan (2013) conducted a study to understand students' perceptions and attitudes toward courses in which Facebook was incorporated. The researchers found that students agreed that "Facebook enhanced their experience of participation in their course" (Barczyk & Duncan, 2013, p. 6). More than 65% of the students agreed that using Facebook (a) allowed them to share educational resources and discuss areas of interests, (b) provided collaborative learning opportunities, and (c) allowed them to communicate with classmates. Students indicated a favorable, positive experience with using Facebook in their courses and preferred using Facebook over Blackboard (Barczyk & Duncan, 2013). These findings are similar to that of McCole, Everett, and Rivera (2014) who found that students who participated in the Facebook optional component of the course made a connection with classmates and shared content-related photos and stories. In fact, more than 50% of the students indicated that the Facebook Group had a "positive impact on their class performance" (McCole et al., 2014, p. 248).

The increased use of Facebook in higher education has reached beyond the United States. In Australia, Backer (2010) conducted research to understand if the use of smartphones and Facebook "improves student learning, creates a sense of independent and collaborative learning, and encourages a sense of responsibility" (p. 25). The research project focused on 12 students using their smartphone and Facebook for researching and delivering the major assessment requirement for the course. Backer (2010) conducted interviews with 12 participants to better understand their experience with the use of technology for the course. At the conclusion of the interviews, Backer (2010) learned that students described the experience as "innovative learning"

(p. 26) and “a much more interactive way to learn” (p. 27). Overall, the students felt that the use of smartphones and Facebook for their course enriched their learning experience.

Hung and Yuen (2010) surveyed 67 students taking face-to-face classes at two universities in Taiwan in an attempt to “explore how social networking technology can be used to supplement face-to-face courses as a means of enhancing students’ sense of community” (p. 706). Unlike previous researchers, Hung and Yuen (2010) used Ning as their social networking site of choice because of the belief that it is less distracting and more learning focused. When asked several questions regarding their learning experiences with using Ning as a supplemental to classroom instruction, more than 90% of the students agreed that Ning allowed them to share personal interest, find and share educational resources, communicate with classmates about course-related topics, encourage learner-centered activities, promotes knowledge, and provides collaborative learning opportunities (Hung & Yuen, 2010). Though the instructors used various functions of Ning (e.g. Forum, Blog, Photos, Videos, My Page, Music/Audio, Members’ Page, Groups, and Chat), more than 90% of the students responded positively to their experience using Ning (Hung & Yuen, 2010).

Likewise, Bosch (2009) conducted a study of 50 undergraduate students and five professors, and learned that students used Facebook to seek answers for assignments and to communicate with one another about study material. Interestingly, students used Facebook to advise their professors of specific topics of which to focus. Meanwhile, one of the professors enthusiastically expressed support for the use of Facebook because it created an opportunity for students to ask questions who might not otherwise do so.

While many agree that social networking has changed the way people communicate and interact, more needs to be known about its perceived educational value. As noted in a report by the Educause Learning Initiative (Educause, 2006) professes that

Any technology that is able to captivate so many students for so much time not only carries implications for how those students view the world but also offers an opportunity for educators to understand the elements of social networking that students find so compelling and to incorporate those elements into teaching and learning. (p. 2)

Acceptance of SNSs in Education: A Diffusion of Innovation Perspective

As with many technological advancements (i.e., Internet, online courses), the rate of adoption often starts off slowly. According to Rogers (2003), “Getting a new idea adopted, even when it has obvious advantages, is difficult” (p. 1), and that has been the case for the adoption of SNSs in education. Simply put, the obvious advantages may be ambiguous for potential adopters (Rogers, 2003).

Rogers (2003) asserted that the diffusion of innovation theory perceives innovations as being communicated through specific channels over time and within a particular social system. Thus, individuals possess distinct degrees of willingness to adopt innovations and the segment of the population that adopts the innovation is roughly normally distributed over time (Rogers, 2003). The characteristics of innovations that help justify the different rates of adoption are (a) relative advantage, (b) compatibility, (c) complexity, (d), trialability, and (e) observability (Rogers, 2003).

Relative advantage is the degree to which an innovation is perceived as advantageous. Thus, the greater the perceived relative advantage of an innovation, the quicker its rate of adoption. Compatibility refers to the degree to which an innovation is perceived congruent with

the potential adopters existing values, past experiences, and needs. Consequently, an innovation that is incompatible with norms and values of the social system are slow to be adopted.

Complexity refers to the level to which an innovation is perceived as being difficult to understand or use. So, new innovations that are easier to understand and/or use are adopted sooner than those that may require potential adopters to acquire new skills. Trialability is the degree to which an innovation can be experimented with on a trial basis. An innovation that has trialability leaves potential adopters with less uncertainty, thus increases its potential for adoption. Finally, observability refers to the degree to which potential adopters are able to see the results of an innovation. To see the results of an innovation increases the likelihood of adoption (Rogers, 2003). As each of the aforementioned characteristics affect the rate of adoption, this study seeks to ascertain students' and faculty's perceptions of these attributes in order to predict the likelihood that Facebook will be used to support education.

Summary of Literature

The chapter presented a broad overview of the literature on Internet use in education, which highlighted a common thought; the advent of the Internet provoked a paradigm shift in instructional delivery. The Internet has allowed school systems to offer online courses to developing virtual schools. As technological innovations changed how people communicate with one another, SNSs were launched and have become increasingly popular. Consequently, educators have grappled with the notion of integrating these technological advancements in education. It is evident in the literature that students use SNS to communicate about coursework and teachers have attempted to use it to supplement instruction. However, due to past and anticipated issues and problems, its uses in education remain controversial. For this reason,

further research is needed to determine current and potential SNS impact on teaching and learning.

CHAPTER III

METHODOLOGY

The purpose of the study was to provide evidence on the adoption and use of SNSs by faculty and students in higher education and will address the following research questions: Are faculty and students adopting SNSs at comparable rates, either for personal or educational uses? Do faculty and student perceptions of innovation attributes (i.e., relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003) help explain their willingness to use SNSs for educational purposes? Do faculty and students perceive similar advantages of using SNS for educational purposes? Do faculty and students perceive similar disadvantages of using SNS for educational purposes? The adoption of SNS in education will be examined through the lens of diffusion of innovation theory (Rogers, 2003). This chapter describes the methods used to gather and analyze data to answer these questions.

Study Design

This study used an explanatory sequential mixed-methods design (Creswell & Plano-Clark, 2007), in which quantitative and qualitative data were collected with a survey, and follow-up qualitative data were collected via a focus group and interviews in order to better understand and interpret the meaning of survey results. Qualitative data were used to shed light on the reasons for adoption and nonadoption of SNSs. Descriptive and nonparametric analyses were used to address research questions 1 and 2, which use quantitative data.

Setting, Participants, and Sampling

The participants of this study included a sample of the undergraduate student population and faculty of a small, southern, metropolitan university. The university from which the sample was drawn has an enrollment of approximately 11,000 undergraduate and graduate students. The gender ratio was approximately 45% male and 55% female. The number of faculty (including full-time and part-time) was approximately 730. However, the study specifically sought to understand the perceptions of faculty and students from the School of Education (SOE). This was a convenience sample, based on the college in which the study was authorized. An online survey was sent via university email to all SOE faculty and undergraduate students. Students were invited by email to participate in a focus group session, and faculty members were invited by email, phone, and face-to-face requests, to participate in an interview.

Instrumentation

The instruments used in this study were an investigator-created questionnaire containing demographic, Likert-scale questions accompanied by open-ended items, an investigator-created focus group protocol, and interview questions. Each was created for this study to gather data regarding faculty and students' SNS use and their perception of the factors that impact adoption of SNS (see Appendix B for the student survey, Appendix C for the faculty version, Appendix D for the Focus Group Protocol, and Appendix E for the interview questions). After items to ascertain faculty and students' current adoption of SNS for personal and educational uses, several four-point Likert-scale questions were designed to assess their perceptions of each the factors (i.e., relative advantage, compatibility, observability, complexity, and trialability) that may influence their rate of adopting SNS in education. Open-ended questions were constructed to

ascertain the perceptions of benefits and challenges of using SNSs to support education. The questions were designed to examine what motivates faculty to use SNS for educational purposes and the course content more likely to be placed on SNSs.

Overview of Procedures

This section describes the steps used to carry out the study. These include instrument validation, data collection, and data analysis procedures. The instrument validation was used to determine reliability and validity. The data collection included an online administered survey, a student focus group, and faculty interviews. The quantitative data were analyzed using statistical tools such as Chi-square and Mann-Whitney *U* tests, while the qualitative data were analyzed using content analysis and coding procedures.

Instrument Validation Procedures

The validity and reliability of the instruments used in this study were crucial to the results of this research and future studies. Therefore, the survey instrument was initially reviewed for face and content validity by three experts in instrument construction who have experience with principles underlying diffusion of innovation theory. Subsequently, the instrument was field-tested in its final form with a few students and faculty from the target population in an effort to ascertain that directions and items were clear and readable. Additionally, the focus group protocol was reviewed by two experts.

A Cronbach's alpha (α) is commonly used to measure internal consistency to indicate the reliability of a set of questions in an instrument (Cronbach, 1951). Thus, after data were collected from the population, the Cronbach's α was calculated to measure the internal consistency of the

Likert-scale items that were used to measure perceptions of relative advantage, complexity, compatibility, observability, and trialability.

Data Collection Procedures

To compare student and faculty perceptions of the adoption of SNSs in education, data were gathered via an online survey (i.e., SurveyMonkey). Potential participants were invited to complete the survey via an email that also contained a letter to enable informed consent. The survey included questions to determine demographics of both student and faculty participants. Most importantly, the survey measured the acceptance of SNS with questions that address their perceptions of Facebook on each of the five attributes. To maximize the number of respondents by making it easy to complete, the survey was created using the SurveyMonkey online service to distribute to the School of Education undergraduate faculty and students of this southern, metropolitan university.

With approval from the Director of the SOE (Appendix F) and the Institutional Review Board (Appendix A), the survey was distributed electronically to current SOE students who were enrolled during the 2013-2014 academic year. Additionally, SOE undergraduate faculty members were invited via email to participate in the study. As less than the desired 60% return rate was achieved after two weeks, a reminder email was sent to all faculty and students. After another two weeks, another reminder email was sent to both faculty and students.

As previously mentioned, Roblyer et al. (2010) found that students appear to be more receptive than faculty to the use of SNSs for instructional purposes. However, it is important to better understand the reasons for this acceptance or nonacceptance. Thus, university faculty and undergraduate students were also asked to respond to several open-ended questions. The

questions were designed to gain a more in-depth understanding of how faculty and students perceive the advantages and disadvantages of using SNSs for educational purposes. Finally, data were also gathered through a student focus group and interviews of representative faculty members.

Data Analysis Procedures

Three types of procedures were used to analyze data gathered from this study. First, descriptive statistics were used to determine basic characteristics of the sample. Second, nonparametric procedures were used to address Research Question 1 on SNS adoption rates of faculty and students and Research Question 2 on factors that correlate with SNS adoption. Finally, qualitative data to address Research Questions 3 and 4 were analyzed using content analysis methods.

Since data on items concerning current and future adoption of SNSs are categorical (i.e., yes/no), they were analyzed using a nonparametric method, namely the Chi square analysis. This analysis allowed for comparison of faculty and students' adoption of SNSs for personal and educational use. Then, since data from the Likert-scale items are ordinal and assumptions of normality could not be met, a nonparametric Mann-Whitney *U* test was used to compare sums of faculty and student responses on items that measure perceptions of relative advantage, complexity, compatibility, trialability, and observability (Witte & Witte, 2009).

A content-analysis approach is commonly used to analyze qualitative data in a way that allows for subsequent interpretation. Coding is “the process of grouping evidence and labeling ideas so that they reflect increasingly broader perspectives” (Creswell & Plano-Clark, 2007, p. 132). Coding allows the creation of categories or trends in the data. Thus, the qualitative data

gathered from the three open-ended questions and the focus group sessions were analyzed using a constant-comparison technique (Creswell & Plano-Clark, 2007) and coded into categories, which revealed faculty and students' commonly held thoughts on the advantages and disadvantages of using SNSs for educational purposes.

Summary of Study Methodology

The chapter presented an overview of how the study collected statistical information on university faculty and students' SNS use, such as Facebook. The researcher developed a suitable methodology for measuring the factors that affect the rate of adoption for both faculty and students: *Faculty Social Networking Survey* and *Student Social Networking Survey*. Included in this survey were several open-ended questions designed to gain insight into faculty and students' perception of the advantages and disadvantages of using SNSs for educational purposes. The open-ended questions and focus group results detailed the motivation of faculty using SNSs for educational purposes as well as the course content placed on SNSs.

The survey was administered to the School of Education faculty and students via university email. Data were also gathered from a student focus group and faculty interviews. After several months of collecting data, descriptive statistics were used to categorize the faculty and student participants. Additionally, the Mann-Whitney *U* test, a nonparametric statistical tool, was conducted to determine if a significant difference existed between the faculty and students, and the Diffusion of Innovation factors (relative advantage, compatibility, complexity, trialability, and observability) that impact their rate of adoption. Finally, thematic coding was utilized to identify emerging themes from the open-ended questions and focus group results, regarding the benefits and challenges of using Facebook for educational purposes.

CHAPTER IV

RESULTS

Introduction to Results

The purpose of this study was to explore faculty and students' current adoption of Social SNSs and their perceptions of uses as resources to enhance teaching and learning, as well as advantages and disadvantages of using SNSs for educational purposes. The research questions that guided this study were: Are faculty and students adopting SNSs at comparable rates, either for personal or educational uses? Do faculty and student perceptions of innovation attributes (i.e., relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003) help explain their willingness to use SNSs for educational purposes? Do faculty and students perceive similar advantages of using SNS for educational purposes? Do faculty and students perceive similar disadvantages of using SNS for educational purposes? The adoption of SNS in education will be examined through the lens of diffusion of innovation theory (Rogers, 2003).

Summary of Methods

The population for this study was the undergraduate students and faculty of the School of Education in one small, southern university during the 2013-2014 academic year. The study was carried out using an explanatory sequential mixed-methods design (Creswell & Plano-Clark, 2007). Survey data were collected from 49 students and 11 faculty members, a focus group was held with 12 students, and separate interviews were conducted with four faculty members to

collect qualitative data. The overall data collection represented a response rate of approximately 1% for students and 32.6% for faculty. Quantitative data were analyzed using Statistical Package for the Social Sciences (SPSS) software, and qualitative data were analyzed using the NVivo program.

Results of Preliminary Analyses

A Cronbach's alpha was calculated to determine the internal consistency and reliability of the 20 Likert-scale items for which respondents were asked to report a level of agreement or disagreement with topical statements. The alpha value of 0.84 indicates strong internal consistency among the 20 items. This correlation coefficient falls within the range reported as "acceptable" for social sciences research, i.e., between 0.70 and 0.95 (Tavakol & Dennick, 2011).

Demographic data that included age, gender, and classification were computed on the 11 faculty and 49 student respondents. Tables 1 and 2 summarize the demographics of both the faculty and student respondents. The majority of respondents in each group tended to be female. Nearly all students were of typical ages of undergraduates (i.e., under 30), and faculty ages tended to be over the age of 50.

Table 1

Respondents by Gender

Gender	Students		Faculty	
	<i>n</i>	%	<i>n</i>	%
Male	6	12.5	4	36.4
Female	43	87.5	7	63.6
Total	49	100.0	11	100.0

Table 2

Respondents by Age

Age	Students		Faculty	
	<i>n</i>	%	<i>n</i>	%
18-20	21	42.9	0	0.0
21-30	22	44.9	0	0.0
31-40	1	2.0	1	9.1
41-50	4	8.2	2	18.1
51-60	1	2.0	4	36.4
60 or above	0	0.0	4	36.4
Total	49	100.0	11	100.0

Results for Research Question 1

The first research question asked, “Is there a significant difference between faculty and students’ self-reported rates of adoption of Facebook for personal and educational use?” The Pearson Chi square test was conducted in order to determine whether observed and projected adoption rates differed between these groups (Witte & Witte, 2009). When asked if Facebook or another SNS was being used for personal, non-educational purposes, the results were significant, $\chi^2(1, N=49) = 28.92, p = .00$, which indicated that faculty and students’ current use of SNS such as Facebook for personal, non-educational purposes was significantly different. Most student respondents (98%) indicated that they use Facebook or another SNS for personal, non-educational purposes, while only 36% of faculty respondents indicated use of SNSs for personal purposes.

In response to the question asking their current use of Facebook or another SNS for educational purposes, the calculated Chi square p-value was greater than 0.05 ($p = .63$). Thus, there was no significant difference in faculty and students’ use of Facebook or another SNS for educational purposes. While 18% of the faculty respondents indicated current use of Facebook or another SNS for educational purposes, 25% of the student respondents indicated current use of Facebook or another SNS for educational purposes.

When respondents were asked about their willingness to expand their educational uses of SNSs in college courses, the results were also non-significant, $\chi^2(1, N=49) = 1.37, p = .24$, indicating that there was no significant difference in faculty and students’ willingness to use SNSs in college courses. While five (46%) of the faculty respondents expressed a willingness to expand their use of SNSs for educational purposes, 31 (65%) of the student respondents were open to using SNSs for educational purposes.

Results for Research Question 2

The second research question asked, “Do faculty and student perceptions of innovation attributes (i.e., relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003) help explain their willingness to use SNSs for educational purposes?” Rogers’ (2003) diffusion of innovation theory on the rate of adoption of new ideas and methods says that perceptions of innovation attributes can be used to help explain the rates at which they are adopted. Though the online survey included 20 Likert-scale items, these items measured five underlying innovation attributes, four items addressing each of the five attributes. The Mann-Whitney U was used to determine if perceptions of adopters and non-adopters were significantly different on each attribute. Similar responses for a given attribute by those who answered “yes” and no” in response to a question about their willingness to expand SNS use would indicate that the attribute is not associated with their adoption/expansion decision. Tables 3 and 4 provide a summary of the Mann-Whitney U results.

Table 3

Summary Mann-Whitney U Results for Faculty

	Mean Ranks		Z	Asymp. Sig.
	Adopters	Non-Adopters		
Relative Advantage	8.30	4.08	-2.108	.035*
Compatibility	4.10	7.58	-1.759	.079
Complexity	6.10	5.92	-.092	.927
Trialability	8.50	3.92	-2.293	.022*
Observability	6.00	6.00	.000	1.000

Note: * Significant at $p \leq .05$

Table 4

Summary Mann-Whitney U Results for Students

	Mean Ranks		Z	Asymp. Sig.
	Adopters	Non-Adopters		
Relative Advantage	31.48	13.83	-4.209	.000*
Compatibility	17.81	37.39	-4.649	.000*
Complexity	29.35	17.50	-2.836	.005*
Trialability	29.32	17.56	-2.813	.005*
Observability	27.69	20.36	-1.747	.081

Note: * Significant at $p \leq .01$

The first four items were used to measure relative advantage, which is the degree to which an innovation is perceived by its adopters and potential adopters as better than previous methods (Rogers, 2003). For faculty, the Mann-Whitney U findings, ($z = -2.109$; $p = .035$), indicated that there was a significant difference between faculty adopters' and non-adopters' perceptions of relative advantage of using SNSs for educational purposes; mean ranks were 8.30 and 4.08, respectively. Likewise, for students, $z = -4.209$; $p = .00$, there was a significant difference in student adopters' and non-adopters' perception of relative advantage of using SNSs for educational purposes; mean ranks were 31.48 and 13.83, respectively.

The second set of four questions was used to measure compatibility, which refers to the perception that an innovation is deemed consistent with potential adopters' "existing values, past experiences, and needs" (Rogers, 2003, p. 240). For faculty, $z = -1.769$; $p = .079$, there was no

significant difference in faculty adopters' and non-adopters' perception of compatibility of SNS uses for educational purposes. Unlike the results for faculty, the results for students, $z = -4.649$; $p = .00$, indicated there was a significant difference in student adopters' and non-adopters' perceptions of compatibility relative to the use of SNSs for educational purposes; mean ranks were 17.81 and 37.39, respectively.

The third set of four questions was used to measure complexity. Complexity refers to the perception of an innovation being difficult to use or understand (Rogers, 2003). For faculty, the Mann-Whitney U results ($z = .092$, $p = .927$) showed no significant difference in adopters' and non-adopters' perception of complexity of using SNSs for educational purposes. Unlike the results for faculty, there was a significant difference in student adopters' and non-adopters' perceptions of complexity of using SNSs for educational purposes, $z = -2.836$, $p = .005$, mean ranks were 29.35 and 17.50, respectively.

The fourth set of four questions was used to measure trialability, which refers to the degree to which people have experimented with the innovation or used it on a trial basis prior to adoption (Rogers, 2003). For faculty, the findings ($z = -2.293$, $p = .022$) indicated a significant difference between faculty adopters' and non-adopters' trialability with SNSs for educational purposes; mean ranks were 8.50 and 3.92, respectively. Similarly, the results for students, $z = -2.813$, $p = .005$, indicated a significant difference between adopters' and non-adopters' trialability with SNSs for educational purposes; mean ranks were 29.32 and 17.56, respectively.

The final four questions were used to measure observability, which refers to the degree to which potential adopters are able to see others using an innovation before they have to make a decision on adopting it (Rogers, 2003). For faculty, the Mann-Whitney U findings, ($z = .000$; $p = 1.00$), indicate that there was no significant difference in faculty adopters' and non-adopters'

perception of observability of others using SNSs for educational purposes. Likewise, for students, $z = -1.747$; $p = .081$, there was no significant difference in student adopters' and non-adopters' perception of observability of others using SNSs for educational purposes.

In summary, faculty adopters and non-adopters did not perceive compatibility, complexity, and observability differently relative to the notion of expanding the use of SNSs for educational purposes. However, they did perceive relative advantage and trialability differently. Similar to the results for faculty, student adopters and non-adopters did not perceive the attribute of observability differently relative to the notion of expanding the use of SNSs for educational purposes, but student adopters and non-adopters did perceive the attributes of relative advantage, compatibility, complexity, and trialability differently.

Results for Research Questions 3 and 4

To address Research Questions 3 and 4, data were gathered from three sources: open-ended survey items, a student focus group, and four faculty interviews. Open-ended survey questions provided data to address the central issue of whether or not faculty and students viewed SNS advantages and disadvantages the same way. The focus group questions for students and the interview questions for faculty provided additional data to understand and help explain the survey responses. Questions in these supplementary data collections focused on faculty and students' perceptions of the advantages and disadvantages of current and potential use of SNSs. To analyze the research questions, all responses were reviewed initially to discern trends in the data. Following this initial reading, NVivo coding was used to begin identifying major themes within each item. NVivo coding is a process in which the respondents' words are extracted to allow organization and analysis of identified themes (QSR International, 2014).

Results for Research Question 3: Trends in Perceived Advantages

The responses regarding benefits of SNSs for education revealed two general themes in both groups: individual communications and group discussions. While both cited benefits to support group discussions, students tended to have different perspectives on the benefits of individual communications than did faculty. A comparison of these perceptions is given here by first identifying student perceptions of communications benefits, followed by a description of faculty perceptions. Finally, the benefits both groups gave on support for group discussions are reported.

Student perceptions of individual communication advantages

Students seemed to perceive the communications benefits primarily in terms of ease of contacting and collaborating with each other. For example, student comments reflected agreement that using Facebook for educational purposes allows them to communicate with their classmates and peers about projects, papers, and homework, including asking questions and/or planning group work. One student said, “I believe the familiarity with Social Networks would lend itself to an easy transition for collaborating on coursework through these sites.”

The reason that many students gave for this preference was ease of use. Many student respondents believe that students are motivated to use SNSs for educational purposes because it is an “easy method of communication.” Comments tended to reflect the belief that an SNS such as Facebook is “easy to access and navigate.” Respondents believe that students are motivated to use SNSs for educational purposes because they are already familiar with that format. As a matter fact, it was stated that “they [students] already know it like the back of their hand, therefore it is much easier to use than other methods.” Several students said that they have

already been using Facebook for courses or assignments, even though communication through this medium was neither encouraged nor required. Specifically, one student mentioned that her current group for an online class is required to submit a group assignment weekly, which requires the group to communicate and collaborate online and face-to-face to compile the work for final submission. However, instead of using Blackboard, they use Facebook.

The idea of substituting Facebook or a similar public social medium for Blackboard was frequently brought up. One student commented, “We have a Facebook group, and it is really helpful to communicate quickly because it is something we use daily, and most of us have access right on our phone. It is more convenient than Blackboard and school email because we check those less frequently and can’t collaborate openly as a group.” Other students concurred that using SNSs is more convenient than Blackboard or email because of quicker access. Several students agreed that the use of SNSs in education and its easy access might get more students involved in their school work, particularly those students who would not normally complete their work. Finally, one student observed that, “The growing familiarity with social networks lends itself to an easy transition for collaborating on coursework through these sites.” Some students suggested that Blackboard be modified to give students an experience similar to Facebook. For example, one student said to add “more Facebook-like features like open collaboration, newsfeed, and visual communication that is open.”

While most students focused on communicating with each other, they also felt that SNSs were a good place for instructors to “push” course information. When students were asked about specific course content that instructors should place on SNSs, they said that course syllabi should be placed on SNSs such as Facebook. Student respondents also agreed that instructors should place reminders and announcements on Facebook and said that it would be beneficial for

instructors to post reminders of due dates for assignments. One student remarked, “I have heard many of my classmates say that they missed, forgot, or couldn’t find several of the items listed on Blackboard, but a lot of my classmates are on Facebook, Twitter, Instagram, Tumblr, and many other SNSs quite often.” Finally, it was also suggested that instructors could include project guidelines, essay rubrics, and links for additional resources.

Faculty perceptions of individual communication advantages

Though one faculty member said he thought an SNS “is a superior way to make sure one is communicating with everyone, faculty and students alike,” it was clear that more faculty had a different focus on the purpose of these communications than did students. Faculty members’ focus was on communicating as a way to deliver information, rather than to interact by exchanging messages with students. In other words, they did not see the SNS as a substitute for meeting with a student or having a phone conversation. For example, one faculty member said it is a way to make “them more informed about educational resources.” Another said, she “would use SNSs to post announcements and assignments.” Yet another faculty member said he believed that students would “like their instructors if doing so provided a way for them to receive course updates and announcements.” It was clear that some faculty members realized that social networking sites could be a way for students to share information with others, noting that, “Using sites such as Facebook might be the best way for my students [pre-service teachers] to communicate with parents and to promote school newsletters.”

When faculty members were asked about specific course content that instructors should place on SNSs, responses were either “nothing” or information of general use in a course. One respondent said we should all “wait until there is conclusive research-based evidence that best

supports the most healthy learning outcomes.” However, other faculty respondents agreed that general information should be placed on Facebook, such as the course syllabi, schedules, assignment explanations, and examples of assignments.

Like students, faculty also seemed to acknowledge the comparative benefits of social media as compared with Blackboard. For example, one faculty member acknowledged that because students are currently using SNSs, especially on their phones, it would be easier and more convenient for them to access these sites rather than accessing other campus-sponsored sites or portals. Another said that students are “a lot more apt to go to Facebook than campus email or Blackboard.”

Faculty and student perceptions of group discussion advantages

Both faculty and student responses tended to indicate the belief that Facebook would be great as a forum for online discussions. For example, one faculty member said she would like to use SNSs for group work for the purpose of keeping the groups connected. “All too often, I have met with students who don’t know the names of any of their classmates. Perhaps requiring the use of group work via SNSs would help students become better acquainted.” One faculty member noted a benefit of online discussions was that “students have an opportunity to see what other students post.” Many students tended to provide lists of uses for a SNS, and discussions and collaboration were frequently mentioned, though they offered no elaborative comments. One student noted a current social media use, though not with Facebook. He said his instructor also required the use of Twitter to live tweet while watching a film, and that required experience with Twitter led to more uses of it. “We ended up using Twitter the rest of the semester to communicate for projects and help.”

Results for Research Question 4: Trends in Perceived Disadvantages

Although responses to Research Question 2 indicated that 65% of students and 46% faculty members were open to expanding their use of SNSs in the future, both faculty and student respondents reflected perceptions of disadvantages when SNSs are used in education. Both faculty and student comments tended to focus on privacy and confidentiality issues. However, students identified an additional disadvantage: distractions. Both these trends are reported here with supporting examples.

Privacy and confidentiality: Shared concerns

Though the perception was often expressed that social media offer too public a forum to be used for educational purposes, both students and faculty recognized privacy as a problem. Many students indicated that SNSs are not secure enough for educational purposes and are much harder to monitor than Blackboard. This is because social media tend to spread information to other sites, while Blackboard keeps everything in one place. A faculty member said, “I won’t use it for my classes because it’s too public to use for educational purposes.”

There was also great concern about instructors and students having access to one another’s personal information and its impact on instructor/student relationships and grades. One student said, “I do not want my personal information [that I post] to impact the grade I receive in a course.” Accordingly, student respondents were concerned about being judged by instructors and classmates based on their comments.

Another reason given for refraining from SNS use in courses was that it is not “professional.” That is SNSs such as Facebook have a designated social purpose and, therefore, tend to mix social and educational boundaries. One student said, “There are things on my

Facebook page that I would not want my professors or classmates to see. It would lower the level of professionalism.” Another student said, “Professors having access to my personal information and students having access to professors’ personal information is a lack of appropriate professional boundaries.”

Faculty and students also tended to express the opinion that confidentiality is a major barrier to using SNSs such as Facebook for educational purposes. For example, one faculty member said,

My concern about confidentiality is why I don’t use them for personal or professional purposes. In working with students who will work with children, especially children with special needs, confidentiality is important. So having these networks and social mediums is not good professionally and I wouldn’t want to take that chance.

A faculty member noted that “due to FERPA (Family Educational Rights and Privacy Acts), it is not wise to require students to participate” in any open discussion forum. Finally, some students and faculty expressed the belief that required educational use of a social network is a clear invasion of their right to privacy. One student said that, unlike Blackboard, a social network is not a secure enough location for students to express candid opinions.

Distractions: Student concerns

Students identified one disadvantage not cited by faculty: that using SNSs for educational purposes can be distracting. One student said, “I have not used Facebook for educational purposes, but I think it would be too distracting for me. I like having only classes on Blackboard and being able to shut off all social media so that I can study.” Some students noted that using SNSs might cause students to wander away from their course content to begin navigating it for social purposes, as it was originally intended.

Summary of Results

Survey results indicated that while there was a significant difference between student and faculty members' personal, noneducational use of SNSs, there was no significant difference between faculty members' and students' use of Facebook or another SNS for educational purposes; most (an average of 79% across both groups) currently do not use Facebook or another SNS for the latter purposes. There was also no significant difference between faculty members' and students' willingness to expand their educational uses of SNSs in college courses. Nearly half (46%) of faculty respondents and 65% of student respondents were open to using SNSs for future educational purposes. When perceptions of adopter and nonadopter categories of faculty and students were compared as to the relative advantages of using SNS, there was a significant difference between these categories in both groups. When considering the attributes of compatibility and complexity, there were no significant differences between faculty adopter and nonadopter groups, but there were significant differences in student adopter and nonadopter groups. Both faculty and student adopter/nonadopters groups differed on perceptions of trialability, but neither differed on perceptions of observability.

Trends in the comments on advantages of educational uses of SNSs that were the same for students and faculty also included a focus on individual communications. However, faculty tended to see this benefit as a way to deliver information to students, while students tended to see it as a way to communicate and collaborate with one another. Both tended to see SNSs as a way to hold group discussions. Trends in comments on disadvantages of using SNSs in education reflected privacy and confidentiality concerns. Additionally, students saw SNSs as offering distractions that had the potential to draw students away from coursework.

CHAPTER V

DISCUSSION

The purpose of the study was to compare faculty and student perceptions of the attributes, advantages, and disadvantages of using SNSs such as Facebook for educational purposes. The research questions that guided this study were: (a) are faculty and students adopting SNSs at comparable rates, either for personal or educational uses; (b) do faculty and student perceptions of innovation attributes (i.e., relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003)) help explain their willingness to use SNSs for educational purposes; (c) do faculty and students perceive similar advantages of using SNS for educational purposes; and (d) do faculty and students perceive similar disadvantages of using SNS for educational purposes? The quantitative and qualitative data were collected with a survey, and follow-up qualitative data were collected via a focus group and interviews in order to better understand and interpret the meaning of survey results.

Results indicated that faculty and students differed in their current use of SNS for personal purposes. Most faculty members (56%) did not use an SNS, while 75% of students did. However, they did not differ as to their current use of SNSs for educational purposes. While both indicated they were not currently using these systems for this purpose, 46% of faculty and 65% of students were willing to expand these uses into the future. When comparing perceptions of faculty and student adopter and nonadopter groups on SNS attributes, faculty adopter and nonadopter groups were not significantly different on perceptions of compatibility, complexity,

and observability, but were significantly different on perceptions of relative advantage and trialability. Student adopter and nonadopter groups were not significantly different on perceptions of trialability, but they were different on perceptions of relative advantage, compatibility, complexity, and observability. Faculty and students perceived individual communications and potential for group discussions as advantages, and perceived privacy and confidentiality issues as disadvantages.

Interpretation of Results

Results are interpreted here by research question. Though limited by small sample size, study findings offer insights into faculty and students' perceptions of SNS benefits and disadvantages and what they might mean for future work in this area.

Interpretation of Research Question 1 Results

Results indicated that while few students (25%) and faculty members (18%) were using SNSs for educational purposes to any extent, most students (65%) and nearly half the faculty (46%) were willing to consider such uses in the future. As hypothesized by Rogers (2003), the perceptions of SNSs attributes by those who expressed support for this idea (i.e., adopters) could yield insights into why they are open to this innovation and why nonadopters are not. It was especially noteworthy that faculty members did not see SNSs as being valuable for personal use, yet less than half (46%) appeared able to see that there may be benefits (i.e., the relative advantage) and impact that these uses might have on students and how SNSs could support their roles as instructors. Faculty adopters also appeared to have more field experience with such uses (i.e., more trialability) and, therefore, had more ability to consider the benefits. Student adopters,

on the other hand, saw the benefits (i.e., the relative advantage), and also perceived the use of SNSs as compatible with their role as students and not too complex for them to access and navigate. Comments reflected that students also had some experience, though limited, with using SNSs to communicate with each other about educational topics. Thus, though the use was not a required one, they had achieved a degree of observability of how such systems might support their own work. If Rogers' (2003) theory on innovation attributes had held for all results, student adopters also should have had higher trialability scores than nonadopters. But in the case of this innovation, trialability and observability may have become conflated in their minds.

Interpretation of Research Question 2 Results

Results indicated that faculty members who were willing to consider using SNSs in the future (i.e. adopters) had more grasp of the benefits (i.e., relative advantage) and had higher perceived trialability than nonadopters. As faculty may read professional journals as part of their ongoing self-development, their perceptions of benefits may have been shaped by research results or opinion articles they could have read on this topic. Additionally, faculty member's perceptions of the benefits of using SNSs in education may have also been shaped by the notion that they knew and understood that students were already using these media to communicate daily, which is consistent with the views of other researchers (Backer, 2010; Cheung et al., 2011; Ophus & Abbitt, 2009; Roblyer et al., 2010; Schroeder & Greenbowe, 2009). Faculty adopters also may have had more opportunities than they reported to try out these systems or may have heard students reporting these uses.

Students who expressed willingness to use SNSs (i.e. adopters), on the other hand, had a higher perceived relative advantage, compatibility, complexity, and trialability than nonadopters.

Students who had more understanding of the benefits (i.e., relative advantage) of using SNSs for educational purposes may have been influenced by their current, non-required use of these media to discuss coursework, assignments, etc. The fact that more than 90% of college students had a Facebook account (Haywoode, 2010; Loveland, 2011) and 98% of the student respondents indicated their use of SNSs for personal, non-educational purposes may have shaped their perceptions of compatibility, complexity, and trialability. Again, students were using SNSs for personal purposes, which could perhaps explain their perception that using SNSs such as Facebook in education was consistent with their existing values and past experiences (i.e., compatibility).

Rogers (2003) asserted that the complexity of an innovation affects its adoption. Therefore, student adopters' current, personal use of SNSs may have influenced their perception that the use of SNSs in education is not quite as "difficult to understand and use" (p. 257). Similarly, student adopters' higher perception of trialability may have also been shaped by their current use of social media. According to Rogers (2003), new innovations that can be experimented with on a trial basis are likely to be adopted sooner than innovations with which there is no trial use or experiment. Thus, students' personal use of SNSs could be deemed as the trial basis they needed before deciding that this innovation could be useful if integrated into their educational experiences.

Interpretation of Research Question 3 Results

Though faculty and students shared many perceptions of benefits and advantages, there were some notable differences in the ways they viewed these positive aspects. While faculty members were most likely to see SNSs as an additional way to deliver information, students saw them as a way to interact with one another about coursework. This may have been the result of differences between how students and faculty view their roles. For example, faculty may see their primary role as deliverers of information and, thus, may constantly be seeking ways they could do this more effectively and/or more efficiently. Also, their lack of experience with using technological tools in place of face-to-face interaction may have been more limited than that for students.

Similar to other research findings (Bosch, 2009; Ophus & Abbitt, 2009) on students' use of SNSs in for educational purposes, students are accustomed to getting additional information and understanding from peers and are not limited to information and assistance they receive from faculty. For example, they have always formed study groups and had phone conversations about coursework. The fact that they use the most modern tools (i.e., social media) to accomplish these tasks is an updated reflection of this "natural" tendency to use multiple resources.

Faculty and students also agreed that SNSs such as Facebook would be a good medium for online discussions. This may be the result of both groups' awareness that students are already using SNSs to discuss course material and seek answers from peers. This finding is also aligned with other findings (Madge et al., 2009; Malhotra, 2013) that students have already informally used Facebook to create groups and organized group meetings to discuss coursework and projects.

Interpretation of Research Question 4 Results

Both students and faculty feared loss of privacy and confidentiality, but perceptions of faculty members may focus primarily on concern about control and monitoring interactions that were not in a university-secured resource such as a content management system like Blackboard. Students, on the other hand, seemed more concerned with expressing opinions that could affect their grades and the faculty members' perceptions of them. Though these concerns of privacy and confidentiality are shared with other research findings in both K-12 and higher education (Bauerlein, 2010; Karlin, 2007; Ophus & Abbitt, 2009; Santovec, 2006; Seaman & Tinti-Kane, 2013), they may be the result of a lack of knowledge and understanding of the privacy settings and ways to utilize the privacy settings to mitigate these issues. For example, Facebook groups can be created with a "secret" privacy setting. With this privacy setting, only those who have been added or invited can join the group. Using this privacy setting allows only current members and/or former members to see (a) the group's name and description, (b) members in the group, (c) group tags, and (d) what members post in the group (Facebook, 2014e). Additionally, being a member of a secret Facebook group does not grant members access to each other's personal profiles. Thus, creating an academically focused Facebook group with a secret privacy setting could mitigate faculty concerns of controlling and monitoring the interactions of students while mitigating students' concerns of being unfairly judged by faculty based on content in personal profile.

Students identified an additional disadvantage not cited by faculty: that using SNSs for educational purposes can be distracting. This disadvantage may be the result of students' more frequent use of SNSs for social, non-educational purposes, which is consistent with findings of Ophus and Abbitt (2009) that the most frequent use of Facebook communication is with friends.

Thus, when accessing Facebook to discuss coursework or participate in group discussions, students may find themselves clicking to the News Feed to read posts made by friends.

Study Delimitations, Limitations, and Assumptions

The study focus was delimited to higher education, specifically this southern, metropolitan university. The student and faculty samples were from a metropolitan public institution in the southern part of the United States. Thus, findings may be generalizable only to other such institutions. A further limitation of this study is that the instruments designed to collect data were designed by the researcher and are not standardized, pre-validated instruments. However, measures were taken to establish both content validity and internal consistency, which was an indication of reliability (Tavakol & Dennick, 2011). In addition, data were drawn from faculty and students who volunteered to participate in the study and may not represent the populations. It is assumed that all survey participants gave accurate and honest responses, since these were given in an anonymous forum. However, focus groups and interview responses were not anonymous, and accuracy may have been influenced by respondents' desire to appear more or less likely to agree with questions posed by the interviewer.

The low return rate on the survey raises the real possibility of response bias, which is when responses “do not accurately reflect the views of the sample and the population” (Creswell, 2012, p. 391). In the case of the study reported here, respondents may have differed from nonrespondents in ways that could alter the results. For example, nonrespondents may have been less likely to express the desire to use SNSs in the future and may consequently have had different perceptions of SNS attributes than those reported for this sample. Another possible explanation for the low response rate could be due to the title of the survey; Student Social

Networking Survey or Faculty Social Networking Survey. The students or faculty who were not users of SNSs may have opted not to participate, perceiving the topic was not applicable to them.

To obtain an indication of whether respondents differed in characteristics that could reflect results, the student sample was compared to the lower and upper division status with the general university undergraduate population. This analysis showed that the sample underrepresented the upper division student population by about 25%. The low sample size and tendency to over-rely on responses from lower-division students means that results should be viewed as tentative pending further studies in this area.

The low response rate of the survey data also impacted the qualitative data, particularly the open-ended items used to ascertain the perceptions of benefits and challenges of using SNSs to support education. According to Marshall, Cardon, Poddar, and Fontenot (2013), “most qualitative methodologists openly recognize the lack of standards for sample size” (p. 11). However, it is evident that the low return on the open-ended items put into question how well respondents represented the population. Attempts were made to address this lack of data with the addition of a student focus group and faculty interviews.

Implications of Results for Practice

Results offer guidance primarily for universities and other higher education institutions that wish to take advantage of the perceived benefits of using SNSs in education while addressing and mitigating potential risk they present. The following are implications that are suggested for the implementation of SNS use in education.

Policies That Address SNS Use

As both faculty and students revealed that privacy and confidentiality represent a disadvantage or barrier to using SNSs in education, universities might modify their Acceptable Use Policies (AUP) to include statements similar to those for K-12 that stipulate how SNSs may be used as a supplemental educational tool. The AUP document is usually posted at each institution's website and given to all faculty and students annually. Universities might consider AUP reviews in the context of an annual online training, similar to the annual online sexual harassment training that many institutions provide.

Faculty Training and Experience

To increase awareness of benefits and provide trialability, universities and other higher education institutions that are interested in incorporating SNS into the educational environment, should provide ongoing training for using SNSs as they often do for Microsoft Office products and other technological innovations implemented to enhance learning, teaching, and advising as well as to streamline processes (e.g., Blackboard, DegreeWorks, Desire 2 Learn, Banner). During the training, faculty could learn how to create a Facebook group with the secret privacy setting. Faculty attendees should have access to sample syllabi and other course related documents to download. Additionally, faculty attendees could participate in group discussions and activities such as posting course-related questions.

Promote Use of Educational SNSs

Though nearly half (46%) of faculty and 65% of students expressed openness to using SNSs such as Facebook in education, privacy concerns were common to both. Thus, in an effort

to offer a similar experience, faculty members could use a platform such as Edmodo or Google+. Edmodo (2014) is a social learning network that was designed to “bridge the gap between how students live their lives and how they learn in school” and to “bring education into a 21 century environment” (para. 1). Though Edmodo is a free, web-based platform for K-12 education, higher education faculty can use this platform as it provides a secure and easy way for faculty and students to communicate, share course content, and participate in group discussions. Similar to SNSs such as Facebook, Edmodo can be accessed in the classroom and on any mobile device. Thus, using this social learning network addresses both risks and privacy better because they are strictly for educational use.

Google+, Google’s social networking site, is another option. It was launched in June 2011 (Google+, 2014c). Similar to Facebook, Google+ allows its users to connect with friends, share photos, video chat, and create groups. According to Erkollar and Oberer (2013), Google+ offers a privacy-centered approach for faculty who are interested in using social media for educational purposes while mitigating the concerns of crossing professional boundaries. Faculty can use features such as (a) circles which allow users to share and receive updates, (b) hangouts which provide opportunities for faculty and students to video chat, and (c) communities which allow faculty to create private communities for students to engage in content-related conversations. In fact, many national international universities have replaced their university email system with Google Apps Education which provides their students and faculty with Google mail (i.e., gmail) accounts with full access to Google apps (Google+, 2014b). Universities such as Vanderbilt University, Brown University, and the Linköping University (Sweden) have found that using Google has changed the way students engage in their college

experience (Google+, 2014a). Google+ can be accessed by any mobile device and in the classroom, similar to other SNSs.

Several universities use Blackboard or another content management system for online courses or as a supplemental tool for face-to-face classroom experiences. Edmodo and Google+ need not replace such systems, but they can be used by faculty who would prefer a social learning experience for their classes, particularly those who have perceived some benefits to teaching and learning.

Implications of Results for Research

More studies on this topic area are needed. Though faculty and students offered insight into perceived advantages and disadvantages of using SNSs such as Facebook in education, more empirical research should be conducted to get better evidence of potential benefits to teaching and learning.

Replications with Modifications

This research study should be replicated at additional sites to compare results reported here with those from other institutions to see if they hold true elsewhere. However, the following measures could be taken to increase the survey response rate: (a) offer incentives for participants; (b) use the university's Facebook page to inform students of the online survey and to send reminders, including the link to the survey; (c) for faculty participants, solicit assistance from deans and department chairs; (d) for student participants, solicit assistance from faculty; (e) offer faculty an option to complete a paper survey by placing the survey in their mailbox; and (f) offer students an option to complete a paper survey by setting up a table in the areas on campus that

receive the most student traffic. Incentives such as a raffle give-away might also be considered to increase response rate.

Studies of Current SNS Uses

In other future studies, qualitative data should be collected with current users of SNSs to understand better how SNSs are used in education and to obtain better evidence of benefits and disadvantages. Additionally, a qualitative study could provide insight into how to increase benefits and address negatives. Using a face-to-face interview approach with current SNSs users could provide more in-depth insights into why they use SNSs for educational purposes and the advantages and disadvantages from an educational user's perspective. Participants should be asked to offer insight into how to maximize the advantages and diminish the disadvantages.

Experimental Studies of SNS Impact

In keeping with the recommendation by Schroeder and Greenbowe (2009) that future research is needed to understand better the use of Facebook as a valuable educational tool, experimental research should be conducted to understand if the use of SNSs in education has an impact on various educational outcomes such as achievement, student engagement, and course satisfaction. Similar to previous research studies (Backer, 2010; Bosch, 2009; Ophus & Abbitt, 2009; Schroeder & Greenbowe, 2009), studies should compare desired educational outcomes with students in a traditional classroom setting that does not use social media and students in a course using a SNS such as Facebook or Twitter as a supplemental resource. Additionally, the chosen courses should be diverse in that they include various disciplines (i.e., social and behavioral sciences, natural sciences, and humanities) to observe potential differences in results

across discipline. The participating faculty should have had experience using the selected the SNS or adequate training as to mitigate implementation issues and concerns.

Conclusions

A significant part of understanding the rate of adoption for technological innovations is gauging perceived advantages and disadvantages of the innovation. As the popularity of SNSs use has increased among college students and universities, it is important to understand if there is a perceived educational value to using SNSs for educational purposes (i.e., classroom experience, improve communication between faculty and students). The overall conclusion that can be drawn from this study is that while some faculty members (46%) expressed willingness to using SNSs, such as Facebook, for educational purposes and appeared to understand the potential benefits of doing so, students are more willing than faculty to consider using these media for educational purposes. These results are consistent with previous studies (McCole et al., 2014; Roblyer et al., 2010; Seaman & Tinti-Kane, 2013).

Faculty and students are apprehensive about official uses of these social networks in education due to foreseen and yet-to-be-identified privacy and confidentiality concerns. This expressed willingness, on the part of some faculty and many students, is an indication to colleges and universities that promoting the use of SNSs in the classroom may be a viable option, if training is offered for faculty to learn how to use SNSs effectively and efficiently in educational contexts. The focus should be on creative strategies to implement the use of SNSs without creating privacy and confidentiality problems in the process.

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APPENDIX A
IRB APPROVAL LETTER

Institutional Review Board

Dept. 4915
615 McCallie Avenue
Chattanooga, TN 37403-2598
Phone: (423) 425-5867
Fax: (423) 425-4052
instrb@utc.edu
<http://www.utc.edu/irb>

MEMORANDUM

TO: JaNethia "Michelle" Caldwell
Dr. Hinsdale Bernard

IRB #14-020

FROM: Lindsay Pardue, Director of Research Integrity
Dr. Bart Weathington, IRB Committee Chair

DATE: February 7, 2014

SUBJECT: IRB #14-020: Going Where Students Are: Comparing Faculty and Student Uses and Perceptions of Social Networking in Higher Education

The IRB Committee Chair has reviewed and approved your application and assigned you the IRB number listed above. You must include the following approval statement on research materials seen by participants and used in research reports:

The Institutional Review Board of the University of Tennessee at Chattanooga (FWA00004149) has approved this research project #14-020.

Please remember that you must complete a Certification for Changes, Annual Review, or Project Termination/Completion Form when the project is completed or provide an annual report if the project takes over one year to complete. The IRB Committee will make every effort to remind you prior to your anniversary date; however, it is your responsibility to ensure that this additional step is satisfied.

Please remember to contact the IRB Committee immediately and submit a new project proposal for review if significant changes occur in your research design or in any instruments used in conducting the study. You should also contact the IRB Committee immediately if you encounter any adverse effects during your project that pose a risk to your subjects.

For any additional information, please consult our web page <http://www.utc.edu/irb> or email instrb@utc.edu

Best wishes for a successful research project.

APPENDIX B
STUDENT SOCIAL NETWORKING SURVEY

APPENDIX B: STUDENT SOCIAL NETWORKING SURVEY

I am a doctoral student at The University of Tennessee at Chattanooga (UTC), under the direction of Dr. Hinsdale Bernard, conducting research for my dissertation on the integration of social networking in education. Below is a link to a 10-minute, online survey consisting of questions about your background and perceptions and experiences with the use of social networking sites (SNS) such as Facebook in higher education.

Your participation is voluntary, but your input is vital to my study. You have the right to withdraw from the study at any time. All responses will be anonymous. No one will know how you responded to the survey. Your completion of the survey will serve as your consent to participate. Participation in the survey implies that participants are 18 years of age or older.

This research study has been approved by The University of Tennessee at Chattanooga's Institutional Review Board. If you have any questions about your rights as a research subject, please contact the Institutional Review Board at 423-425-4443. If you have questions about the study, you can also contact me directly at janethia-mcdaniel@utc.edu.

Thank you for your time and consideration!

J. Michelle Caldwell, Doctoral Student
Learning and Leadership
The University of Tennessee at Chattanooga

Gender

- Male
- Female

Age

- 18 - 19
- 20 - 25
- 26 - 30
- 31 - 36
- 37 - 44
- 45 - 50
- 51 - 59
- 60 or above

Student Classification

- Freshmen
- Sophomore
- Junior
- Senior

What's your current major?

Use of a Social Networking Site

1. I currently use Facebook or another Social Networking Site for personal, non-educational uses (e.g., connecting with friends and family, researching company products).
 - Yes
 - No

2. I currently use Facebook or another Social Networking Site for educational uses (e.g., connecting with my instructor and other students, completing course assignments).
 - Yes
 - No

3. I would be willing to expand my educational uses of Social Networking Sites in college courses.
 - Yes
 - No

Relative Advantage

1. Social Networking Sites such as Facebook offer a faster, more convenient way for college faculty and students to communicate than other ways such as email.
 - Strongly Disagree
 - Disagree
 - Uncertain
 - Agree
 - Strongly Agree

2. Using Social Networking Sites such as Facebook can have a positive impact on my teaching/learning experience.
 - Strongly Disagree
 - Disagree
 - Uncertain
 - Agree
 - Strongly Agree

3. Students/instructors can learn more about each other using Social Networking Sites such as Facebook than from other, in-person methods.
 - Strongly Disagree
 - Disagree
 - Uncertain
 - Agree

- Strongly Agree
4. Facebook and other social media offer many benefits to teaching and learning.
- Strongly Disagree
 - Disagree
 - Uncertain
 - Agree
 - Strongly Agree

Compatibility

5. Using Social Networking Sites such as Facebook for instructional purposes is an invasion of my individual privacy.
- Strongly Disagree
 - Disagree
 - Uncertain
 - Agree
 - Strongly Agree
6. Social Networking Sites such as Facebook are for personal/social uses; they're not for education.
- Strongly Disagree
 - Disagree
 - Uncertain
 - Agree
 - Strongly Agree
7. Posting coursework on Social Networking Sites such as Facebook is too public a forum for educational purposes.
- Strongly Disagree
 - Disagree
 - Uncertain
 - Agree
 - Strongly Agree
8. Facebook and other such technologies are too impersonal; face-to-face communication is best for college courses.
- Strongly Disagree
 - Disagree
 - Uncertain
 - Agree
 - Strongly Agree

Complexity

9. Social Networking Sites such as Facebook are easier to use than other communication technologies such as email or Blackboard.

- Strongly Disagree
- Disagree
- Uncertain
- Agree
- Strongly Agree

10. I have no trouble figuring out how to use the features available on Social Networking Sites such as Facebook.

- Strongly Disagree
- Disagree
- Uncertain
- Agree
- Strongly Agree

11. When I run into a technical problem when using a Social Networking Sites such as Facebook, I can usually figure it out.

- Strongly Disagree
- Disagree
- Uncertain
- Agree
- Strongly Agree

12. Generally, technologies are difficult and complex for me to learn.

- Strongly Disagree
- Disagree
- Uncertain
- Agree
- Strongly Agree

Trialability

13. I currently have a personal account in a Social Networking Site (e. g., Facebook).

- Strongly Disagree
- Disagree
- Uncertain
- Agree
- Strongly Agree

14. I have used a Social Networking Site such as Facebook in at least one way to support my coursework.

- Strongly Disagree
- Disagree
- Uncertain
- Agree
- Strongly Agree

15. I am not willing to try using Facebook for educational purposes.

- Strongly Disagree
- Disagree
- Uncertain
- Agree
- Strongly Agree

16. I need more time to experiment with a Social Networking Site such as Facebook before I consider using it for educational purposes.

- Strongly Disagree
- Disagree
- Uncertain
- Agree
- Strongly Agree

Observability

17. I have personally seen at least one college course that is using Facebook or another Social Networking Site for support.

- Strongly Disagree
- Disagree
- Uncertain
- Agree
- Strongly Agree

18. I have read about some good ways of using Facebook or another Social Networking Site to support teaching/learning.

- Strongly Disagree
- Disagree
- Uncertain
- Agree
- Strongly Agree

19. I have talked with college faculty and/or students who are using Facebook or another Social Networking Site for educational purposes.

- Strongly Disagree
- Disagree
- Uncertain
- Agree
- Strongly Agree

20. I have spoken with at least one person whose opinion I respect regarding the use Facebook or another Social Networking Site for educational purposes.

- Strongly Disagree
- Disagree
- Uncertain

- Agree
- Strongly Agree

Additional Questions

1. What do you feel motivates students to use Social Networking Sites such as Facebook for educational purposes?
2. What course content should instructors place on a Social Networking Site such as Facebook?
3. What problems or obstacles do you encounter (or might encounter) using Social Networking Sites such as Facebook for educational purposes?

APPENDIX C
FACULTY SOCIAL NETWORKING SURVEY

APPENDIX C: FACULTY SOCIAL NETWORKING SURVEY

I am a doctoral student at The University of Tennessee at Chattanooga (UTC), under the direction of Dr. Hinsdale Bernard, conducting research for my dissertation on the integration of social networking in education. Below is a link to a 10-minute, online survey consisting of questions about your background and perceptions and experiences with the use of social networking sites (SNS) such as Facebook in education.

Your participation is voluntary, but your input is vital to my study. You have the right to withdraw from the study at any time. All responses will be anonymous. No one will know how you responded to the survey. Your completion of the survey will serve as your consent to participate. Participation in the survey implies that participants are 18 years of age or older.

This research study has been approved by The University of Tennessee at Chattanooga's Institutional Review Board. If you have any questions about your rights as a research subject, please contact the Institutional Review Board at 423-425-4443. If you have questions about the study, you can also contact me directly at janethia-mcdaniel@utc.edu.

Thank you for your time and consideration!

J. Michelle Caldwell, Doctoral Student
Learning and Leadership
The University of Tennessee at Chattanooga

Gender

- Male
- Female

Age

- 18 - 19
- 20 - 25
- 26 - 30
- 31 - 36
- 37 - 44
- 45 - 50
- 51 - 59
- 60 or above

Faculty Classification

- Adjunct faculty
- Instructor/Lecturer
- Assistant Professor
- Associate Professor
- Full Professor

In what discipline(s) do you teach?

1. I currently use Facebook or another Social Networking Site for personal, non-educational uses (e.g., connecting with friends and family, researching company products).
 - Yes
 - No

2. I currently use Facebook or another Social Networking Site for educational uses (e.g., connecting with other instructors and students, posting course assignments).
 - Yes
 - No

3. I would be willing to expand my educational uses of Social Networking Sites with more uses in college courses.
 - Yes
 - No

Relative Advantage

1. SNSs such as Facebook offer a faster, more convenient way for college faculty and students to communicate than other ways such as email.
 - Strongly Disagree
 - Disagree
 - Uncertain
 - Agree
 - Strongly Agree

2. Using Social Networking Sites such as Facebook can have a positive impact on my teaching/learning experience.
 - Strongly Disagree
 - Disagree
 - Uncertain
 - Agree
 - Strongly Agree

3. Students/instructors can learn more about each other using Social Networking Sites such as Facebook than from other, in-person methods.
 - Strongly Disagree
 - Disagree
 - Uncertain

- Agree
 - Strongly Agree
4. Facebook and other social media offer many benefits to teaching and learning.
- Strongly Disagree
 - Disagree
 - Uncertain
 - Agree
 - Strongly Agree

Compatibility

5. Using Social Networking Sites such as Facebook for instructional purposes is an invasion of my individual privacy.
- Strongly Disagree
 - Disagree
 - Uncertain
 - Agree
 - Strongly Agree
6. Social Networking Sites such as Facebook are for personal/social uses; they're not for education.
- Strongly Disagree
 - Disagree
 - Uncertain
 - Agree
 - Strongly Agree
7. Posting coursework on Social Networking Sites such as Facebook is too public a forum for educational purposes.
- Strongly Disagree
 - Disagree
 - Uncertain
 - Agree
 - Strongly Agree
8. Facebook and other social media are too impersonal; face-to-face communication is best for college courses.
- Strongly Disagree
 - Disagree
 - Uncertain
 - Agree
 - Strongly Agree

Complexity

9. Social Networking Sites such as Facebook are easier to use than other communication technologies such as email or Blackboard.
- Strongly Disagree
 - Disagree
 - Uncertain
 - Agree
 - Strongly Agree
10. I have no trouble figuring out how to use the features available on Social Networking Sites such as Facebook.
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 - Strongly Agree
11. When I run into a technical problem when using Social Networking Sites such as Facebook, I can usually figure it out.
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 - Strongly Agree
12. Generally, technologies are difficult and complex for me to learn.
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 - Disagree
 - Uncertain
 - Agree
 - Strongly Agree

Trialability

13. I currently have a personal account in a Social Networking Site (e. g., Facebook).
- Strongly Disagree
 - Disagree
 - Uncertain
 - Agree
 - Strongly Agree
14. I have used a Social Networking Site such as Facebook in at least one way to support my coursework.
- Strongly Disagree
 - Disagree
 - Uncertain

- Agree
- Strongly Agree

15. I am not willing to try using Facebook for educational purposes.

- Strongly Disagree
- Disagree
- Uncertain
- Agree
- Strongly Agree

16. I need more time to experiment with a Social Networking Sites such as Facebook before I consider using it for educational purposes.

- Strongly Disagree
- Disagree
- Uncertain
- Agree
- Strongly Agree

Observability

17. I have personally seen at least one college course that is using Facebook or another Social Networking Support for support.

- Strongly Disagree
- Disagree
- Uncertain
- Agree
- Strongly Agree

18. I have read about some good ways of using Facebook or another Social Networking Site to support teaching/learning.

- Strongly Disagree
- Disagree
- Uncertain
- Agree
- Strongly Agree

19. I have talked with college faculty and/or students who are using Facebook or another Social Networking Site for educational purposes.

- Strongly Disagree
- Disagree
- Uncertain
- Agree
- Strongly Agree

20. I have spoken with at least one person whose opinion I respect regarding the use of Facebook or another Social Networking Site for educational purposes.

- Strongly Disagree
- Disagree
- Uncertain
- Agree
- Strongly Agree

Additional Questions

1. What do you feel motivates faculty to use Social Networking Sites such as Facebook for educational purposes?
2. What course content should instructors place on a Social Networking Sites such as Facebook?
3. What problems or obstacles do you encounter (or might encounter) using Social Networking Sites such as Facebook for educational purposes?

APPENDIX D
FOCUS GROUP PROTOCOL

APPENDIX D: FOCUS GROUP PROTOCOL

To provide further context for these questions, here are the basic, underlying assumptions we make when creating and conducting focus groups...

- The group will meet for 60 – 90 minutes. Timeframes (i.e., starting and ending) will be strictly honored.
- The group will contain no more than 13 participants and no fewer than 8 members.

Beyond the context, as the researcher/evaluator, I will cover the following points/topics with group members prior to starting the actual questions.

Thank you so much for agreeing to help me carry out a dissertation study on faculty and students' perception of using Social Networking Sites in education. I will ask you to answer some questions on technology, social networking, and your perception of using such technologies in education. Please feel free to be open and honest with your answers. All comments will be kept strictly confidential. Your name will not be included in the interview data. Do you have any questions before we begin?

Questions:

1. What is the most interesting or intriguing use of technology that you've heard about or experienced? Why?
2. How many Social Networking Sites do you currently use? Which ones?
3. Do you use these sites for personal or educational purposes, or both?
4. How often do you access these mediums?
5. If required, how would prefer to use Social Networking Sites, such as Facebook in your courses?
6. What barriers do you (or might you) encounter using Social Networking Sites, such as Facebook for educational purposes?
7. As faculty/student, what do you believe would be the advantages/disadvantages of using Social Networking Sites for educational purposes?
8. Agree or Disagree: Social Networking Sites, such as Facebook provides a faster, more convenient way for college faculty and students to communicate than other ways such as

campus email and/or Blackboard. Why?

9. Agree or Disagree: Using Social Networking Sites, such as Facebook for instructional purposes is an invasion of my individual privacy. Why?
10. Agree or Disagree: Generally, I have no trouble figuring out how to use the features available on Social Networking Sites, such as Facebook. Why?

Conclude the focus group with the following remarks:

Do you have any other comments you would like to share? Would you like a summary of the results of this study? _____ It will probably be available next Spring.

After the focus group, say, "Thank you for helping me with this study. If you think of any other information you'd like to add later, please call me at _____ or email me at _____. Also, if you'd like a copy of the results, please email me.

APPENDIX E
INTERVIEW QUESTIONS

APPENDIX E: INTERVIEW QUESTIONS

1. What is the most interesting or intriguing use of technology that you've heard about or experienced? Why?
2. How many Social Networking Sites do you currently use? Which ones?
3. Do you use these sites for personal or educational purposes, or both?
4. How often do you access these mediums?
5. If required, how would prefer to use Social Networking Sites, such as Facebook in your courses?
6. What barriers do you (or might you) encounter using Social Networking Sites, such as Facebook for educational purposes?
7. As faculty/student, what do you believe would be the advantages/disadvantages of using Social Networking Sites for educational purposes?
8. Agree or Disagree: Social Networking Sites, such as Facebook provides a faster, more convenient way for college faculty and students to communicate than other ways such as campus email and/or Blackboard. Why?
9. Agree or Disagree: Using Social Networking Sites, such as Facebook for instructional purposes is an invasion of my individual privacy. Why?

Agree or Disagree: Generally, I have no trouble figuring out how to use the features available on Social Networking Sites, such as Facebook. Why?

APPENDIX F
SOE DIRECTOR LETTER OF APPROVAL

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December 5, 2013

Dr. Hinsdale Bernard
Dissertation Committee Chair
University of Tennessee-Chattanooga
615 McCallie Avenue
Chattanooga, TN 37403

Dear Dr. Bernard:

It is my understanding that J. Michelle McDaniel will be conducting a research study on "GOING WHERE STUDENTS ARE: COMPARING FACULTY AND STUDENT USES AND PERCEPTIONS OF SOCIAL NETWORKING IN HIGHER EDUCATION". Mrs. McDaniel and I met to briefly discuss the design of the study as well as the instrumentation.

To compare student and faculty perceptions of the adoption of Social Networking Sites in education, she has requested to distribute an online survey to the School of Education faculty and undergraduate students. I will provide any assistance for the implementation of this study. If you have any questions, please do not hesitate to contact me.

Sincerely,



Linda Johnston

Director, School of Education

The University of Tennessee @ Chattanooga

VITA

J. Michelle Caldwell is an experienced professional with a combination of 12 years of experience in higher education, training, supervision, instruction, and managing operational budgets. She completed both an undergraduate and graduate degree in Business Administration from the University of Tennessee-Martin and the University of Tennessee-Chattanooga, respectively. After several years of working in the healthcare industry, she transitioned to higher education which is when she later earned a Specialist in Education degree from Middle Tennessee State University, with an emphasis on Administration and Supervision. J. Michelle Caldwell is currently serving as faculty at Western Governors University for the College of Business graduate programs. She is continuing her education in Learning and Leadership by pursuing a doctoral degree at the University of Tennessee-Chattanooga, which will improve her credibility in the field and possibly present additional consulting opportunities.