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A case study examining how students make meaning out of using Facebook as a virtual learning community at a Midwestern university

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A case study examining how students make meaning out of using Facebook as a virtual learning community at a Midwestern university

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DEDICATION

With love to my wife, Shannon,
thank you for your support and encouragement throughout the entire journey!

To my daughters, Ellie and Grace,
thank you for your patience and understanding;
you were helpful, encouraging and motivating.

I believe it is time to put our toes in some sand!

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ABSTRACT

The purpose of this qualitative case study was to explore how peer mentors make meaning out of using Facebook as a virtual learning community. With the prevalence of Facebook usage by college students, and the introduction of Facebook into academic settings by educators, program facilitators, administrators, and recruiters, researchers have begun to examine the impact of Facebook as a virtual learning community. Currently, there has been a missing voice in the research, the voice of the students involved in the use of Facebook as a virtual learning community. Facebook presents itself as an ideal vehicle for a virtual learning community, but it's not known how students perceive the use of a social tool in an educational setting.

The current literature is mainly quantitative in nature, focuses on how students use Facebook in a social setting, and addresses student academic performance resulting from the use of Facebook as a social tool. This case study examined how peer mentors perceive the use of their social tool in an academic setting. The current literature on virtual learning communities is beginning to examine Facebook usage, but not how the students perceive the use of Facebook as an academic tool. The participants for this case study were five peer mentors who had belonged to the virtual learning community the previous year. These peer mentors had two years of experience within virtual learning communities that were hosted as Facebook groups.

The peer mentors shared their experiences of what they believed made Facebook work as a virtual learning community. One might expect that the peer mentors would recommend using Facebook in all classes, especially given that the peer mentors believed that society held a perception that students are constantly on Facebook. The peer mentors

described specific settings, actions, and requirements of the program facilitator needed in order to make Facebook function as a virtual learning community.

The study provided a voice to the peer mentors, and the peer mentors provided direct messages to those who might use Facebook in how they believed Facebook should be used as a virtual learning community. I proposed a model for implementing Facebook as a virtual learning community in higher education settings. The model was constructed through a careful examination of existing literature and based upon data from my case. The purpose of a case study is to lay the foundation for future research; this case study laid the foundation for future examination into the academic implications for students who use Facebook as a virtual learning community.

CHAPTER 1 INTRODUCTION

Introduction

As of March 2012, there were over 835 million registered users of Facebook worldwide (Internet World Stats, 2012), indicating a large number of Facebook users. In 2007, Ellison, Steinfeld, and Lampe studied 800 Michigan State University students; they found that bridging social capital was built through Facebook. Bridging social capital is when a member of a social network, provides "useful information or new perspectives" (p. 1146). Their study findings "suggest that Facebook is indeed implicated in students' efforts to develop and maintain bridging social capital at college" (p. 1157). The growth and popularity of Facebook among university students, combined with the usage of Facebook by university students to maintain bridging, or weak, ties coincides with the growth of Facebook being utilized as a virtual learning community. However, the use of Facebook has moved beyond the older definition of a virtual learning community, which can be summarized as a way for educators and students to maintain contact while incorporating aspects of traditional learning communities (Lenning & Ebbers, 1999). In colleges and universities the use of Facebook is beginning to incorporate actions that were traditionally aligned with learning communities that were not virtual.

Facebook offers a new method of community building that Ellison et al. (2007) noted, "represents an understudied *offline to online* trend in that it originally primarily served a geographically-bound community (the campus)" (p. 1144). Facebook can facilitate the extension from the geographically bound learning community to a virtual learning community. To further understand the offline-to-online virtual learning community, it is important to examine the development of social capital within this type of virtual community.

Daniel, Schwier, and McCalla (2003) stated "high social capital is crucial for creating successful virtual learning environments" (p. 3).

Facebook, as a virtual learning community, is used in a variety of ways. In this case study, university students were first asked to join the departmental Facebook group prior to their arrival on campus. The departmental group had three primary groups of users. The first was the program facilitator and graduate student who were responsible for setting up and launching the group. The second group of users comprised the peer mentors. The peer mentors were students who had successfully completed their first year of studies within the program. These peer mentors were volunteers who had to go through a screening and interview process prior to becoming a peer mentor. The last group of users was the first-year students, both traditional first-year college students and transfer students. In this case study, all participants were peer mentors who had participated in the previous year's Facebook group. Many of the students and peer mentors had not been located in the same state or geographic region prior to their arrival at the university. Yet, they had access to the same shared virtual space on Facebook.

The use of Facebook by the program facilitator to help establish and maintain communities through interaction illustrates how Facebook is using the three main types of group membership interactions discussed by Lenning and Ebbers (1999). Community interactions on Facebook are foremost virtual in nature, but the other two interaction types, correspondence and physical interaction, are also major aspects of college students' use of Facebook. Hew (2011) found that college students are more likely to add Facebook friends once they meet them in person, which represents physical interaction. Messaging, one of the main features of Facebook utilizes the interaction of correspondence. Students communicate

using Facebook messaging through a combination of posting questions to the group, instant messaging, and e-mail.

Problem

Some individuals believe that Facebook can be utilized as an effective virtual learning community because of its market penetration and its ease of use. Empirical evidence shows the increased use of Facebook, including highlights of the ways students use features within Facebook. Multiple studies (Cheung, Chiu, & Lee, 2011; Hew, 2011; J. Hsu, Hwang, Huang, & Liu, 2011) have examined questions of social capital accrual, communication patterns, and ties to past acquaintances. However, these studies did not examine how students viewed their participation and contribution to Facebook as part of their coursework. These studies also did not study the impacts on the students or how students continued to use Facebook outside the stated purpose. The problem is that Facebook presents itself as an ideal vehicle for a virtual learning community, but it's not known how students perceive the use of a social tool in an educational setting.

Purpose of the Study

The purpose of this study was to examine how peer mentors in a specific program utilized Facebook as a virtual learning community and how they made meaning of their role as a peer mentor in the Facebook group; and to investigate how the program facilitator encouraged participation and growth within the virtual learning community. Studying the shared experiences of the participant peer mentors who utilized Facebook as a virtual learning community will advance the knowledge of how students view its use, the impact on virtual learning communities, and the development of social capitol. I also sought to understand how the student peer mentors perceived using Facebook as a virtual learning

community and whether they believed they were building social capital. My research examined the actual use of Facebook by reviewing and analyzing two of the Facebook groups. Additionally, I examined how the use of Facebook contributed to the development of the learning community. Finally, I studied how the program facilitator aided the growth of the learning community through the use of Facebook.

Research Questions

1. How did the peer mentors perceive their experiences in using Facebook as a virtual learning community for a specific program?
2. How did the use of Facebook impact the development of virtual learning communities and the building of social capital?
3. How did the program facilitator aid the growth of a virtual learning community through the use of Facebook?

The answer to these questions were provided by knowledge and perspective gained from the voice of the participants. Many scholarly quantitative research pieces have measured the usage and engagement of Facebook (Cheung et al., 2011; Ellison et al., 2007; Hew, 2011; Junco, 2012a). However, the "story" of the individuals engaged in building virtual communities using Facebook is a missing piece. Daniel et al. (2003) noted that "the nature of social capital in virtual communities may be embedded in the stories told by the participants" (p. 10). Each participant in this case study had a unique story to share. Giving voice to my participants allowed me to address my research questions.

Significance

The purpose of this study was to give a voice to a select group of peer mentors in the use of Facebook as a virtual learning community and to examine the role of the program

facilitator in growing the virtual learning community. I explored the idea that, as Facebook users, the peer mentors built social capital by participating in the virtual learning community established by their program facilitator. The peer mentors were either sophomores or juniors at the university, and the juniors had been engaged in using Facebook as a virtual learning community since 2010, whereas the sophomores had been using Facebook as a virtual learning community since 2011. The findings of this study will be useful to program facilitators and others who work with students in higher education, specifically those who wish to utilize Facebook as a virtual learning community.

Theoretical Framework

This study was conducted as a qualitative case study influenced by two social learning theories. The first theory that served as the framework for the study, proposed by Vygotsky (1962), states that all learning is social. The second theory was the social modeling theory put forth by Bandura (1977). These two theories both fit the social constructivism that is typical of case studies (Merriam, 1998).

As defined by Creswell (2013), the theoretical framework of social constructivism is used by "individuals [to] seek understanding of the world in which they live and work" (p. 24). It is important to recognize the impact of the constructivist approach and social learning.

Bandura's (1977) theory of social learning contributed to Vygotsky's (1962) theory by acknowledging that gaining new knowledge is a labor intensive process and that social learning lessens the amount of labor required (Bandura, 1977). By decreasing the amount of labor required to acquire knowledge, social learning via a virtual learning community is a

logical step. Using Facebook as that social virtual learning tool to create a virtual learning community adheres to both Vygotsky's and Bandura's theories.

Oren, Nachmias, Mioduser, and Lahav (1998) noted that a virtual community needs to provide a virtual space that can also be anchored in real world social ties. Facebook is constructed to provide a virtual space with face-to-face ties. The communication styles, the capabilities of multiple types of communication, and the ability for users to easily switch between roles are important aspects of Facebook's ability to be a valid virtual learning community. The aspect of knowledge sharing on Facebook is another important aspect of the validity of Facebook as a virtual learning community. Facebook provides the ability to create a group, and within that group there are three levels of security. By segmenting Facebook into groups, the number of social participants is decreased while allowing for an increased amount of security.

Increased security leads to a buildup of trust. As trust increases, users feel more likely to share their knowledge with the group. The more removed from easy access the group is, the more likely a member of that group may be to take a risk and share knowledge, information, or opinion than if the group is open for all to view. As the first initial moments of knowledge sharing occur, others within the group will see the increase of both social capital and knowledge sharing and, according to Vygotsky (1962) and Bandura (1977), will endeavor to be part of that knowledge sharing. Once the users see that there is reciprocity, then truly deep and effective knowledge sharing may occur. Deeper and more effective knowledge sharing makes the virtual learning community a more valuable space for knowledge sharing and also increases the social capital of its members.

Social learning theory leads to knowledge sharing, and effective knowledge sharing requires trust. As trust increases, knowledge sharing becomes more effective, and the group then becomes more effective. As groups are in the process of learning, they exhibit what Vygotsky (1962) described as existing within an evolved society that teaches through social interactions. Those social interactions, according to Vygotsky, are fundamental to the acquisition and use of new knowledge. Vygotsky theorized that those interactions take place through the use of well-established signs and language. Facebook not only provides the tools required to host a virtual learning environment, it also provides an arena with a common language base that allows for individuals to become immersed in a virtual learning community.

In this study, the theoretical understanding of both Vygotsky (1962) and Bandura (1977) were important. The social learning theories espoused by both Vygotsky and Bandura result in a constructivist position. Many researchers who have examined social learning theories also used a constructivist viewpoint. This epistemology was clearly defined by Kilpatrick, Barrett, and Jones (2003), who stated that the theoretical background of learning communities "are consistent with a constructivist approach to learning" and that those constructions create value through social capital (p. 10). A constructivist basis is found in Vygotsky's social learning theory based on his discussions of the importance of knowledge and interaction and also in Bandura's theory based on the construction and integration of social engagement.

Proposed Methodology

The methodology for this case study was influenced by Merriam's (1998) definition and applications of case studies, and Seidman's (2006) interviewing structure. Merriam

stated that a case study is "a thing, a single entity, a unit around which there are boundaries" (p. 27). Yin (1994), who informed Merriam's definition, noted that a case study "investigates a contemporary phenomenon within its real-life context" (p. 13). The case I studied was that of the peer mentors' activities within a specific Facebook group at their university. The boundaries are clearly defined: the interactions of the peer mentors within the program groups on Facebook.

Merriam (1998) noted that a "case study does not claim any particular methods for data collection" (p. 28); rather, qualitative case studies use a variety of techniques. One technique used was Seidman's (2006) interviewing technique. I modified the interview structure to perform two rounds of interviews with my peer mentor participants. The reason for conducting two rounds of interviews was due to my case being bound by time, place, subject matter, and participants. After discussing my study with the program facilitator, a concern was raised about time constraints and that the peer mentors would be more receptive to two interviews. Prior research done by Ellison et al. (2007) explored the current social uses of Facebook, which would be a major focus of one of the three rounds of interviews if Seidman's (2006) protocols were precisely followed. Due to these two factors, the prior research and participant availability, I followed Seidman's (2006) alternative structure guidance (p. 21) and shortened the interview schedule from three interviews to two interviews.

I had three different data points to examine for the case study. For the study, I conducted two rounds of semistructured interviews with the selected peer mentors. These semistructured interviews, combined with an interview of the program facilitator, provided rich individualistic descriptions of the interactions within the virtual learning community.

During the interviews I explored the perceptions and meaning making from both the program facilitator's and peer mentors' points of view. For all interviews I created audio recordings, transcribed the recordings, analyzed the interview transcripts, and encoded all data.

The peer mentor interviews provided one examination of the case. The program facilitator interview provided another point of analysis for the case study. After interviewing the peer mentors and the program facilitator, I used the Facebook postings to triangulate the data gathered and further define the case. The interaction and document analysis of the Facebook postings, which included coding of all posts from both the 2011 and 2012 Facebook groups, was the third data point examined. Creswell (2013) noted that studying hermeneutics, or written interactions, in a qualitative study highlight the "lived experience" (p. 79) of the participants.

As I examined the peer mentor interviews and the program facilitator interview, and combined the findings of those interviews with the interaction and document analysis of the student interactions on Facebook, many unique stories were uncovered that combined to make a holistic case. As Stake (1995) stated, "multiple views of the case" are required because not all participants experience the case in the same way.

My study is one in which the focus of the case study is the case itself. The case study falls into the category that Creswell (2013) defined as an intrinsic case study. My interest is in technology in higher education and how the students view that use of technology. As Stake (1995) identified, intrinsic case studies are studied "because we need to learn about that particular case" (p. 3). I specifically sought out a program facilitator who was using Facebook as a method to develop a virtual community with his students.

Scope of the Study

The scope of the case study was bound by place, time, subject matter, and participants. The participants of this study belonged to one science program at a research intensive university. Students were encouraged to join the Facebook community during their summer orientation periods. Students who already had been in this particular science program for one year or more were given the opportunity to be peer mentors. The scope of the study included the program facilitator; the peer mentors, because they had the longest exposure to the Facebook virtual learning community; and the posts to the Facebook groups from 2011 and 2012. I examined only the 2011 and 2012 Facebook groups, and I did not examine the previous years' groups or group members.

Definitions of Terms

I have included the following definition of terms because, in studying emerging technology, there can often be confusing jargon. I have endeavored to limit the amount of technical jargon; however, I provide definitions for words that can be used in more than one way or relate to the emerging technology and social media.

Learning community: in the broadest sense, communities of knowledge sharing whose primary membership comprises individuals who are on-site and physically meet in person.

Offline: interactions that take place in the real world that are not Internet based.

Online: interactions that take place either on the Internet or in a social media setting.

Social media: online interactions accessed via mobile and/or web-based technologies that allow interactive communication between individuals, communities, companies, or other organizations.

Social networks: not referring to a technical network, but rather to a network of social relationships an individual establishes both online, and also offline, in the real world.

Virtual learning community: a community that is visited and built in a virtual space; however, this definition does not preclude the possibility that community members will meet, interact, or engage in physical interactions. The definition of virtual learning community is a combination of the meaning of the word "virtual" and the scholarly definition of "learning community."

Delimitations and Anticipated Limitations

This study was limited to the singular case of the use of Facebook by a selected science department. The delimitations include the inclusion of just the program facilitator who engaged with the students via Facebook, peer mentors who had completed at least one year of being part of the virtual learning community, and the Facebook posts and discussions of these two groups of participants and the first-year students.

Dissertation Overview

This dissertation is divided into six chapters. Chapter 2 is a literature review, which includes an examination of the theories relevant to virtual learning communities, social learning theories, and the validity of using Facebook as a virtual learning community. Chapter 3 provides a description of the research methods: an explanation of the study design, site selection, participants, data collection, data analysis, ethical concerns, goodness, trustworthiness, and research positionality are addressed in that chapter. Chapter 4 introduces and defines the case, including a review of the examination of the Facebook groups. Chapter 5 comprises a reporting and discussion of the findings from my study. Chapter 6 concludes

the dissertation with a summary of the findings, research conclusions, discussion of future research, and potential practices that can be enhanced based on the case study.

CHAPTER 2. LITERATURE REVIEW

Social Learning Theories

Reviewing the literature on the impact of Facebook, and the validity of using it as a virtual learning community, requires examining two social learning theories and the supporting activities within a virtual learning community (see Appendix A for a literature map). Researching the theories and activities includes tracing a path through Vygotsky's (1962) social learning theory, the importance of knowledge sharing, and the resulting social capital that may be gained. Eun (2008) summarized Vygotsky's sociocultural theory of development by stating that "the individual mental functions arise from specific social interactions and retain a social nature even in the most private spheres of human consciousness" (p. 135). In summary, Vygotsky's theory maintains that acquiring higher level mental functioning requires social interaction with a targeted purpose. It is the social nature of Facebook that lends itself to the possibility of being used as a virtual learning community.

In studying Vygotsky's (1962) social learning theory and the development of online (virtual) learning communities, Swan and Shea (2005) noted that "the research on social presences tells us that students perceive themselves as interacting socially in online courses and that they relate such perceptions to learning" (p. 14). The next step is to determine if a place of normal social interaction (i.e., Facebook) can be used as a virtual learning community. Vygotsky's learning theory states that the act of individuals interacting with each other is a key component in the development of knowledge. In 2011, Hew found that students spend between 10 and 60 minutes on Facebook daily, though the primary use was to

keep in touch with friends (p. 667). The worry, as discussed by Madge in 2009, is that students may not take well to using Facebook for academic work.

In keeping with Vygotsky's (1962) social learning theory, there needs to be a component of knowledge sharing that helps bridge the theoretical gap between using Facebook purely as a social tool and implementing it as a virtual learning community. The examination of knowledge sharing theory needs to be included in order to study the implementation of Facebook as a virtual learning community. The bridge between Vygotsky's social learning theory and virtual learning communities is Bandura's (1977) social cognitive theory. Social cognitive theory relies on economic exchange theory, which posits that effective knowledge sharing will take place after there is a greater benefit to the user than the cost of actually sharing the knowledge (M. H. Hsu, Ju, Yen, & Chang, 2007). Knowledge sharing is based on trusting others involved in the knowledge sharing activities, because the trust allows for a deeper level of sharing. The greater the level of trust, the more effective the sharing will be and the more likely the members of the virtual learning community will have a meaningful gain from participation in the virtual learning community.

According to Swan and Shea (2005), social learning theories all point to all learning as being social in nature. Additionally, Vygotsky (1962) maintained that all learning starts out as social in nature. In a 1962 translated work, Vygotsky stated that, "any higher mental function was external and social before it was internal" (p. 197). This portion of the social learning theory is applicable to Facebook because it is both external to the user and a highly social engagement platform. Facebook provides an open framework that allows every member to be searched by any other user of Facebook. The sheer openness of Facebook certainly fulfills the open social portion of Vygotsky's social learning theory.

Bandura's (1977) social learning theory built upon Vygotsky's (1962) theory. Bandura believed that learning is accomplished through social modeling and noted, "Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do" (p. 22). Bandura's theory that modeling is required for social learning is based on four parts:

1. Attention: One must pay attention in order to learn.
2. Retention: Retention of the new behavior must be established.
3. Reproduction: One must demonstrate the new behavior. Repeated practice of the behavior is important in this phase.
4. Motivation: One must feel motivated to repeat the behavior in order for successful learning to have occurred.

Completing all four steps leads to successful learning of a new behavior. Bandura's social learning is typically centered on psychology and behavior modification. Learned behaviors and social learning, as described by Bandura, can also be seen in the use of Facebook. As a social tool, Facebook has the ability to disseminate a behavior and provide the necessary feedback and rewards that encourage the reproduction of behavior.

It is important to note the convergence of Vygotsky's (1962) theory and Bandura's (1977) theory regarding behavior changes. Another aspect of Vygotsky's theory that impacts social learning theory is the focus he placed on the power of language. Fox and Riconscente (2008) noted that Vygotsky's theory centered on the "internalization of language-based interactions as the medium by which behavior is controlled and consciousness and abstraction achieved" (p. 387). The focus on language and its importance to learning makes Vygotsky's social learning theory another fit for the study of Facebook as a potential virtual

learning community. The main form of communication on Facebook is through direct typing of a message. Therefore, discourse analysis is a main methodological means used to study the interactions and activities on Facebook.

Another portion of information on socially constructed learning and the social learning theory is Baxter Magolda's (1999) knowing and reasoning patterns. Baxter Magolda (1999) posited that students embrace transitional knowledge as they progress through their college years. Transitional knowledge, as opposed to absolute knowledge, is the ability to know that there is no one right answer. Baxter Magolda (2004) noted different percentages of students embracing transitional knowing, with 53% of sophomores, 83% of juniors, and 80% of seniors applying transitional knowledge (p. 34).

The ability of students to gain the ability to think more deeply and apply a more complex thought pattern to their studies is important to understanding virtual learning communities. To understand the growth of rational processing development in the college years, it is important to understand the different ways of knowing. Baxter Magolda (2004) noted that this growth is possible because of social learning. She stated that these "ways of knowing and patterns within them are socially constructed, context-bound and best understood through the naturalistic inquiry, and represent possibilities; and reasoning patterns are fluid and gender-related rather than dictated by gender" (p. 36). This statement is important because it directly ties the methodology and methods that one might use to study the use of Facebook as a virtual learning community.

The use of "naturalistic inquiry," a term used by Baxter Magolda (2004), would mean that the sheer numbers and data associated with Facebook do not directly correlate with the highest quality data related to the building of socially constructed knowledge. The methods

of inquiry need to mindfully follow the natural patterns and discussions that occur within Facebook and analyze how those patterns apply to the growth of Facebook as a virtual learning community. Using discourse analysis is one methodology that would follow Baxter Magolda's (1999, 2004) prescription.

Knowledge Sharing and Trust

Cyr and Choo (2010) studied the individual and social dynamics of knowledge sharing. They noted that "knowledge sharing belongs to a class of human decision making that takes place in situations of outcome interdependency, where decisions have reciprocal consequences for the well-being of all parties involved" (p. 828). In order for a virtual learning community to be a place for knowledge sharing, it relies on a highly social and highly trusting community. The individuals in a virtual learning community need to have some motivation to share knowledge. The motivations are based on a variety of factors including desire to share knowledge, ability to determine the costs and benefits of sharing the knowledge, and individual intrinsic motivation (M. H. Hsu et al., 2007).

The motivations of individuals to engage in knowledge sharing behaviors are also based upon trust. Trust is a key component in creating a virtual learning community and building social capital. The definition of trust is not ubiquitous. As Daniel et al. (2003) noted, "various forms of trust might influence social capital differently" (p. 6). They also noted that there are several assumptions about trust:

1. Trust is a measurable belief and its measurement is based on a number of factors such as attitudes, perceptions, evidence, and experiences.
2. Trust evolves and changes over time.
3. Trust is directed and relative.

4. Trust in individuals does not necessarily translate into trust in a system or a group.
5. Trust is reflexive, yet trust in oneself is relative.
6. Trust is transferable from one context to another but not from one individual to another.
7. Trust is not transitive (i.e., if Agent A trusts Agent B and Agent B trusts Agent C, this does not automatically translate that Agent A will trust Agent C).
8. Trusting others can involve cultural attitudes.
9. Trust can be based on individual competence.
10. Agents can trust other agents with whom they have a long history of interaction.
11. An agent can trust those individual agents with whom it shares similar culture (i.e., cultural trust).
12. Trust can be based on personal experiences.
13. Agents can trust a legal institution more than the individual agents that belong to it.
14. An agent will choose to trust another person whom he/she does not know in a situation where there is little choice in who to trust. This is similar to blind trust. (p. 8)

Understanding the assumptions of trust impacts the research methods used to study how to engage in effective knowledge sharing.

However, trust is not the only piece of knowledge sharing that needs to be examined. Expectations of successful knowledge sharing are also key to the process of knowledge sharing. M. H. Hsu et al. (2007) found that the key to successful knowledge sharing is more than just the expectation that there is a desire to carry out the sharing of knowledge; an

intrinsically motivated individual must know that there will be someone willing to be a receptive and reciprocal audience (p. 155). The act of completion and sharing can be viewed as reciprocity. That is, knowledge producers must perceive that they have the capability of relying on that same virtual learning community to gain knowledge that they may not currently possess.

The notion of reciprocity is supported by research completed by Chen and Hung (2010). Their research focused on virtual communities at a professional level, but the data gathered can be translated to a college population using Facebook as a virtual community. The key point that Chen and Hung found is that trust and reciprocity are essential for those participating in, and benefiting from, a virtual community. The research suggests that for complete and effective knowledge sharing to occur, three key elements are needed: a community, trust within that community, and the expectation of reciprocity.

Chiu, Hsu, and Wang (2006) found that trust did enhance the quality of knowledge shared. They found that the impact of the possibility of increased social capital is one factor that may lead to increased knowledge sharing. The dynamic of social capital being an essential part requires a deeper examination of knowledge sharing and the inputs that drive knowledge sharing.

One of the three main components to effective knowledge sharing is community. Some researchers discuss the need for awareness—participants being self-aware of their surroundings. Daniel et al. (2003) referred to a phenomenon of awareness that correlates to the idea of community. They discussed the use of awareness in terms of "an understanding of the overall state" of the group or system (p. 8). The discussion of awareness is important given that one's understanding of the group and recognizing one's own ability to share within

the group impacts knowledge sharing. The outcome of knowledge sharing moves a community closer toward being a successful place for learning and effective knowledge sharing. Because the theory and practice of knowledge sharing are building a basis for what makes a strong virtual learning community, it is important to recognize the vital role that social capital plays.

Social Capital

In 1991, Bourdieu and Thompson defined the concept of social capital as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships" (p. 248). Because human capital and physical capital are resources that can be harnessed and used productively, social capital also is a resource that can be harnessed and used productively. Social capital is talked about in many terms, but for convenience sake, the terms "bridging" and "bonding" social capital will be used going forward in this dissertation. Bonding social capital was described by Ellison, Steinfield, and Lampe (2011) as providing "benefits from close personal relationships," whereas bridging social capital was defined as providing "benefits derived from casual acquaintances and connections" (p. 875).

Bonding social capital is seen as social reliance on the individuals with whom one has strong ties. Those strong ties can be with relatives, close friends, long-term friends, or individuals who hold highly similar world views to that of the individual. Bonding social capital provides an individual with reassurances and deeper emotional support (Ellison et al., 2011). A large benefit can be validation of an opinion or belief, or even a monetary loan. In a virtual community, such as Facebook, it has been noted that when individuals post that they

are not feeling well, most of the contacts who respond will be bonding social capital contacts (Hew, 2011).

The bridging social capital contacts initially can be seen as weaker ties. Weaker ties most likely will possess different knowledge or information that will establish stronger ties. These weaker bridging ties are highly important in a virtual learning community and in providing effective knowledge sharing. Also, the wider range and array of weak ties helps round out an individual's knowledge base and delivers a broader view of world events and unique knowledge (Ellison et al., 2011).

Within a virtual learning community there are the two types of ties: bonding (strong) and bridging (weaker). The previously discussed aspects of trust and reciprocity also are required. With these characteristics of a successful virtual learning community there is one more feature of successful engagement in social learning in a virtual learning community. In 1998, Coleman researched the use of social capital that leads to productive human capital. He noted that the acquisition of information is a labor intensive process that can be eased through social learning. He noted that one way to acquire knowledge "is by the use of social relations that are maintained for other purposes" (p. s104). The belief is that "all social relations and social structures facilitate some forms of social capital" (p. s105). These two beliefs led Coleman to posit that there needs to be some norms and sanctions built into successful learning communities.

Coleman (1988) believed that social capital is built within a community. He stated that first there needs to be a feeling of obligation for one to contribute, and the expectation of reciprocity is a requirement for the successful building of a learning community. He also stated that trustworthiness in both the participants and the environment are required.

Additionally, the existence of a free flow of information requires a set of rules or norms created within the group, and there needs to be resulting sanctions for breaking those rules (p. s119). The norms are "reinforced by social support, status, honor and other rewards" or are focused around halting "deviant actions that harm others but also deviant actions that can" derive change that may benefit the entire community (Coleman, 1988, pp. s104–s105). The norms may hold back the group, but by organizing and regulating the community, the knowledge sharing will be effective and will minimize the labor needed to gain knowledge in a community.

The next step is applying Coleman's (1988) learning community theory to a virtual learning community. Virtual learning communities exist online and, by their nature, come with an inherent set of rules and norms. Virtual learning communities situated around learning management software are bound by membership rules and social protocols of being part of a classroom environment. Similarly, virtual learning communities taking place through e-mail, instant messaging, or social networking sites, such as Facebook, have inherent rules that still provide the norm and sanctions sought by Coleman. These norms and rules revolve around the social environment that students are currently engaged in for purposes other than being productive members of a virtual learning community. These rules govern the method of data submission and sharing, and mirror the theories discussed above regarding effective knowledge sharing.

As Ellison et al. (2007) noted, "Facebook appears to play an important role in the process by which students form and maintain social capital" (p. 1162). Facebook, as a virtual space that is conducive to creating and maintaining social capital, should therefore be examined as a virtual learning community.

Virtual Learning Communities

In 2003, Kilpatrick et al. wrote a discussion paper that created a comprehensive definition for learning communities. They noted that learning communities are growing into "communities of common interests" and are not just geographically bound (p. 2). Although Kilpatrick et al. acknowledged that the 21st century is moving into a more globally positioned knowledge economy that relies on long distance communication, the authors focused on succinctly defining what is meant by a learning community. They noted that the purpose of a learning community is to "not only facilitate the sharing of knowledge, but have the potential to create new knowledge that can be used for the benefit of the community as a whole and/or its individual members" (p. 3).

The authors of the discussion paper compiled a large collection of meanings for "learning communities," and they created a graphic definition that depicts what comprises a learning community. This visual definition is reproduced in whole as Figure 1. The composite definition is broad in scope and covers definitions for learning communities that fall both inside and outside of higher education.

The key is to define "virtual" and merge it with the composite definition of learning communities. The definition that seems to fit best is one from 1998 by Oren et al., which defines the burgeoning studies of online learning. They defined virtual as "the possibility to access the site from any place at any time, thus eliminating some of the physical constraints of the real world" (p. 8). It is important to note that the definition doesn't eliminate all physical constraints of the real world; a real world component still needs to be addressed. For students to engage in a virtual learning community, they need to have physical access to

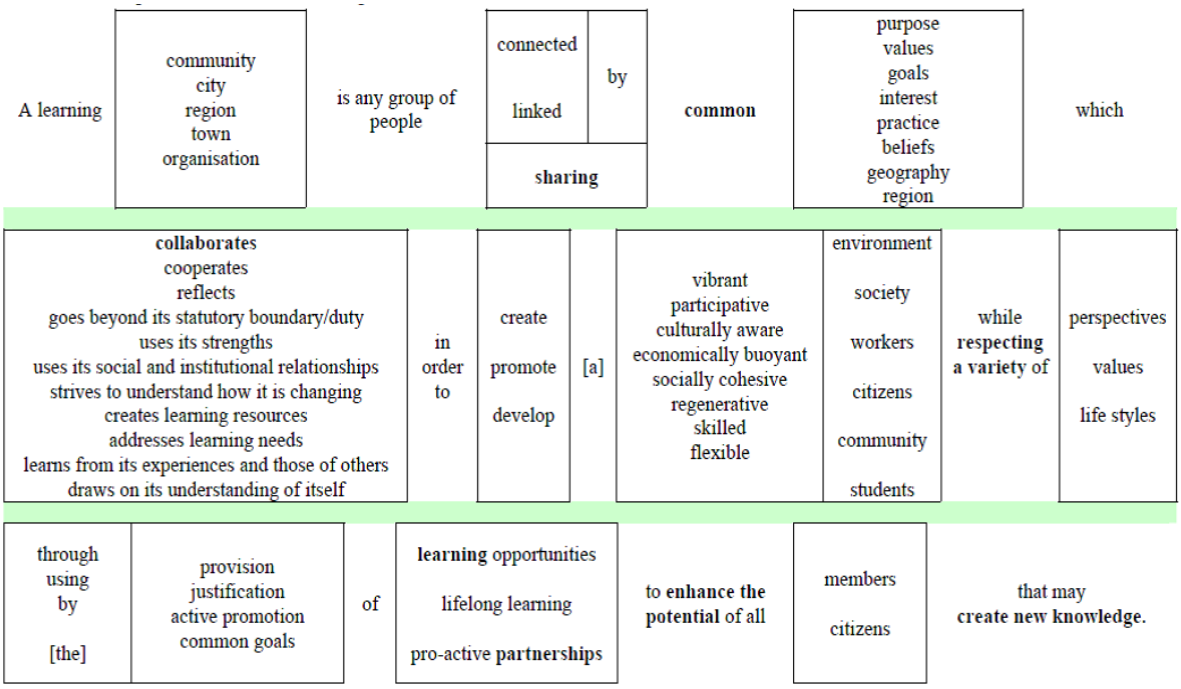

Figure 1. Composite definition of learning communities (compiled from Department for Education and Skills, 1998; Graves, 1992; Henderson, Castles, McGrath, & Brown, 2000; Kearns, McDonald, Candy, Knights, & Papadopoulos, 1999; Kilpatrick, Johns, Mulford, Falk, & Prescott, 2002; Landry & Matarasso, 1998; Longworth, 1999).

the virtual space. As the complexity and accessibility issues are addressed, learning communities will generate further study of virtual learning communities.

Although the importance of accessibility does need to be addressed, in 2007 Gannon-Leary and Fontainha noted "the internet offers the potential for access and interaction with universally accessible, democratic and interactive hub of speedy, low-cost communications and resources connecting individuals, disciplines, departments and services" (p. 7). In 2008, Sobrero posited that engagement, not accessibility, may be a large issue. She found in her study that students who are already engaged learners will visit virtual resources on their own and also take an active role in virtual social networks. Sobrero noted that students may use

communication technologies, but the habits and positive engagement strategies that Sobrero found in engaged learners needs to be cultivated in younger learners to help encourage their engagement.

Other crucial elements of virtual learning environments were identified by Oren et al. (1998). The crucial elements that are required to help virtual learning communities evolve are the need for an immersive environment, the ability to take on different roles, and a variety of communication methods (Oren et al., 1998). The thought behind an immersive environment is that students need to have a place that anchors them to the virtual learning community. The anchoring of a group in an environment that enables the students to immerse themselves can be as simple as a web page or as complex as virtual reality software. The important aspect of a virtual environment is the ability for students to have a virtual place to identify with the group. A student can go, in a virtual manner, to this place that encourages the student to have the feeling of being a productive group member. To have a successful virtual learning environment requires the students to take on a multitude of roles within the community. Besides communicators, there needs to be planners, actors, leaders, and producers. Individuals do not need to inhabit one role, but users need to take on varied roles over time.

Facebook as a Virtual Learning Community

Various studies have been conducted on using Facebook, including the use of Facebook by students (see Hew, 2011; Mazman & Usluel, 2010), the impact of social networks and their impact on communities of practice (see Weber, Conceição, & Baldor, 2010), and those claiming that Facebook does allow for the creation of social capital (see Ellison et al., 2007, and also Valenzuela, Park, & Kee, 2009). Additionally, there are

specific studies on the use of Facebook as a virtual learning community. These studies focused on why Facebook makes a good tool to be used as a virtual learning community.

The benefits of using Facebook have been described across multiple studies. Hew (2011) made the point that students are already engaged in computer work as part of their school work. Working on the computer to complete assignments provides easy access to Facebook for students. Educators already are facilitating its ease of use by requiring students to complete work, or otherwise be engaged, on a computer that also has easy access to Facebook. Ellison et al. (2007) found that, as students entered college, they were already quite familiar with the use of Facebook. This familiarity promotes positive behavior of students to be more socially engaged online than they would be in a classroom. Ease of access and familiarity lowers the barrier to participation in a virtual learning community.

Cheung et al. (2011) found that Facebook users enforce their own group norms, just as Ellison et al. (2007) stated that group norms are needed for a successful learning community. The use of norms, or rules, and the application of sanctions are found on Facebook. Facebook enforces its norms and rules by impacting the social capital that is gained or lost by its participants (Hew, 2011).

An area in need of further research is student receptiveness to educators taking part in online social networks. In 2011, Wong, Kwan, and Leung found that students are "comfortable" with educators being actively engaged in Facebook. They noted that students actively sought out online interactions with professors (p. 319). The study did not go into depth on this issue; it addressed student acceptance as a small part of a larger study.

Three studies did address Facebook features that make it particularly adaptive as the host of a virtual learning community, noting the ease of access, the sheer market penetration

among college students, and the amount of time per day spent on Facebook by college students as key features. There are several features that are part of Facebook itself that make Facebook a valid virtual learning community. The ease of communication is one of the main features of Facebook (Cheung et al., 2011; Ellison et al., 2007; Wong et al., 2011)

Facebook in Higher Education

In 2012, Aydin noted that the popular social media site, Facebook, "is quickly emerging as a new educational environment" (p. 1093). Mark Blankenship (2011), commenting on his use of Skype to deliver a guest lecture, stated, "Interactive, community-focused online tools—like Skype, Twitter, Facebook, YouTube, blogs, wikis, and the educational software Blackboard—are becoming so dominant in the classroom that it's hard to imagine any professor or student making it through a week without them" (p. 39). Downes (2007) stated, "It should not go unremarked that Facebook is an education site, built in the first instance by and for university students" (p. 1).

There has been a lot of hype regarding online resources and education. Wall, Ahmed and Smit (2006) highlighted one such piece of hype from the CEO of Cisco in 1999. During the keynote address of the 1999 COMDEX (computer dealers exhibition), John Chambers stated, "The next big killer application for the Internet is going to be education. Education over the Internet is going to be so big it is going to make e-mail look like a rounding error" (Wall et al., 2006, p. 7). Although the subject of online education being bigger or a driving force for profit has been discussed, online interactive education does not have the number of users compared to social media (Aydin, 2012). Social media presence, as noted by Aydin (2012), has reached the point that one in twelve people worldwide has a social media account. The promise of online education does not need to be separated from the market

penetration of social media. Blankenship (2011) noted that "social media often also inspire new creativity in the way subjects are taught" (p. 40).

Blankenship (2011) also noted that professors using social media meant more work for the educator (p. 40). He summarized five key points that impact professors' effectiveness at utilizing social media. Those five points are (a) attention, (b) participation, (c) collaboration, (d) network awareness, and (e) critical consumption. (p. 42). Blankenship (2011) defined attention as "the ability to know where and when to place one's attention when navigating, various types of social media and when navigating between social media and '"real world"' moments" (p. 42). He stated that educators "must be trained in how to decide what deserves our attention, or we will become overwhelmed and distracted" (p. 42). The next point, participation, was defined by Blankenship as "of knowing how and when to post a comment on a blog, for example, and what kind of comment will be helpful and appropriate" (p. 42). Educators must pay attention to social media and be willing and competent participants. The third point, collaboration, is to understand that online communities and social media are designed for collaboration. Blankenship noted that to become skilled at collaboration one must be able to collaborate "both online and in the actual world" (p.42).

The final two points of Blankenship's (2011) key points were network awareness and critical consumption. Blankenship stated that network awareness is "being literate in how a social media network operates. Mastering the privacy settings on Facebook, for instance, requires literacy" (p. 42). The key to network awareness is being aware of how the different social media networks are used. The final point of skill that Blankenship defined is critical

consumption. He stated that critical consumption is "the ability to surf an ocean of online information and decide which nuggets are reliable and which are disposable" (p. 42).

The rise in usage of social media in general and Facebook in particular, as noted by Aydin (2012), makes it a tool that is being utilized in great numbers by college students. Educators' desires to use social media mean that those very educators need to focus on the five points of skill that Blankenship (2011) mentioned if they want to utilize Facebook, or other social media, appropriately in their courses. One question that is asked is about the longevity or usefulness of Facebook. Downes (2007) best addressed this question with the following statement:

> The nature and popularity of Facebook itself challenges the idea of what an educational application should look like. Facebook puts the social community first, with content—including, but not limited to, educational content—being the medium of exchange between them. Though the traditional learning management system will contain community features, such as a chat room or discussion area, it contrasts sharply with Facebook because it puts content first and structures interactions around the course, the textbook, or the professor. (p. 3)

Technology and Student Engagement

I next examined technology, Facebook, and student engagement. If Facebook is not going to be going away, what are the impacts to students and their engagement in higher education? Junco (2012b) noted that "Facebook is a platform intended for engagement" (p. 188). In 2008, Heiberger and Harper observed that "students today network with each other using technology as much as, if not more than, face-to-face communication" (p. 19). The

point of examining technology and student engagement was to research what impacts technology had on student performance.

> Heiberger and Harper (2008) found that
>
> students who spend more time (more than one hour per day in the Facebook study, and more than six hours per week in the social network study) on social networks and Facebook are not spending more or less time studying and are spending more time socializing with the university community. (p. 27)

They also found that this extra time spent on social networking sites and on Facebook translated into students "spending more time participating in student clubs and groups" (p. 29). They went on to illustrate another benefit of Facebook for higher education: "College students are beginning their developmental path toward becoming adults. Facebook gives them opportunities to learn about and self-select into programs and services beneficial to them" (p. 32).

In 2012, Junco (2012a) examined the time students spent on Facebook to learn if their grade point averages (GPAs) and academic performances were impacted in the same fashion as was engagement in student organizations. The amount of time he found that students spend on Facebook is higher than what Ellison et al. (2007) found. In his study Junco reported, "While taking important control variables into account, time spent on Facebook is a strong negative predictor of overall college GPA. Specifically, large increases in time spent on Facebook relate to lower overall GPAs" (p. 194). The increased time spent on Facebook is based on a "mean time spent on Facebook" of 106 minutes (p. 194). This 106 minute mean time is more than the one hour that Heiberger and Harper (2008) noted, but Junco

(2012a) also examined specific activities on Facebook to see if certain activities and not just time spent negatively impacted a student's GPA.

Junco (2012b) found that "posting status updates and chatting on Facebook chat were negatively predictive of GPA, while checking to see what friends are up to and sharing links were positively predictive" (p. 196). Junco (2012b) related the time spent on Facebook chatting as negatively predictive because "chatting on Facebook chat may involve multitasking" and the multitasking may impact the ability of students to prepare properly for the next class session (p. 196). Junco (2012b) also stated that posting status updates also is negatively predictive because it is "more focused on broadcasting personal information" and not in knowledge sharing or trying to increase one's knowledge (p. 196).

Interestingly, Junco (2012b) noted that the sharing of links was positively predictive of a student's GPA. He noted that sharing links "seems as close to an academic activity as any others because links usually refer to blog posts or news stories" (p. 196). Overall, though, Junco (2012b) noted that the needed increase in time spent on Facebook to "produce a substantial decrease in GPA was enormous" (p. 196). He also cautioned that, though the time increases would need to be large [93 minutes beyond the 106 minutes saw a 0.17 decrease in GPA (p. 194)], the patterns of student performance and Facebook usage were important to observe (p. 196). In summarizing his study Junco (2012b) stated:

> The relationship between time spent on Facebook and grades is negative, the real-world impact of said relationship does not seem to be a major detriment to academic success. In other words, there may be other variables that are more strongly related to overall GPA and time spent preparing for class that should be the focus of examination and intervention, instead of student use of Facebook. On the other hand,

> the ability of time spent on Facebook to significantly predict overall GPA indicates that there may be some negative academic impacts for students who use Facebook in certain ways. (p. 197)

Peer Mentorship

As the participant pool in this study comprised peer mentors, I wanted to examine current literature on the role peer mentors play in higher education. Budge (2006) noted that early research on peer mentoring focused on areas outside of higher education but that more study of peer mentoring inside higher education was needed because "undergraduates are being more frequently used as peer mentors" (p. 75). Johnson (2009) found that "the goals of peer mentoring programs tend to focus on developing relationships with such students who are adjusting to college" (p. 189).

The question of effectiveness and benefits of peer mentors is an important topic. Karcher, Davidson, Rhodes, and Herrera (2010) found that mentored students need time spent with a peer mentor to see increased benefits, but peer mentors can benefit academically based upon being selected as a peer mentor (pp. 214–215). The key factor to success of a peer mentor, according to Karcher et al., is support. They noted that support can vary for peer mentors; it can positively or negatively impact a peer mentor (pp. 213–214). Johnson (2009) noted of the peer mentors in her study that "they have substantial responsibilities in implementing our course, and students rely on their advice and guidance about getting involved during their first semester in college" (p. 196). Budge (2006) found that there were benefits for both peer mentors and peer mentees. She found that "for mentors, developing or advancing interpersonal and communication skills were found to be the two most important

outcomes. Both mentors and mentees specified that they had also expanded other qualities such as patience and compassion" (p. 75).

Budge (2006) succinctly stated what many others advanced, that is, peer mentoring "has been implemented in the university setting is to increase retention rates" (p. 75). In terms of peer mentoring and retention, Johnson (2009) found that "the goals of peer mentoring programs tend to focus on developing relationships with such students who are adjusting to college" (p. 189). Johnson's study found:

> Students listed 76 comments in response to the question "What impact did your peer leader have on your first semester at UF?" Only five students said that their peer leader did not have a significant impact on their first semester. Most of the comments focused on the general guidance and assistance provided to the students as well as the specific advice about getting involved on campus. (p. 194)

Karcher et al. (2010) noted that peer mentoring is a beneficial retention tool. Yet, they also stated that the positive impacts on peer mentors could not be overlooked. Karcher et al. found that " peer mentoring also provides a venue for promoting developmental competencies of the mentor. Positive associations have been reported between serving as a peer mentor and improvements in academic connectedness and self-esteem" (p. 213). The role of peer mentor serves the dual purpose of improving retention in higher education and also providing positive impacts to the peer mentor's academic standing and abilities.

Summary

In undertaking a review of literature on social learning theory, knowledge sharing, social capital, virtual learning communities, social media, and Facebook there are multiple data points that support the use of Facebook as a valid space for a virtual learning

community. The theories of Vygotsky (1962) and Bandura (1977) both support my theory that Facebook is a valid location for a virtual community. Facebook allows for easy social access with low barriers and multiple forms of communication. The ability to provide online security, groups that have a specific online location, and the resulting trust can lead to effective knowledge sharing. Users' behaviors are governed by, and rewarded with, increased social capital. Social capital also increases as the group members become more interactive and as more members join the group. The supporting information points to Facebook as being a valid online locale for a virtual learning community.

CHAPTER 3. METHODOLOGY

Introduction

The purpose of this case study was to examine how the peer mentors made meaning out of the use of Facebook in an academic setting. The main research was focused on how the peer mentors viewed the utilization of Facebook as a virtual learning community. As part of the case study, I also examined how the use of Facebook impacted the development of the virtual learning community, and the acquisition of social capital within the community. For the third research question, I studied how the program facilitator aided the growth of the virtual learning community through the use of Facebook.

This case study was bound by location, participants, and subject matter. The bound nature of the case study makes it unique, and the scarcity of qualitative research on the subject matter makes the topic engaging. Although researchers, such as Junco (2012b) and Valenzuela, Park, and Kee (2009) have undertaken the quantitative aspects of researching student engagement with Facebook, there is still a need for interpreting the students' perceptions surrounding this particular case. As Stake (1995) noted, case studies are particularly useful when examining situations where there is "a need for general understanding" (p. 3). By investigating a particular case, the richness and depth of a qualitative case study grows and includes an important voice—that of the student. Edwards (2005) noted that oftentimes official sources are too heavily skewed toward only experts and that action "marginalizes ordinary people as potential sources, and the people most often marginalized are youth" (p. 15). Seidman (2006) also noted that there are several types of social science studies on educational research, but little of the research focuses on the perspectives of the students or educators (p. 10).

As this study's research questions examined the perceptions of the peer mentors in a unique learning community, the classification of the study is that of a qualitative case study. Stake (1995) stated that "qualitative researchers treat the uniqueness of individual cases and contexts as important to understanding" (p. 39). The research methodology for this study was driven by the desire to examine a unique case and derive an understanding of how the peer mentors respond to the use of Facebook as a virtual learning community.

Theoretical Framework

The epistemological framework of this case study was based in constructivism. As Stake (1995) stated, "the world we know is a particularly human construction" (pp. 99–100). Vygotsky's (1962) social learning theory is bound in constructivist philosophies, and my case study relied on constructivism, justifying "lots of narrative description in the final report" (Stake, 1995, p. 102). The second learning theory relied upon to examine the case was Bandura's (1977) belief that learning needs to be modeled in order to make acquisition of knowledge easier. Bandura's modeled learning theory is constructivist in nature. The construction of knowledge through modeling is, as Maxwell (2013) noted, "inevitably of our construction, rather than a purely objective perception of reality" (p. 43).

Building on a constructivist epistemology, the methodology of this study's theoretical framework was a particularistic and intrinsic qualitative case study. Merriam (1998) noted that a case study is a sound choice for research methodology when a case is "intrinsically interesting" (p. 28). The study can be further defined as a particularistic case study. Merriam defined a particularistic case study as one that focuses on a specific program or happening within a program (p. 29). The combination of the need for constant interpretation within a case study (Stake, 1995) and the need for deep inspection of an individual's

experience (Seidman, 2006) are two more indicators for the use of a case study for the methodology of the study. The particularistic case study provided a research methodology that best addressed my research questions.

Study Design

The design of a particularistic case study, as Shaw (1978) noted, concentrates on the way groups of people focus on a topic and is typically small in scale (p. 2). Stake (1995) noted that one of the initial steps in study design is to "pick cases which are easy to get to and hospitable to our inquiry" (p. 4). In the design of this qualitative particularistic case study, I employed purposeful sampling. Creswell (2013) stated that purposeful sampling is defined as when the researcher "selects individuals and sites for study because they can purposefully inform an understanding of the research problem and central phenomenon in the study" (p. 156). The case study I conducted began with finding a site with a program facilitator who was using Facebook as a virtual learning community.

The program facilitator in this study had endeavored to implement Facebook as a method for building community. His first attempt was in 2010 with two Facebook groups. In 2011, he had just one Facebook group and the usage of Facebook began to increase. In 2012, the program facilitator encouraged the peer mentors to be more active participants in the virtual learning community. The program facilitator provided a background and baseline for the case. My participant pool consisted of 38 peer mentors from 2012 who had been engaged in the virtual learning community as students in either 2010 or 2011. At the beginning of my study, the 38 peer mentors had been using Facebook within the selected science department as a virtual learning community for at least four semesters. I narrowed

my participant pool from the 38 peer mentors to 10 peer mentors by examining their usage of Facebook within the virtual learning community.

Site Selection

My site selection was based on access to a group of participants who had been engaged in using Facebook as a virtual learning community. The site needed to fit Stake's (1995) requirement of being "hospitable" to this particularistic qualitative case study (p. 4). The chosen site was a research intensive university. The participants were the program facilitator, and the students were all peer mentors who had been engaged in the use of Facebook as a virtual learning community in the science program.

The program facilitator recruited the peer mentors from the previous year's students. The program facilitator served in the role of a leader of the program, and creator of both the learning community and the Facebook virtual learning community. The program facilitator also was responsible for recruiting and training the peer mentors. The peer mentors met with the program facilitator prior to the start of the learning community and received some instruction on the expectations of the program facilitator. The expectation was that the peer mentors would serve to ease the new program members into life at the university and within the program. The overall goal of the program facilitator was to increase retention of new program members while fostering a sense of community. One key element of the building of community was the use of the peer mentors in both a face to face and virtual presence.

The peer mentor participants of the study were selected based on their continued enrollment within the program and their continued use of Facebook. Because Facebook is used to create a virtual space, it is important to examine why Facebook was chosen as part of my case. Facebook is one of many social media websites that are easily available to the

student population. The market penetration and high usage of Facebook by college students makes it a logical choice for use as a virtual learning community. Facebook's adoption, usage, and group functionality provide a secure location for the creation of a shared space that is needed for a virtual learning community.

There are multiple communication methods available to Facebook users. Users of Facebook can leave messages on their own wall to invite comments. The act of writing on one's own wall is known as updating one's status. The purposes of status updates are numerous; however, in the case of virtual learning communities, the status update can be a request for information. Another form of communication is that one can leave messages on another user's wall in reply to a comment or to elicit a response from the user. The communication posted on the other user's wall can be in response to a question or can ask the user a new question. The question and response may begin a dialogue, and Facebook provides multiple methods for that dialogue to occur.

There is a private messaging feature that allows for a one-on-one discussion that is similar to e-mail communication. Private messaging features the ability to save the messages, reply at a delayed time, and include multiple Facebook users in the message. These features allow users to be added or removed from messages to increase the effectiveness of the virtual learning community. The private messaging feature is not designed to be an immediate form of communication.

The immediate form of communication is called simply "messaging." The Facebook messaging feature is similar to online instant messaging services such as Google Talk or MSN Messenger. The messaging feature is designed for immediacy in communication. There are several features that make the messaging feature a different form of

communication than the private messaging features. The messages are stored and recorded, just like private messaging. The interaction takes place on the same main screen of Facebook, not a separate page as with private messaging. In October of 2010 Skype, which allows for video chats, was tested as part of the Facebook messaging features. By June of 2011, the video chat feature was fully integrated on Facebook, and Skype added some Facebook functionality to its interface. The integration of Skype and Facebook expanded virtual communication to voice and video chats (Tofel, 2011).

All users have the ability to create events on Facebook. These events can be virtual meetings or real-life meetings. The importance of this feature is that it allows one person in a virtual learning community to arrange a group meeting. The meeting allows users to join the event or select "maybe," which still allows users to track the event. One added feature is that, once an event is created, it creates a specific page on Facebook that can be used to gather information. After the event passes, the page is phased out. The benefit is short term and requires users to transfer data away from the page. The page may disappear from view, but it can be linked to an individual group page, allowing for continued accessibility.

The group page is the immersive locale in Facebook for a virtual community home. A group can be created by any one person and has three layers of security. First, the security feature's open access allows any user of Facebook to see the group, its members, and its posts. Second, closed access allows any user of Facebook to see the group and its members, but only members can see the posts on the group page. Third, secret access allows only members to see the group, its members, and its posts. The variety of security levels allows for the virtual learning community to exist in a secure space.

The communication capabilities of Facebook groups, the program facilitator's request for participation, and the security features combine to create an environment that is conducive to building a virtual learning community. A secure and private Facebook group is the type of virtual environment that was constructed for the specific science program. Access to a program facilitator and the presence of the peer mentors provided a specific case for study.

Participants

As the methodology for this study, I employed a purposeful sampling technique to determine the participant pool. I contacted a program facilitator who was using Facebook as a virtual learning community. We met in order to discuss my research and ensure that his use of Facebook would fulfill my research needs. The virtual learning community that was built by the program facilitator used peer mentors as a key component. Peer mentors were students who had prior experience as virtual learning community members. I then selected specific peer mentors from the virtual learning community as additional participants for the case study. The selected participants were not only engaged, but also were willing to build the community by serving as peer mentors to incoming first-year students.

I selected peer mentors who elected to use the Facebook virtual learning community as part of their peer mentorship role. These peer mentors had a documented and researchable history of participation in the use of Facebook as a virtual learning community. The 2012 Facebook group had 38 total peer mentors assigned, but participation in Facebook for the peer mentors was voluntary. The professor gave all 38 peer mentors information regarding his goals for the use of Facebook.

The selection of the 38 peer mentors was further narrowed down based on the criterion of Facebook group usage. I narrowed the list of participants down to 10 peer mentors based on participation in the 2011 and 2012 Facebook groups. In order to derive a meaningful sample, I simplified Ellison et al.'s '(2007) Facebook intensity survey to examine a few key aspects of the peer mentors' Facebook usage. The Facebook intensity tool was created as a tool that asked individuals to rate their own Facebook usage (see Appendix B). I had access to the Facebook groups, which provided the actual usage data for the peer mentors. As Creswell (2013) stated, "it is essential that all participants have experience of the phenomenon being studied. Criterion sampling works when all individuals studied represent people who have experienced the phenomenon" (p. 155). Using the criterion of intensity of usage, I narrowed the pool of 38 down to 10 participants who had participated in both the 2011 and 2012 Facebook group.

In order to address the research questions it was important to establish a baseline of understanding. This required me to meet with the program facilitator to learn what his desired results from using Facebook as a virtual learning community were. The next step in data gathering was to capture and code the Facebook group data from 2011 and 2012. I then attended a lunch-and-learn hosted by the program facilitator. The entire lunch-and-learn session was recorded, and the recording and notes were uploaded to Nvivo software. The document and interaction analysis included the lunch–and-learn PowerPoint presentation, the notes taken during the presentation, and the two years of Facebook group data. After the program facilitator interview, coding the document analysis data, and rating the peer mentors on intensity of Facebook group usage, I generated the participant list. I then followed the

process I defined with the university's institutional review board (IRB) to establish contact with the peer mentors via e-mail (see Appendix C).

The peer mentors were first sent a message via e-mail, then a follow-up message 1 week later if they had not responded, and then a third and final message was sent again 3 weeks after the original message. In the message it was clearly stated that each participant would receive a $30 iTunes gift card in recognition of their time spent in interviews and with member checking. The two interviews could have lasted 90 minutes each, which is a significant commitment. After receiving confirmation that a participant was willing to join the case study, the pre-defined IRB process was followed. I scheduled the two-part interviews once the participants agreed to sign the participant's informed consent document. The interviews served as my main process for data collection with the peer mentors.

Data Collection

For this qualitative particularistic case study, four methods of data collection were employed. Interaction analysis of the Facebook group, which was defined by Maxwell (2013) as looking "for relationships that connect statements and events within a context into a coherent whole" (p. 113). A modified two-tier interview based on Seidman's (2006) model was conducted with five peer mentors. The first interview with the individual peer mentors sought to build a rich background for each participant and his or her life experiences. Each peer mentor was interviewed individually and did not have knowledge of who the other participants were. The first interviews lasted between 30 and 60 minutes and were conducted face-to-face in an empty university classroom or conference room. During the second semistructured interview with the peer mentors, the research questions were explored and discussed in depth. The second interviews lasted from 60 to 85 minutes and were conducted

in a conference room, reading room, or empty classroom. A one-time semistructured interview with the program facilitator was conducted. The interview was conducted in the professor's office and was just over 35 minutes in length. The final method of data gathering was document analysis.

All individual interviews were audio-recorded, transcribed, and analyzed. The transcripts of all interviews were shared with participants for member-checking purposes. Once the participant validated the accuracy of each transcript it was uploaded into NVIVO software for coding and analysis. Each interview began with a fact sheet that captured the basic demographic data of each participant. The goal of the interviews, as Stake (1995) noted, was to develop themes from "the many coexisting happenings" of my case (p. 39). The interview transcripts are kept in a locked drawer in my office on an encrypted thumb drive. The NVIVO software was password protected, and the data files were further protected behind a second password. I conducted the individual interviews with five peer mentor participants. The saturation point, defined by Merriam (1998) as feeling "saturated; that is you begin to see or hear the same things over and over again," was reached with the five participants.

The interaction and document analysis I applied to the Facebook group, the one-time semistructured interview with the program facilitator, and the two-stage, semistructured interviews with the student mentors provided me with multiple unique data points. Though the data were all from separate areas of the case, saturation of information was achieved. The data points provided triangulation of data. The use of member checks helped ensure the rigor and quality of the data gathering process.

Data Analysis

I organized my data and imported it into the NVIVO software package for ease of sorting and retrieval. Then the analysis of the data began with analysis of the transcripts, reviews of the notes taken during the interviews, and listening to the recorded interviews multiple times. I employed what Creswell (2013) defined as a "data analysis spiral" of:

- Data collection
  - File organization
- Data management
  - Reflecting and writing notes
- Reading and memoing
  - Context examination, categorization, comparisons
- Describing, classifying, and interpreting data into codes and themes
  - Coding matrix, data trees
- Representing and visualizing the data
- Presenting the data. (pp. 183–188).

The final step of data analysis was to engage in member checks, or respondent validation, with both the peer mentors and the program facilitator. As Maxwell (2013) noted, "this is the single most important way of ruling out the possibility of misinterpreting the meaning of what participants say and do and the perspective they have on what is going on" in order to validate what was observed (pp. 126–127).

The initial data analysis was the creation of short memos that summarized each interview. These memos were created as audio files and served to help inform second round interview questions and the examination of the Facebook group data. I also examined the

interview and Facebook group data for themes, similarities, and patterns. The examination of data included examining connections between the data points. The connection analysis was to find relationships, as Maxwell (2013) stated, "among data in actual context" (p. 106). The contextual analysis and coding was then used to create categories and coding labels. Codes were created and tracked within the NVIVO software package.

Ethical Issues

Ethical concerns are paramount for me as a researcher. Pseudonyms were used for all participants in this study, including that of the program facilitator. I also did not identify the university beyond stating it was a research intensive university. Finally, I labeled the program only as a science program. These steps are important, but the key is in reviewing and presenting the data from the Facebook group. As part of the IRB approval process, I ensured the privacy of all members of the Facebook group by noting that there would be no direct quotes from the Facebook groups. To ensure maximum privacy for all members of the Facebook group, only paraphrased descriptions were used in the case study. The Facebook group data provided a depth that enhanced the case study and could be utilized while still protecting the privacy of all members of the group. These restrictions were approved by the university's internal review board on September 6, 2012.

All participants were informed that audio files, documents, and data would be kept in a locked cabinet. The participants also were informed that data would not be kept or backed up to any networked file shares, such as Dropbox. All data files were backed up in two different manners— DVD and hard drive—and those media were locked in the same cabinet as all paper files. I also ensured that any transcriptionist, editor, or reviewer who saw the raw

data signed a confidentiality agreement (see Appendix D). These privacy measures were explained to all participants so that they understood that I respected and valued their privacy.

In order to ensure that the data used were not a misinterpretation, the strategy of respondent validation, or member checking, was used with the participants. Maxwell (2013) noted that member checks are "the single most important way of ruling out the possibility of misinterpreting the meaning of what participants say" (p. 126). The participants had the opportunity to review, clarify, and contribute information to ensure the statements recorded had accurately captured their desired meaning. Participants had the opportunity to review the one-page fact sheet that was created at the initial interview and all verbatim transcripts of their interviews.

Goodness and Trustworthiness

Merriam and Associates (2002) described how to ensure quality in a qualitative study. I used seven of their eight strategies for "promoting validity and reliability" in a qualitative study (p. 31). First, I triangulated the data. Interviewing the program facilitator and the students, as well as my analysis of the Facebook group conversation and usage provided me with multiple data points of my case.

My use of Merriam and Associates' (2002) second point, member checks, was described in the ethical issue section. The third point, peer review and examination, was addressed through my membership in a peer working group. I took advantage of working with my peer group during the writing process. The dissertation writing community I joined during the writing stage, however, was not my only avenue for peer review. I also received feedback from a professor mentor at Kansas State University.

Fourth, researcher positionality and reflexivity are fully disclosed in this dissertation. My positionality statement is provided in the following section because it is crucial for qualitative researchers to know their role in being the interpretive point of the case study (Crotty, 1998; Stake, 1995). I also have included a statement on reflection and interpretation in Chapter 5.

Merriam and Associates' (2002) fifth and sixth points that are reflected in my study are adequate engagement and an audit trail. I reached the saturation point by having multiple participant voices contributing to the narration of my case. I also notated, codified, and collected a multitude of information and provided several items in the appendices of this case study.

The seventh point of Merriam and Associates' (2002) eight strategies that I used was the inclusion of thick, rich descriptions in the narrative. I specifically chose a qualitative study because the nature of my case required a highly detailed, well-described examination of the research. The goal of my case study was to provide as thick and rich a description as possible in order to provide others with the opportunity to determine if their situation is similar to my case. If there is a close match, then others may be able to transfer my findings.

These seven points—in addition to including research questions (Appendix E), interview fact sheets, and other data in the appendices—provided a level of high quality data to use within my qualitative case study.

Researcher Positionality

As a researcher, I was keenly aware of both my positionality and my role within the case study. Stake (1995) noted that the researcher "perceives what is happening in key episodes or testimonies, represents happenings with their own direct interpretation and

stories" (p. 40). With the belief that my perceptions would affect the final case study, it is important to know my positionality. As a constructivist who believes in the construction of knowledge through social interaction, I relate closely to the Bourdieuian (1977) theory of structuration (pp. 115–117). My positionality is that socially constructed knowledge impacts how individuals interact with the world around them (Prasad, 2005).

These beliefs are as much of who I am as is my personal background. At the time of this study, I was a learning technology specialist at a small private college tasked with exploring and helping faculty integrate new technologies into their courses. Prior to this position, I worked for 15 years in the private sector as an information technologies manager, but my original professional career saw me graduate with an education degree and spend 4 years teaching high school students. I am highly interested in engaging students, at all levels, using technology.

My philosophical background and positionality within my career created an intrinsic desire to learn more about the present case. As a teacher and IT professional I constantly endeavored to implement the use of technology within the classroom. I wanted to know what meaning these peer mentors have made out of using Facebook. The following quote by Stake (1995) provides an excellent summary: "The function of research is not necessarily to map and conquer the world but to sophisticate the beholding of it" (p. 43). My role as researcher and my positionality contributed to me providing a deeper understanding about the use of Facebook groups in course work and how students perceived that use.

Limitations and Delimitations

I already addressed that my study is limited to a single case of the use of Facebook groups by a selected science program. The delimitations include the use of only one program

facilitator who engaged with the students via Facebook, peer mentors who had completed 2 years of being part of the virtual learning community, and the Facebook posts and discussions of the specific science program. Another limitation is the need to keep online Facebook posts private, which limited the ability to use direct quotes from the Facebook group. This level of privacy was important to protect my participants and all members of the Facebook group. Lynn Roberts (2012) noted in a blog post that, even if one uses pseudonyms and does not mention blog posts, individual quotes "may be locatable through search engines" (para. 3). The limitations described above and the delimitations of my study to one case is important to note, but not impact the goodness or validity of my case study.

CHAPTER 4. THE CASE

Introduction

The purpose of this qualitative case study was to examine and explore how the students who functioned as peer mentors made meaning out of the use of Facebook in an academic setting, and how the program facilitator impacted the growth of the virtual learning community. The case study was designed to examine the case from multiple differing viewpoints to explore how the use of Facebook functioned as a virtual learning community, the impacts of building social capital through the use of Facebook, and what steps the program facilitator took that may have increased the growth of the virtual learning community.

This chapter is a brief introduction to the case that was examined. The first data examined are findings from a data analysis of the information provided by the program facilitator as part of a presentation that was delivered to multiple other faculty members. Included in the data analysis are descriptions, questions, and statements that built depth within the case. Next, the interaction and data analysis of the Facebook groups from 2011 and 2012 are described. Then information and data gathered during the interview with the program facilitator is presented, and finally, there is an introduction to each peer mentor who participated in the semistructured interviews.

The Case

This qualitative case study was bound by location, participants, and subject matter. The case was located at a research intensive university located in a town that primarily supports the university and, as of 2010, had over 60,000 residents. The participants included the program facilitator of the course and the peer mentors who used and oversaw the

Facebook group. The subject matter was how the peer mentors perceived the building of the online community through Facebook groups called "Incoming 2011 [program] Students" and "Incoming 2012 [program] Students."

The program facilitator created the Facebook group in 2010, but admitted he was "never the first adopter of technology." In 2010 the program facilitator in this case, "Professor Walt," set up two Facebook groups, one for transfer students and one for incoming freshman. In total, there were 140 users and 141 total posts. In 2011, Professor Walt created just one group and invited all incoming students to attend. He had 88 members in the open group, but the number of posts increased to 428 posts. In 2012, he created a private group that required students to be added manually; he had 207 members. This last group was still active, and as of October 1, 2012, there were 1,373 posts. (See Table 1.)

Table 1

Number of Virtual Learning Community Members per Year

Year	Group type	No. of users	No. of posts	Post increase from previous year
2010	2 open groups	140	141	—
2011	1 open group	88	428	+287
2012	1 private group	207	1,373+	+945

The case focused on the 2012 group peer mentors. The peer mentors were members of the 2010 and 2011 groups, plus they volunteered to come back as peer mentors to the incoming students in the 2012 Facebook group. Yet, to have a depth of understanding, I

examined data from the 2011 Facebook group, interviewed the program facilitator, analyzed data from the 2012 Facebook group, and interviewed five peer mentors.

After Professor Walt accepted my invitation to participate in my study, he invited me to attend a lunch-and-learn he was hosting. I was not only able to observe Professor Walt discussing the use of Facebook from his perspective, but I also received the PowerPoint presentation he used to deliver his presentation. These two new data points provided further depth to the study of my case.

Document Review and 2010 Summary Presentation by the Program Facilitator

The review of Professor Walt's lunch-and-learn was based on my researcher notes and an audio recording of the proceedings. The room for the lunch-and-learn was set up with long rows of tables, all facing a large projector screen. Along one wall there was a table that had several pizzas as well as cans of soft drinks set out. There was enough seating for 38 individuals. Including myself in the count, there were 19 individuals in the room. The breakdown of attendees was: four male attendees, 13 female attendees, and two male presenters. The presentation began shortly after 12:00 Noon and ended at 12:45 p.m. The presentation was titled, "Beyond Social Media (A Retention Opportunity Hidden Behind a Facebook Mask)" and was 11 slides long.

The first slide showed the title and an introduction to the presentation. Professor Walt included quotes on the bottom of many pages. His quotes ranged from a serious quote by M. J. Riggs (1883), "We come to college not alone to prepare to make a living, but to learn to live a life" to, two slides later, a much more humorous quote by cartoon character Homer J. Simpson: "English, who needs that? I'm never going to England."

Professor Walt delivered the presentation wearing jeans and a button-down shirt to a relaxed audience, but he was not fully at ease with the technology and stumbled once or twice with switching the slides before delivering a steady presentation. He used one slide to cover why incoming students may have issues adjusting to college life, and then he used the next four slides for presenting information on retention and the cost to the university when students are not retained.

Professor Walt took a noticeable pause after he finished the discussion on retention issues, associated costs, and his department's retention numbers. The pause, roughly 15 seconds, was just long enough to notice but not too long to cause comment or stirring among the crowd. Professor Walt then moved on to four slides about the Facebook group. He had a nice, loose presentation style while talking about Facebook. At the beginning of the presentation, he said that Facebook was the retention "piece I'm not excited about." He related how he set up two different Facebook groups in 2010, and that he was "hesitant to use Facebook." His four Facebook slides covered the Facebook group makeup, the breakdown of posts, and two quotes from students.

The final slide of the presentation was entitled, "Failures and Successes." The slide discussed how he began the first group too early, how he had two different groups, and how he only had a few group administrators, which made the work overwhelming. Professor Walt related that it was quite a bit of work, but he referenced back to an earlier quote that read:

> This group for incoming freshmen was very helpful for me personally because it gave me a chance to talk to other [university] students before we even got here. I think that it is an advantage to meet people in your major before you come to a college

> especially if your [sic] an out-of-stater like myself. It was a way to make the transition easier. It also gave me an open opportunity to ask my classmates questions about various things, such as clubs, classes and anything else that crossed my mind at the time. Thank you for setting this up for us and I hope that you continue to do so for other incoming freshmen.

At the conclusion of his presentation, Professor Walt opened up the floor for a question-and-answer session.

Most of the audience members were dressed in casual dress. The audience was made up of educators and administrators. Several of the professors wore jeans and school sweatshirts, but there was an older female professor who wore dress slacks and a shiny embroidered sweatshirt. She kept adjusting her hair, even though it was firmly hair-sprayed into place. While she was adjusting her hair and fidgeting some in her seat, the first question came from one of the males in the room. I was encouraged, as the question was about the students. He asked, "How did the students adjust to using Facebook?" Professor Walt responded with, "They are on there all the time." I thought the back-and-forth dialogue on the students might delve into the question of how the students felt about professors using Facebook. Instead, the concern was, do students "really use Facebook that much?"

Professor Walt seemed a bit taken aback by the follow-up question about student use of Facebook, and he moved the discussion to the use of peer mentors. Another question, from someone sitting near the front, was asked about the continued usefulness of Facebook. She asked, "Did Facebook serve as a good way to smooth the transition to college, or was there more use for it?" Professor Walt stated, "I found far more uses for it than I thought."

He then went on to discuss how the students used it to ask questions, sell sporting event tickets, arrange roommate situations, and work together to carpool home.

The older woman finally spoke up. She had been prepping her question for some time, but when she began talking she did not have a question. Rather, she was conflicted about using "something new," as she referred to Facebook. She quickly moved from one statement to the next without really asking a question, but each statement seemed to increase her nervousness. She first talked about signing up for Facebook, "I think I did it last week." She was concerned that she would not be able to "get back into" Facebook. She even went so far as to state, "I don't remember how I signed up." She said she needed to understand what the point of Facebook was. Professor Walt addressed her concern by pointing out it was a more effective way to communicate. He discussed that Facebook is just another way to reach out to students, and that he's "not even competent in Facebook."

The presentation was nearing the end of the advertised time, and the older woman seemed to be settled and was writing furiously in a notebook as the professor who was sitting in front of me talked about how he was thinking of using Facebook. The professor talked about his plan to possibly create a group, or maybe a page, but he wanted to "think about using Facebook" in his coursework. He asked what turned out to be the last question: "What were the expectations that Professor Walt held in using Facebook?" Professor Walt, in an understated way, simply said, "I had no expectations."

Professor Walt thanked the crowd, thanked the graduate assistant who was helping him with that year's (2012) Facebook group, and then invited further questions via phone or e-mail. As the presentation ended, some of the attendees sat silently, others finished up their pizza, and some filed out immediately at the end of the presentation. A couple of the

attendees approached Professor Walt and asked a few questions or made comments, but the room was too noisy to hear exactly what was said. As the room emptied, Professor Walt thanked me for coming, and I thanked him for the invitation.

Document Review: Facebook Group

I reviewed the Facebook groups from 2011 and 2012. The groups were entitled, "Incoming 2012 [Program Name] Students" and "Incoming 2011 [Program Name] Students." The 2011 Facebook group was fairly static and did not have many postings in 2012. However, as I began the data analysis of the Facebook group posts, there were four new posts within the group since the beginning of the 2012 school year. The 2011 Facebook group had a total of 428 posts at the time of coding. The 2012 group was still an active Facebook group. I collected data through September 30, 2012. The 1,373 posts have been added to frequently since that date, but I have only examined and coded the data collected through September 30.

I generalized the data I examined from the two groups into four categories. The four categories were knowledge sharing, selling items, housing items, and general group items. The definitions I used for each category were as follows:

1. Knowledge sharing: requesting specific data, asking for help on a topic, responding to requests with an answer, or sharing knowledge that would be helpful to the entire group.
2. Selling items: listing items for sale or requests to purchase those items (e.g., sporting event tickets, books, or other class materials).
3. Housing items: listing of housing-related information (e.g., posts or responses to housing for rent or sublet roommates wanted, and questions about living arrangements).

4. General group items: Listings that did not fit the other three categories; this catch-all category included jokes, pictures, links to other Facebook groups that are not academic in nature, and general group social invites.

I did not code one-word answers or posts where just a character, such as a question mark or exclamation point, was presented. I based my coding using just four main themes on Creswell's (2013) process of "lean coding" (pp. 184–185), which narrows the coding into just a small number of themes. Those themes would then have several categories that comprise those main themes. The 2011 Facebook group had 428 total posts, and I was able to categorize 261 (61%) of those posts. The breakdown for the 2011 Facebook group posts is shown in Figure 2.

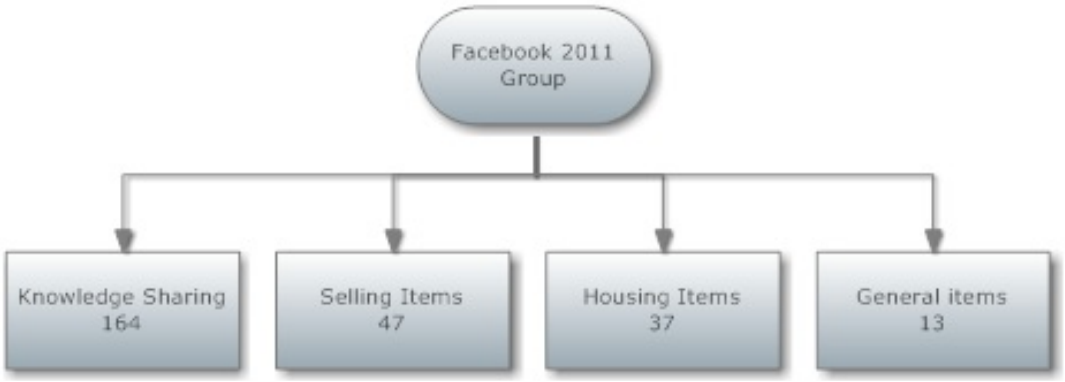

Figure 2. High level coding for 2011 Facebook group.

The knowledge sharing category was of most interest because it contained requests for help, exhibitions of trust, examples of reciprocity, and the sharing of knowledge. I coded to these subcategories based on Kilpatrick et al.'s (2003) definition of necessary parts of a learning community and also based on knowledge sharing items that Vygotsky (1962) found

as necessary for social learning. The breakdown for the 2011 knowledge sharing category is shown in Figure 3.

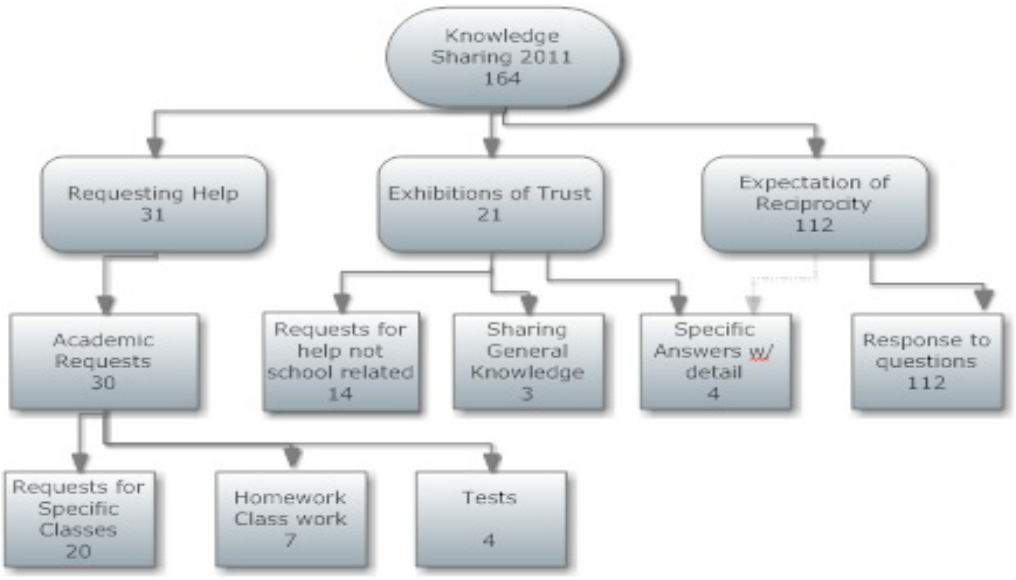

Figure 3. Detailed coding of knowledge sharing theme—2011.

The highly specific answers showed exhibitions of trust (by delivering very detailed answers and asserting full knowledge) and expectations of reciprocity. Reciprocity was assumed because individuals who share highly specific answers expect similar high-quality answers when they request knowledge from the group.

The learning community in 2011 had 112 nonspecific general responses to questions. Quite frequently these general answers would be, "Check the syllabus," or "Use the website to find your answer." Those responses were general answers that did not provide specific or highly detailed answers. General answers were nonspecific, though in 2011 there were four highly detailed answers provided in the Facebook group. Typically, highly specific answers were posted when one student requested a detailed response to a homework question. The

answers would oftentimes include a link to a website that supported the information provided in the detailed answer. This type of answer takes quite a bit of trust because the specific example was not the first response to the student's question, was not put forward by the program facilitator or a peer mentor, and also ran counter to two previous general answers. The one item that did not occur in 2011 in a measureable manner was polite replies of thanks for providing information.

In 2012, there was an increase in all types of posts, including the number of polite replies and specific responses. The 2012 group was set up as a private group, which may explain the increase in posts. The 2012 group also was mostly controlled by the peer mentors. The increase in the total post counts from 428 in 2011 to 1373 posts in 2012 may be because the group was not open and/or because of the increased authority of the peer mentors. Of the total of 1,373 posts, 1,018 (74%) were coded. This is an increase of 13% of posts coded compared to the 2011 Facebook group. The post breakdown for the 2012 Facebook group is shown in Figure 4.

One fact that is obvious is the increase in sheer numbers of posts in the 2012. The biggest increase is seen in the knowledge sharing posts. There was an increase of 524 posts, but there also was an increase in the types of knowledge sharing posts. The differing types of posts can be seen in Figure 5. The differing makeup of the 2012 Facebook posts that were classified as knowledge sharing is far more diverse than for the 2011 Facebook group.

Figure 4. High level coding 2012 Facebook group.

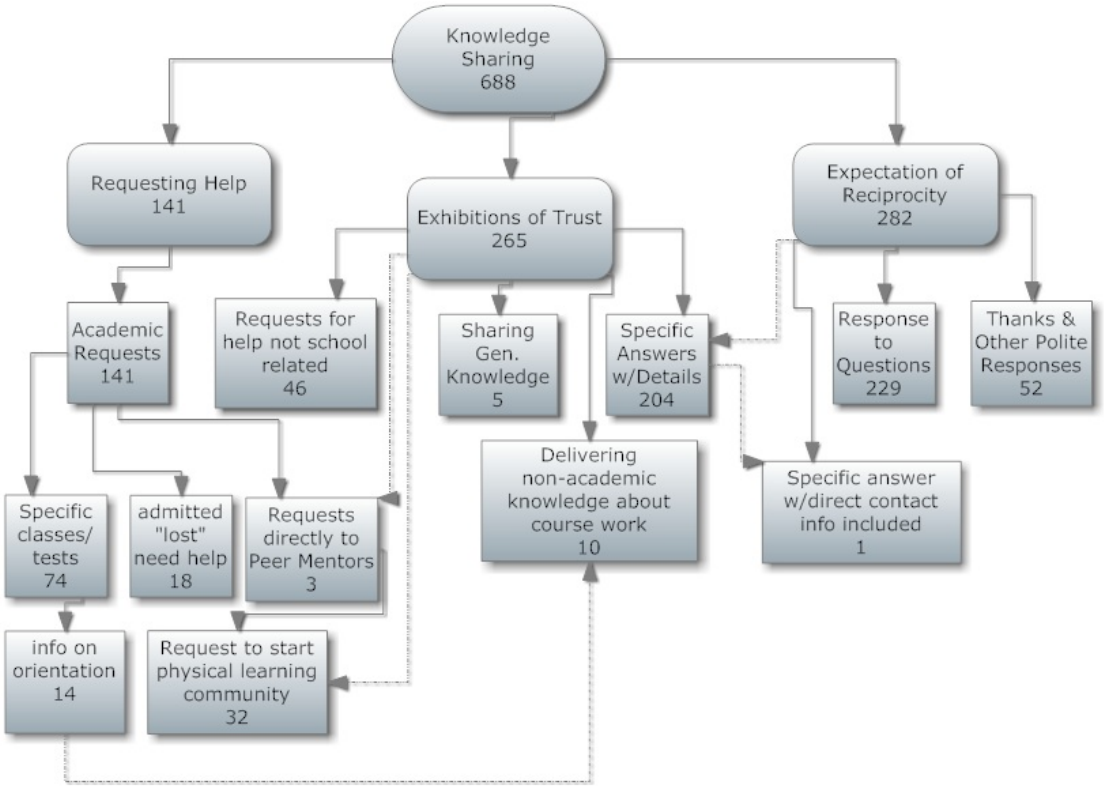

Figure 5. Detailed coding of knowledge sharing theme—2012.

One posting type that stood out in 2012 as both being a request for help and also an exhibition of trust were posts in which students would request that other students join them in a study group. These study groups were both short term (for one test) and long term (for the

course) study groups. This activity is an illustration of Lenning and Ebbers's (1999) belief that virtual communities can be both physical and virtual. The ability to use a virtual community to create a smaller physical community points to one of the main differences of the 2012 group over the 2011 group.

The 2011 group was an open group with minimal peer mentor involvement. The group did show an increase in the overall number of posts and more posts that were academic in nature. The group in 2012 was one that showed increases in both number of overall posts and number of knowledge-sharing and academic-related posts. The community as a whole in 2012 was centered on the involvement of peer mentors. This involvement is seen by direct requests for peer mentors to respond to specific questions. The increase in specific requests and specific answers may be attributed to peer involvement, but it also may be due to the increase in security settings that came with the 2012 group being a closed group.

Interview: Professor

Professor Walt was situated in an office with a shared entry. Upon walking into the shared area, Professor Walt's office was directly across from the door. His office had the same generic beige wall coloring that carried in from the larger reception area. He had a large wooden desk with a wall of shelves on the opposite wall. Across from the doorway were two windows that looked out onto a hallway. The metal miniblinds were pulled down, but just enough florescent light flowed in around the sides to ensure that visitors could tell that the windows did not open to the outdoors.

Professor Walt and I had had communications on a couple of occasions, but this was my first time meeting with him since I attended his lunch-and-learn presentation. Prior to beginning the semistructured interview questions, I used the first few minutes of our

interview discussing the lunch-and-learn and I thanked him for providing the PowerPoint presentation. Professor Walt was eager to read and examine my research. He had been accommodating with his time and more than helpful in providing me access to his materials. I stressed again, before proceeding with his interview, that this was a qualitative research study. I assured him that I would provide him with relative details and information from my research once I had finished with all of my interviews.

As the case was regarding a virtual online learning community using Facebook groups, I started off by asking Professor Walt about his technical expertise. When asked about his technical expertise he at first was taken aback and finally stated, "I am never the first adopter of technology but I have used Camtasia Relay here, I have taught online courses where we have used WebCT, and am currently using Blackboard in a course." He discussed that he still did not do online testing as he liked to stick with things that work for him. He believed that face-to-face is an important method of instructional delivery, but was willing to try new things. I ask him: "So, even if you have a few hesitancies, you aren't afraid to try?" His response was, "Right, I would say, probably just too lazy to learn something new."

Professor Walt struck me as busy, but not lazy. I moved on, and one area that I examined related to his technology expertise was his experience with Facebook. I asked him what his comfort level and level of experience was with Facebook. He first started using Facebook to keep in touch with his son who was overseas for a trip. He assumed once his son returned that he would move on from Facebook and that would be the end of it. Instead, he had former students and alumni reach out, and he began to use it as a way to keep in touch with former alumni and old friends. I asked him specifically about the 2012 Facebook group and why he set it up to be a private group and what drove his choice. He was not aware he

had made it a private group; he stated, "It was probably my lack of ability of knowing what I am doing, but I like the fact that they have to ask to join, it does give a little more control."

The interview continued on to other social media, and he mentioned that the department was using Twitter, but that he was not engaged in using any other social media. I then moved the conversation in a different direction: When he went away to school how would he have viewed the use of Facebook to introduce students to the program and help them through their first year of classes? He stated,

> I was one of those kids that probably would have benefited enormously and never used it. I was not much of a joiner; not so good at reaching out and I am not sure that I would have felt comfortable doing that.

I asked him where the idea to use Facebook came from, and he credited his peer mentors. He discussed how Facebook was blending his personal life with his work life, so he could see the social application of Facebook, but that the Facebook group was pushed by his peer mentors. He told me,

> My peer mentors had brought it up that it would be neat if the students knew who each other was so they could friend each other and then that led to the discussion of creating a group where they could, new students could find each other before they came here.

He reiterated that his use of Facebook was more of a social use than for any educational purpose. His Facebook group was not required for the course or the program, and when I asked him about requiring the use of Facebook for coursework he replied, "I'm not a fan of that." I probed for more detail and he responded with, "Some kids just don't want to join Facebook." He expressed that he thought Facebook might be set up in such a

way that students only join for that course, but he did not believe in "using a social media thing for nonsocial purpose."

Purpose of Facebook Group: Program Facilitator

The discussion of the use of Facebook for a nonsocial purpose led to the question of what the program facilitator perceived as the purpose of the Facebook group. During the lunch-and-learn he stated that the use of Facebook was a simple throw-in piece for a three-part retention plan. I asked, "What was your original plan for the usage of the Facebook group?" His answer was simple and not exactly what I had anticipated based on his discussion of using Facebook for a retention tool. He stated that his plan was, "Strictly for students to get to know each other and kind of see what the other students would be like coming in."

I followed up by referring back to his stated goal of retention and asked specifically about the retention potential. He talked about the department's review of literature and how that review found that students who had a feeling of connection to the program were far more likely to continue on to program completion. Professor Walt went on to say, "Connecting with an advisor, connecting with a peer mentor, connecting with each other, those were kind of our goals."

Through two more questions on the purpose and goal from different angles, the answer kept coming back to student connection. I questioned Professor Walt on the use of the Facebook group and if he thought there would a huge difference in the sense of belonging if the group did not exist. His response was, "I don't know that it made much of an impact the first two years [2010 and 2011 groups], but this year I feel like it made an impact and especially with students feeling connected to the peer mentors."

The connectedness and role of the peer mentors were central to the case study. The program facilitator, Professor Walt, saw the connectedness and involvement of the peer mentors as being key to the success of the group. He saw 2012 as the most successful year to date. The increased peer mentor involvement, the secure environment, and overall increased involvement all pointed toward a more successful Facebook group.

Introduction to Peer Mentors

The student mentor group was made up of 38 volunteers, all of whom had to interview for the position of peer mentor. The peer mentors were not required to participate in the Facebook community, but 35 of the 38 peer mentors did sign up to be part of the group. My participant pool was drawn from those 35 peer mentors. In terms of gender breakdown, 33 of the 35 peer mentors were female. The two male participants did not participate in the Facebook group enough to qualify for participation in my study. The top 10 Facebook group participants were all invited to participate, and five agreed to participate.

As part of the definition of the case that is part of the study I will introduce each of the peer mentors. All the peer mentors were students who had been members of at least the 2011 Facebook group as a member and were current members of the 2012 Facebook group. They all had been members of the university for at least two years, were major participants in the Facebook group, and felt that peer mentorship was an endeavor that provides both short- and long-term benefits.

Carol

Carol was a college junior who entered the university with a year's worth of college credits. She graduated from a small rural high school that had a graduating class of 43 students. She made the statement, more than once, that her graduating class was smaller than

the number of students who lived on the floor in her dormitory. Her mom was an elementary school teacher, and her father was a construction manager, and together with a younger brother, she grew up outside of town in a rural setting. She summed up her early years by saying, "I had a pretty good childhood."

Carol was an extremely active student during her high school years. In addition to taking college courses during her high school years, she also was a member of the choir, band, cross country team, track team, and speech and drama club. Her time spent in speech and drama played out during her interviews, as she spoke in a clear and smooth manner. Her move to the university had not lessened her level of activity.

Her current activities included being in one of the university choirs, being a student assistant in a research laboratory, and being employed in two different positions within the program itself. She described herself as being a "busy kid," and her listing of activities, plus a full course load, and the duties of the peer mentorship, added up to her having an extremely full schedule.

Carol shared that she felt like she was fairly comfortable with technology. She claimed that she was no "master of Facebook," and she carried a "lame flip phone," yet she still was an adept user of Facebook. Carol was the most active participant in the 2011 and 2012 Facebook groups. I asked her about the time she spent on Facebook and how much time she thought she would spend on Facebook before she came to college. Her response was,

> I knew I was going to spend a little more time on Facebook than I should have. I've gotten better at it. I work quite a bit and I have found that the more time I work the less time I spend on Facebook, um, but on breaks and any time I get a free weekend, I

spend a lot more time on Facebook than I have ever anticipated. So between that and Pinterest, I can, yeah, waste a couple hours doing that.

When I asked her in our second round of interviews why she spent so much time, even though she was so busy, her reply was, "I kind of have this mom complex where I feel like I have to take care of everybody." The desire to help out others made Carol the peer mentor with the highest number of replies in terms of posting and commenting within the two Facebook groups.

Mabel

Mabel was a college sophomore who came from another university town in the state. She was keenly aware that her hometown is the cross-state rival of her current university. Mabel's high school graduating class was between 300 and 350 students. Her hometown population was over 65,000, and her move to college meant she did not have to adjust to a vastly different locale. During her high school years Mabel was involved in cross-country and volleyball and was a member of the national honors society. Her college activities were not as numerous as Carol's.

Mabel was a member of the honors college and was involved in two clubs that were the focus of her current program. Mabel had an easy-going manner, but she was a bit nervous at the beginning of the interview. She slowly began to go into more detail and ignored the few minor notations that I made as we worked through the interview protocol. As the interview progressed, she mentioned Internet privacy and security a couple of different times. I asked her to provide some details on how she kept her profile and online presence presentable. She indicated that she examined all pictures she was tagged in on Facebook and would ask individuals to pull down the pictures. I asked her how secure her

profile on Facebook was, and she said she had it pretty locked down: “People that I am not friends with can look at my page and all they can see is like my profile picture and my “About” stuff, but they can’t see all of my pictures or all of my wall posts.”

Mabel did admit that she would check Facebook during classes and also would spend an hour or two a day on Facebook and Tumblr. Mabel did see positive potential in using social media. She used Facebook to examine individuals before she would go out with them, and she felt more connected to people. When discussing the positive aspects of social media, she believed it was becoming more of a networking tool, but she also liked “being able to share my life with my family and friends that I don’t live near me.” Mabel had a balanced view of the use of social media, and she felt that being a peer mentor included helping her mentees navigate using social media in a positive manner.

Irene

Irene was a slight young woman who came from a small consolidated rural school district. She had a graduating class of 52 students in her high school. Irene was involved in several activities during her high school years. She participated in drill team and volleyball, was on the golf team and student council, was a member of the national honor society, and was elected class president two years in a row. She mentioned that she lived outside of town, and being involved meant she spent a lot of time at school and with her friends.

In college she was no less busy. She was a sophomore who had been a peer mentor for just one year. She was an active member of the 2011 Facebook group, and the 2012 Facebook group was her first year as a peer mentor. She was involved in several clubs and groups revolving around the program, plus she was active in intramurals. She was on intramural volleyball and broom hockey teams.

When I asked Irene how technically competent she was, on a scale of 1 to 10, with 1 being not competent, she quickly responded that she ranked herself as an 8. She expressed that she was comfortable with technology and social media. She was using Twitter, Skype, and various chatting programs in addition to Facebook. Irene clearly was comfortable with technology and mentioned that, even with an older cell phone, she used it to tweet while walking across campus.

I asked Irene about her use of Facebook and social media once she arrived on campus. I wanted to find out if she had found any academic benefit from using Facebook in a social manner, so I asked, "When you showed up here, how quickly did you start adding people to your social network on Facebook?" She replied, "Pretty quickly" and went on to describe:

> I think [a classmate] was a little sketchy on giving [his phone number] out to me, so he added me on Facebook and then we kind of chatted on when we were going to meet up and go over our philosophy study guide together.

Irene would answer questions in this manner throughout both interviews. She would take a question and provide quite a few details in her answer.

After Irene's comment about her classmate not quite trusting her with his phone number, I asked her if she was concerned about privacy on Facebook. Irene's story of her study partner's reticence in providing a phone number made it appear as if students protected their cell phone information more so than their Facebook information. Irene talked about the ability to check out other users' Facebook pages. I asked, "The term Facebook 'stalking' has come up with different interviewees; have you ever done that?" Irene replied, "Yes, I have

Facebook 'stalked' people." I then asked, "Okay. Do you think that's a good thing or a bad thing?" Her response was,

> It depends on how much "stalking" you are doing. If you are going through all 550 of their photos, that's a little intensive but I usually just try to go through the first two, so then I kind of have a general sense of their personality, even though that's probably not a good thing to do.

Irene's capabilities carried through her interviews. She was confident and it was easy to see why her high school classmates elected her class president two years in a row.

Nora

Nora walked up to me as I was walking in the building to conduct the interview and introduced herself. The timing of the interview, on a weekend, meant the building was mostly empty, and it was not a stretch for her to assume I was the person there to interview her; yet, she was confident enough to walk up and introduce herself. She was friendly, bright, and quite talkative. Nora would take each question and answer as if she were racing to provide as much information as possible.

Nora was the participant who had been with the program the longest. She was a junior from the East coast who had been a member of the program for three years. Nora had been a peer mentor for two years by then and was not overly active in the Facebook group as a member. As a peer mentor she became more active in the Facebook group this past year. Even though her activity on the Facebook group had increased, she was no stranger to social media.

Nora's first use of social media was with MySpace, a precursor to Facebook. When I asked her about her early social media use, she shared, "MySpace was big, everybody used

it." This was during her eighth grade year. I asked her when she made the move from MySpace to Facebook, and she discussed how she made the move in ninth grade:

> I still had my Myspace and my Facebook, and I was debating which one was better, but then when everybody switched to Facebook because it was, "friendly" and only your friends could see it, so that's when everybody switched over and deleted their Myspace account.

Nora had been a regular user of social media since her middle school years. She did admit that she was not a big Twitter user, and she told me she had deleted her MySpace account, so her main use of social media was Facebook.

When discussing her use of social media when she first came to the university, I asked her, "How quickly did you start adding your classmates to your social networks?" She stated, "It's pretty much the day you meet that person, they usually find you and add you, which is interesting." When I asked her why that was interesting, she replied:

> Well I don't know, it's like, "I just met you." When I create my role, or my little guideline, when I add someone, it's 'cause I really know you, I'm interested in continuing our friendship, I could see us being friends for over a year. If I only see you in class, like, you know, for like 50 minutes every day, I don't talk to you at all, I don't really need to be your friend on Facebook.

When I questioned Nora about privacy and her rules on Facebook, she struck the same note that many of her fellow peer mentors hit: she had strict guidelines about photographs on Facebook. Like other peer mentors, she had a family member (aunt) who acted as a censor. The peer mentors uniformly mentioned that they worked to keep what

they considered inappropriate pictures off of their profile on Facebook. Nora, like the others, asked users to remove pictures in which she was tagged that had blatant alcohol on display.

Nora was different than the other peer mentors in one way though. She did not keep in touch with her high school friends via Facebook. She stated that she "wasn't really good friends" with her friends in high school. She did mention that if she did have contact with her high school friends it was not through Facebook; rather, it was through texting. Nora did not keep those local ties and had built her entire social network based on the newer, weaker, ties that she had established in her three years of college.

Ida

Ida was a slender, quiet, young lady who often took a short pause before delivering an answer. Her answers were all thoughtful, and she even asked me once if she provided enough details in her answers. Ida was attending the university from a neighboring Midwestern state. Ida was not a major consumer of social media; when I asked her about which social media she was using, she stated that she used only Facebook. When asked about her use of social media prior to attending college Ida stated, "My friends had Myspaces and Facebook, I just didn't really care about it." The lack of social media usage made me question her technical capabilities. I asked her what her level of technical competence was, and her response was, "I can kind of fumble my way through most of [technology]. I'm better than some, but I'm not good by any means."

Ida's lack of social media usage and her belief that she was lacking in technical skills were a first among the participants. She had a self-deprecating manner, but her self-assessment of technology and social media usage caused me a moment of hesitation during that first interview. I asked her what she saw as the positive benefits of social media. Her

response was, "I think it's a nice way to stay connected with people that you really wouldn't stay in touch with." She went on to relate how her high school class president had already created a group in order to make future class reunions easier to coordinate. She then went on to explain how she thought Facebook should be used:

> I wouldn't really use it to stay in touch with people that I'm really close with, like my best friends. I don't need to look on their Facebook to know what they're doing, but people that are just kind of acquaintances. It's a good way here [at the university] to find someone in your class if you need to study, because it's like, "Oh, do you want to exchange phone numbers?" "Not really, I've never met you," but you can always look them up on Facebook and message them.

I then asked her in follow up, "a way to be connected," and Ida interrupted me before I could finish my question: "[But not] overconnected."

Ida's lack of social media usage may have differentiated herself from her peers, but her belief in the power of Facebook to serve as a connection device did not. Yet, her self-scoring of low social media usage and low technical adeptness did not make her feel as if she was an outsider. I asked her to rate herself on a scale of 1 to 10 for Facebook usage, with 10 being a heavy user and 1 being someone who logged in once a week. Her response was, "I'd say probably 5, since I have it on my phone, it's just convenient if I have 10 minutes here or there just to look; I never really post anything."

Ida was more of a consumer of Facebook overall, but was an active participant as a peer mentor. She posted both as a group member and as a peer mentor, but not in the same volume as did Carol or Mabel. She felt a duty to make sure that the group for which she was a peer mentor knew that she was always there to help. She saw Facebook as just one way to

stay connected with her mentees, but viewed herself as a middle-of-the-road user of Facebook.

Summary of the Case

In examining the case of how the students perceive their use of Facebook groups I used multiple data sources. The use of multiple sources allowed me to derive a clearer understanding of the Facebook groups, the participants, and the use of the peer mentors within the Facebook groups. The varied sources provided rich descriptions that laid the ground work for an interesting case.

The presentation and question-and-answer session that followed provided the first examination of the program facilitator's goal of the Facebook groups. The analysis of the two Facebook groups, from 2011 and 2012, helped establish the virtual learning community and also highlighted the growth in the viability of the community. Interviewing Professor Walt added another layer of information that illustrated the natural growth pattern of the virtual learning community. The interviews with the peer mentor participants were the fourth data source that was used to evaluate my case study.

The five peer mentors were quite different from each other. Three of the participants were from in-state high schools, whereas two were from out of state. Three participants were sophomores, whereas two were then enrolled as juniors. One participant ranked her skills and abilities on the low end, two ranked themselves as technically in the middle, and two ranked themselves near the high end of technical abilities. Of these participants, three had participated as both members and peer mentors, whereas two had participated in the Facebook groups only as peer mentors. The participants, the analysis of the Facebook

groups, and the information from the program facilitator provided triangulation of data that helped provide a triangulated examination of my case.

CHAPTER 5. RESULTS

Introduction

The purpose of the case study was to examine how peer mentors in a specific program utilized Facebook as a virtual leaning community, how they made meaning out of their role as a peer mentor in the Facebook group, and the role of the program facilitator in the development of the virtual learning community. The study also explored how students viewed the use of Facebook and if the use of Facebook aided in the development of social capitol. The case study also investigated how students used Facebook and how they viewed the program facilitator's role in using Facebook as a virtual learning community.

This results chapter will examine themes that evolved during the coding of all the data gathered for the case study. In following Creswell's (2013) process of "lean coding" (pp. 184–185), which narrows the coding into just a small amount of themes, the data were organized and analyzed around four main themes. Those themes were: (a) the student's perception of the use of Facebook for the program group, (b) the use of Facebook and the building of social capital, (c) the program facilitator's expectations and the students' perception of Facebook as a virtual learning community, and (d) connectedness. Each theme is presented in separate sections, which serve to organize the results.

In the section entitled "Student's Perception of the Use of Facebook and the Virtual Learning Community," I explore the early technical competence of the peer mentors, the general benefits that Facebook brought, the use of Facebook prior to the arrival of both peer mentors and students to campus, and the thoughts and feelings of the peer mentors on the Facebook group. In the second section, "The Use of Facebook and Building of Social Capital," I explore what benefits the peer mentors found in the Facebook group, the level of

engagement of the peer mentors due to Facebook, how they viewed the building of social capital, and the specific benefits the peer mentors received from participating in the Facebook group. In the third section, "Program Facilitators Expectations and Student Perceptions," I investigate the peer mentors' views on interacting with faculty on Facebook, the program facilitator's goal for the Facebook group, and the students' perception of that goal. The fourth section, "Connectedness," is an examination of the peer mentors' overall perception of how to build a successful virtual learning community.

The findings and results in this chapter are based on the following data sources: one semistructured interview with the program facilitator who founded the Facebook group, observational analysis of a 1-hour presentation by the program facilitator to a meeting of his peers, review of Facebook postings to the Facebook group for 2012, review of the postings to the Facebook group for 2011, and two semistructured individual interviews with each of the five peer mentors from the 2012 Facebook group. The peer mentor interview participants contributed to the themes at varying levels, but they did contribute to all four of the themes.

Student Mentors' Perceptions of Facebook and the Virtual Learning Community

The student mentors all completed two semistructured interviews with me as part of the case study. During the process of examining Facebook as a virtual learning community, I found it key to ascertain the peer mentors' level of comfort with technology. The purpose of my questions on technical and Facebook confidence was to see if the peer mentors believed they had a wide variety of technical competencies. When asked about how adept they were at using technology, and Facebook, the answers ranged from Ida saying, "I wouldn't say I'm any sort of master of Facebook or figuring out how to post things" to "Facebook is pretty straightforward." The other participants responded in a similar fashion. To probe further on

competency and usage, I asked where they would rate themselves in terms of Facebook usage on a scale of 1 to 10, with 1 meaning posting once a week and 10 meaning posting hourly. The answers, in numerical terms, ranged from Ida who rated herself a 5 to Nora who rater herself an 8. Ida replied, "I'd say probably 5, it's just convenient if I have 10 minutes here or there just to look, I never really post anything." Yet, when describing their usage, four of the five peer mentors stated something very similar to Ida's belief that Facebook was "pretty straightforward."

The usage of Facebook by the peer mentors led to the question of what they perceived as the benefits of using Facebook. Irene brought up the ability to communicate without giving away too many personal details. She spoke specifically about communicating without having to give out one's phone number. She related this brief example:

> In my philosophy class for example, I sat by a kid, and philosophy is not my cup of tea, so we studied together, but I didn't have his phone number 'cause I think he was a little sketchy on giving that out to me. So he added me on Facebook, and then we kind of chatted on when we were going to meet up and go over our philosophy study guide together.

Nora mentioned the benefit of speed when using Facebook: "You always know somebody's on Facebook, so it's the fastest way to get in touch with them." Irene and Nora were not alone in discussing the two main benefits of Facebook as being ease and speed of communication. The participants all protected their phone numbers; phone numbers were only for their closer friends and relatives, but for the weaker ties of a classmate or occasional acquaintance, Facebook was mentioned as the preferred method of communication.

Carol discussed the communication benefit of using Facebook from the perspective of a member of a student organization. She stated that she was part of a club that used Facebook to communicate. She noted,

> We have, um, you know events that we will put up for some of my clubs on Facebook and I kind of use it to keep an eye on what we are doing, and it's nice if you forget, or you miss the e-mail, or delete the email, because you get a thousand of them a day, to kind of keep up with that [communication] on Facebook instead.

Carol, as an involved student, relied on Facebook to receive communication about the clubs she was involved with. When asked directly if she would say Facebook was a central part of her college experience, her reply was,

> I would say so, yeah, I think that it is a major part. I wouldn't say that it would be extremely lacking if I didn't have Facebook. I have known friends who have gotten sick of it and just deleted their accounts and they've been fine, you know, they aren't ostracized or severely lacking, but I think that it has helped, and it is a good way, especially with clubs and things like that, to keep people involved.

The idea of involvement was a piece of the communication benefit for several other participants. Carol noted, "I feel like this year's peer mentor class is a little more engaged than the one that was in charge of my class."

The benefit of communication and engagement also was discussed by Irene. She thought back to her experience as a mentee the previous year and noted, "I think that [a more involved group] would have been beneficial to me if I would have had, you know, someone to ask a question to and have them answer." Mabel saw the benefit of question and answer on Facebook slightly differently. She noted that as a peer mentor, "I don't ask a lot of

questions but being able to see other people ask questions and getting answers or helping other people find things" had made her explore the university's website. She felt she then knew more about her program and her university. Professor Walt noted that the use of Facebook to deal with questions and answers was a great benefit: "I would get tons of e-mails from families and students all asking the same questions and now they ask it on Facebook and I answer it once."

When I prompted Mabel about the purpose of Facebook for college students, her response was,

> Sharing everything with everybody else and like keeping [in] touch with people but I think it's also like turning into networking. Um, not in a huge way but you're friends with coworkers, or you know a friend of a friend where you want to get an internship. It's an easier way to find people rather than to have to go ask a professor.

The benefit of networking was touched upon by all five of the peer mentors, and it was not always used in the same manner as being connected. Networking for the participants meant a business network. The Facebook group even had one student mentee comment that the group was on Facebook, not a networking site like LinkedIn (2012 Facebook Group Post). Ida was another peer mentor who specifically mentioned networking. When prompted to discuss networking as a benefit in more detail she stated, "The people that I'm still friends with now, like if you are applying for a job at a company that they work at down the road, you could get back in contact with them."

Nora also mentioned another benefit that is similar to involvement, networking, and engagement on Facebook. She mentioned a theme that continued to develop throughout my interviews. She raised the idea of connection. She stated that one of the benefits she could

foresee once she left school was using Facebook "to connect with companies and coworkers." The idea of connection became a prevalent theme and one that I will address later in the "Connectedness" section of this chapter. As the benefits of Facebook were discussed, I inquired about the use of Facebook in choosing the university.

The peer mentors were in a specific program and all made mention that the program was the main purpose for selecting to examine attending a university. Of the peer mentors, most applied to the university as the first or only choice, except Mabel. She mentioned examining five schools. Mabel was also the lone individual who mentioned that she used social media in looking for a school. I asked her, "What about social media when you were looking at these other schools? Did you check out their social media offerings at all?" Mabel answered, "I looked at a lot of the Facebook pages for the schools, and their websites." Mabel indicated though, that the science program in which she was currently enrolled was the main draw.

Another interesting discovery that was made during the interview questions on college searching and social media was about the use of social media prior to arriving on campus. Mabel noted, "I actually met my roommate on that [university] page and she's from California, so I had never met her before, but we met on that page and then became Facebook friends and then decided to live together." The use of Facebook to create a new bond, to help build community, was also a benefit according to three of the five peer mentors.

Nora stated that the Facebook group is exciting because "it's a growing community, it's not just for freshman you know or transfer students, it's for everyone that's in the [program]." She believed that the student mentees who were currently part of the group would continue to participate in the group. Irene spoke of the future benefits of being part of

the Facebook community by noting that "knowing people" and being able to look them up years down the road is a benefit. Carol spoke of the Facebook group as a community by stating, "I feel like it made me see that we all had a lot in common, that there was more of a community here than I thought."

I asked directly, "What does it mean to you to have that kind of community around you?" Carol addressed the idea of community in a program that requires further pursuit of education in highly selective graduate school programs:

> I really enjoy it because, especially in the first couple of weeks I was here, it was really easy in the [program] group of kids to get really competitive and kind of cut throat, everybody's, you know, fighting for the same grades and the same jobs and the same spot in [grad] school, so it's really easy some times to see it as a big competition instead of everybody just being this community where, you know, were all trying to help each other. And so I feel like the Facebook group, especially in the freshman [year], kind of fostered that feeling of community and, you know, yes you want to get into [grad] school, but we're still a department and we're still helping each other learn and that's the primary focus of it, not just getting you, one person, into [graduate] school.

The benefit and feeling of community transitioned into discussing how Carol perceived using Facebook.

When asked how she perceived interacting with the program facilitator on Facebook, Carol defined the role of the program facilitator as being important in the interaction. She stated, "I still feel like the group setting is a nice way to do it. I think that Professor Walt has done a great job, that he keeps it very, um, very professional based where he's just there to

answer questions." In addressing the professionalism and role of the program facilitator she further clarified the role,

> He's not there to be their friend or to see all their pictures on Facebook and kind of, you know, he's there as a resource when students do have questions or if the peer mentors can't answer something, you can, you know, have Professor Walt answer it.

Irene spoke of the role of peer mentors with the group,

> There is kind of this sense that this group is made around us peer mentors, so it kind of makes you feel a little important in a way, because the students are asking questions to you, and they're wanting you to answer the questions so, I don't know, it makes you feel a little special, important, like you're actually making a difference for someone.

When Mabel addressed the issue of how she perceived professors and the program facilitator using Facebook she stated,

> I think it's important to have a Facebook page because everybody is already on Facebook. It makes it easier for people to just "Like" it and, um, I think it makes people more comfortable asking questions that they may not just go ask the professor. I also think that professors should be, like, engaged on the Facebook page instead of just moderating it.

When I followed up with Mabel on how she thought they should be engaged, she related that someone needed to address and answer those questions. She thought a teaching assistant, a program facilitator, or a peer mentor needed to be involved to answer questions that are raised by the students.

Ida took more of a middle ground view regarding the use of Facebook: "I guess like I feel like I'm not really, I'm not strongly against Facebook or like strongly for Facebook." When pressed on how she would respond if an educator asked if they should use Facebook, Ida replied, "I guess I would tell them that if they feel comfortable using it, it's worth a shot . . . but I don't think it's necessary, but it might make them more relatable to some students."

Nora had a conflicted view of the use of Facebook. When she related how she perceived using Facebook she replied:

> I feel like sometimes I wish [Facebook] wasn't there because it's such a distraction. I mean, when we didn't have it, I feel like people were a lot more involved and did a lot more things instead of always concerned about what's on Facebook. Like we used to go outside and talk to each other, and now it's all about, you know, texting and Facebook stuff.

When I prompted her to come back to how she perceived using Facebook in coursework, she replied, much like Mabel did: "I feel it is important for professors to use it." When I came back to Nora's statements of being constantly in communication, she replied that she did not mind the constant availability, just that she felt "sometimes I wish it wasn't there because it's such a distraction"—that the use of texting and Facebook kept her connected, but the technology also "keeps you distant."

I asked Nora to elaborate on that feeling of distance, and she responded:

> Well I don't know, like, when you're in a table studying, you know, most people are on their Facebook, but we used to just talk with each other, but now everybody's on their Facebook. I think it's just a matter of technology, you know, people are just less

willing to talk person-to-person, more they like to do it through something rather than face-to-face, and it's just a concern [laughs].

When I asked Nora what her main form of communication was, she said it was texting. She elaborated, "I would call but now it's the age where it's inconvenient to call 'cause most people, when they talk, it's during class, it's just a way to pass time, but I really much prefer calling." When I addressed her concern later in the interview she said it was "not something she really thought of before" and that she was not concerned with being overconnected.

The Use of Facebook and Building of Social Capital

The use of Facebook and the building of social capital was the second main theme that was found during coding of the data. The building of social capital theme was built around the discussion of knowledge gains, trust, engagement, and the recognition of social capital. The study focused on Bourdieu and Thompson's (1991 social cognitive theories and that social capital is the material benefits that are gained by an individual through interactions with their social networks. With that definition as a foundation, I found that the peer mentors recognized that they were building social capital, but that they did not know to call it social capital. When interviewing the peer mentors, I inquired as to what future benefits they may experience by being part of the Facebook group. The exploration of social capital was discussed by the participants as three main benefits: (a) knowledge gain or knowledge sharing, (b) engagement, or (c) connectedness.

Knowledge Sharing and Knowledge Gain

Carol responded with a detailed example of how she has gained knowledge through being a peer mentor. She stated,

> I feel like [her role as a peer mentor in the Facebook group] helped me develop a lot of skills in promoting events and in answering questions, especially as a [future professional], um, I feel like professionally you have to answer a lot of questions. You know, people are going to come to you because you are supposed to be an expert in your field, and I feel like it's helped me learn to explain things in a way people, a lay person would understand, especially things that would be a bit more complicated, like trying to figure out how to find your degree audit on the [university system]. You have to give specific instructions, step by step, and make them clear because it's the Internet and nobody understands what's going on [laughs]. So I feel like it's kind of helped me learn how to explain things in a way that people would understand them.

Carol related that she gained some specific skills: online promotion of events, answering questions and communicating through electronic communications, and the ability to explain complex material in an easy-to-understand format.

Irene did not think that she gained much knowledge; rather, she saw her role as sharing knowledge. When I asked what she may have gained, she replied, "I think I've gained knowledge about knowing other people, not necessarily knowledge, I don't know. I think I've learned more about other people and how they connect, I don't think I've really gained anything too much." When I prompted Irene later in the interview about gaining and sharing knowledge she related the following:

> I tell my mentees all the mistakes that I have made in the past two years, which is a lot! I tell my mentees, if I would have been a mentee and I was on that Facebook page, I would probably have asked about classes and what books to buy, 'cause that's

> another thing, 'cause I bought all these books, thinking I needed 'em because [the university] said I needed 'em and I didn't. I wasted probably $200 my first semester here because my books for philosophy, I never used 'em, I never even took 'em out of the package, and so, that would be another thing. And where to buy your books from, I told my mentees all about that, and there are other places to buy your books that are cheap, that are a little bit cheaper than buying them through the school.

When she finished relating all of the knowledge she had passed on, I asked if these were all the things she would have asked if her peer mentor had been as engaged as she was. Irene replied, "Oh there are so many things that I would have asked [laughing]." Irene expressed that she had a responsibility to share her knowledge with the Facebook group and the mentees.

Nora related a different benefit in terms of knowledge gain. She related the following story of knowledge gain available on Facebook:

> There's a Facebook group, uh, I don't know, you're not gonna tell, we'll they probably already know. There's a Facebook group that posts, um, previous exams, which, that's everywhere so that's, that was actually a major help, that's what helped me pass one of my classes 'cause we all share study guides.

Nora expanded on this topic by stating,

> I was taking a class and my friend suggested joining this group because it has all the previous exams, and some of the professors, their exams, they just do a photocopy of last year's exam, and so some students procure a copy and post it online and then we all share it.

Although the use of photocopied exams is neither new, nor positive, it highlights one more

way that social media is being utilized to create a virtual learning community similar to the face-to-face college communities.

Engagement

The role of the peer mentor within the Facebook group was not clearly defined. Carol noted that she had a "mom complex," which required her to help out anyone who asked a question. Ida went into more detail though on how she engaged with the Facebook group. When I asked her about her interaction with the mentees on Facebook she related, "[A new posting] comes up on my notifications when someone says something, and I always check [the Facebook group], and like if it's something that would be like beneficial for me to respond to, I do." Mabel summarized her thoughts on how the peer mentors interacted and engaged on Facebook, "I think the whole point is it's a group of peers and we can all sorta answer each other's questions."

Irene noted that forcing someone to join the Facebook group would defeat the purpose of the group. She related the following about a peer who was forced to use another piece of social media, Twitter:

> I know there is a teacher here that requires you, for a class to join Twitter, and I know that my friend, she was forced to join Twitter or whatever, but she wasn't very excited about it because she's never, she didn't know how to use it and in order to get your points for the day you had to post something on Twitter, so for me, I wouldn't want to force anyone to do it because I know, I know for her, it was hard for her to try to understand it and she's never done Twitter or "tweeted" or anything, so she didn't really understand the whole concept of it, and so forcing someone to be on Facebook I think would not be a good thing.

The idea of negative consequences from forced engagement was echoed by Nora. She stated that she thought students did well in the Facebook group because they chose to be members in the group.

> When I asked Carol how she perceived being part of the Facebook group she replied: I think it made me more engaged, not by design it was just kind of on our own. I do think it made me think about what I was doing in class more, because I was taking the time to explain [class work] to someone else, so it kind of made me think twice about what I had done and look at my process a little bit.

I then asked Carol, "How engaged would you say you are in the Facebook group?" She replied, "I would say I was really engaged, especially I feel like I was more engaged as a peer mentor than I was as an incoming freshman, but I think that I was on it quite a bit as a freshman too." When I prompted her for more details on her engagement as a peer mentor she related the following examples:

> I would see a freshman who had a question, and I would be sitting there doing homework, and I would have Facebook up in the other window and see that someone else was like, "I'm panicking. I can't get into this bio lab and I need this class." So it was kind of nice to talk to them and be like, "Hey, it's going to be okay if you don't get into your bio lab, here are your options." Um, and things like that. I think there were a lot of questions about the health clinic, and half the time I didn't even really know what they were asking about, but I knew how to find it on the home page, so I would kind of be like, "Click, here's a link. Check it out, let me know if you need any more help with it."

The peer mentors all stated, in various ways, their desire to be able to assist the first-year students who were in the Facebook group. The peer mentors stated that they believed that they were leaders responsible for helping out the first-year students.

There were two statements that all of the peer mentors relayed during the course of the individual semistructured interviews. Nora summarized the feeling of the peer mentors when she stated, "It made me a better student." She did not go into the detail that Carol did, but all of the peer mentors touched on the belief that their engagement within the Facebook group made them better students. The other statement was from Carol, who commented, "The freshman were more involved on the page this year than I had remembered them being in the past." She believed that this involvement on the students' part was because "we've [peer mentors] been a little bit more engaged."

The engagement with the Facebook group made the peer mentors feel as if they were better students. It could be because they had to help out some of the mentees on Facebook or because they chose to be a peer mentor and were somehow responsible for ensuring that the mentees succeeded, but all five peer mentors related that at some level being a peer mentor made them a better student. Carol summarized what four of the five peer mentors related, and that was their engagement made the first-year student mentees more engaged in the Facebook group. The peer mentors believed that their engagement was beneficial both for the first-year students but also for themselves.

Trust

One of the key aspects to building social capital is the inclusion of trust within the virtual learning community. The act of sharing, the willingness to contribute, and the feeling that individuals could trust their peers were all issues raised by the peer mentors. The fact

that the Facebook group was a safe, and private, space was another recurring statement from the peer mentors. These also were aspects of trust that support the building social capital theme. The first aspect examined was trust as a piece of the virtual learning community. Then trust and the relationship with the program facilitator were inspected. The last aspect of trust that was discussed with the peer mentors was trust and the relationship of trust to their peers.

Carol discussed the idea of sharing when she was a mentee:

> As a freshman it took me a while to warm up to the group. I think I was one of the earlier ones to join the group, and it took off, I think, early summer but there were only a couple people in it and only one or two people would ask questions. It took a while to catch on. So I wasn't really super involved with it or comfortable with posting on it but once everybody else started posting,

Carol started posting more as well. She stated that once others started posting,

> I feel like it made it a lot more exciting to be a part of, and so someone would post and you would check it every day and see how many other people would post on it. So I think that helped quite a bit.

Carol discussed how once she knew others would post she believed that she could post to the group too.

Ida noted that she used Facebook to filter people, so she would accept friend requests from individuals who were "going out [to Facebook] and describing themselves." She trusted their descriptions and "looking at" their Facebook profile to make a judgment about trusting her peers. Ida was the most cautious of the peer mentors. When asked about how

quickly she started expanding her social media network at the university, she answered, even with her caution, "I guess it was pretty quick."

The inclusion of new contacts within a social network is a sign of trust (Cyr & Choo, 2010). The privacy and list control options of Facebook do allow for segmenting new Facebook friends though. Yet, all five peer mentors began adding Facebook friends quickly. Mabel began adding friends prior to her arrival on campus, and Nora and Irene both stated that they began adding friends "on day one." The peer mentors all expressed that they perceived some level of trust with their peers.

Trust of the mentees by the peer mentors was discussed in a different manner. Nora went into detail about how she wanted to be perceived and how she had some issues of trust when she first joined the Facebook group as a peer mentor. She stated:

> I kind of wanted to sound professional, but I also didn't want to sound too stern, I wanted to be, like, easy going with the first-year students, to tell them it's no big deal, it's just a fun group. It took me a while but then I got comfortable.

When prompted to discuss what happened to make her more comfortable she related:

> I talked to [Professor Walt] more and, um, just knowing more of the mentors, 'cause I only knew, well I knew a lot of them because a lot of them were in the program last year, but I didn't know them on a personal basis. So, hanging out with them more, talking to them more, just, and just taking the step out the door and saying it's okay [laughs], you know.

Nora needed to build up her feeling of trust in her peer mentors, but the other peer mentors discussed how they trusted their mentees and did not state that they worried about trusting the other peer mentors.

Irene discussed that she fully trusted that the mentees would take the Facebook group seriously and not see it as a social group. She stated, "I think they're actually concerned and they ask questions about things that they need to know." When asked how she would know if it were just a purely social group Irene answered:

> I would consider it [Facebook group] more social if those kids were asking questions, and then I was answering, and then they were adding me on Facebook and messaging me, that type of thing, but it's more of they ask questions, I answer them and they say "thanks." It's not purely social just to find friends.

Irene discussed the need for the mentees to develop trust. Irene related how one mentee in her group helped the entire group trust each other more, which increased how much her mentee group would share.

> So there was a girl in my mentee group that, she first added me, she actually added me on Facebook and she, it was crazy because she knows a girl from my [high school] class and so we kind of connected in that way, and she went to a conference with a girl in my class and then she started e-mailing me back and forth throughout the summer so we kind of had a little pen pal thing I would call it, that you just kind of e-mail each other back and forth, and she'd just tell me how she was nervous to come here and she came from a class size about [the same as] mine. . . . So we kind of connected before she came, and then she was one of my most interactive ones in the group, and so I don't know if that helped cause she felt comfortable around me because she was the first one to talk, first one to say her name, and first one to, first one to interact with everyone else, and so I think that she felt comfortable and that helped, the whole e-mail thing helped her a lot.

Irene believed that the early relationship and trust allowed the mentee to share and helped the entire group be more open.

Mabel also mentioned confidence as being an essential part to trusting enough to share with the Facebook group. When asked if she trusted that the Facebook group would find her input valuable, she replied, "If it's something that I'm like confident I know the answer or that, if, I can just go look it up on the website, then I'll just answer it." The issues of trust led to a discussion of oversharing.

All of the peer mentors thought others overshared, but they were not concerned. Carol had a unique censor, her grandmother, who would call her mother if she spied something on Carol's Facebook feed that was out of place. Mabel and Irene were not concerned as they kept their pages private. Nora related the following on oversharing on Facebook:

> It's my friends "over-sharing," because it depends on each person's personality and their, you know, view on privacy. Like most of us, we don't care, so they post all of the photos from a party, so it's kind of a concern while others who are like juniors or seniors about to get a job, career, they're more aware of what they should post, so they make their pictures more private or like, you know make their profile more secure, which I really wish I would know how some of them do it. Like how do you make it so people don't see all your photos, they can only see, like, albums? Like, I don't know how to do that 'cause Facebook makes it so hard, like they're making it harder and harder to make your things private. . . it's really annoying.

I asked Nora, "So have you tried to make your information more private?" and she responded, "I have tried, like I've tried, it's like you have to do it." Nora worried about that

fine line between sharing and oversharing. Her concern about employability and employers checking Facebook was repeated by Carol, Irene, and Mabel.

The peer mentors were concerned that someone would examine their Facebook posts. The discussion of trust, for the peer mentors, included the idea of trust and their program facilitator who witnessed all of their Facebook group activity. Professor Walt created and added all the peer mentors to the Facebook group. When asked about trusting Professor Walt in terms of the Facebook group, all of the peer mentors had similar responses.

Carol stated, "Sure, you know, [we] interact with Professor Walt without actually being friends with him on Facebook, so I think the group setting is a nice way to do it." Carol went on to elaborate that she thought that Professor Walt had "done a great job, that he keeps it very professional based." When I prompted Carol to go into more detail on educators and professors using Facebook, she related one conversation:

> All the professors that I've worked with especially in a research setting have said, you know, "I have no problem with being friends with you on Facebook, but it'll be not till you graduate or not till you're done working with me so that it's outside of that setting, so we can keep it professional and education based." I think that's a nice way to do it because I feel like there might be problems that arise. Especially, I think with older male professors [laughs] and having a lot of younger female friends that are their students, I feel like it kind of sets up a bad image of those professors at times.

Carol was not the only peer mentor to praise the use of groups on Facebook as a method for allowing contact with professors without having to friend them.

Irene related she trusted the group and her ability to share from the moment that Professor Walt "added us all to a Facebook group and then he said the class of 2016 or the

incoming 2012 students would soon be adding themselves." When I asked her if she would have had that same trust if Professor Walt had friended her on Facebook, Irene responded, "I don't know, just to randomly socialize, I think that would be weird."

Nora did not have that instant sensation of trust. She stated "I was kind of shy 'cause I knew that [Professor Walt] was also in the group." Nora discussed how groups allowed a good barrier between social and school life and also mentioned how her trust increased. She discussed how she "talked to [Professor Walt] more" and how she was comfortable sharing within the Facebook group. She praised the idea of keeping her social life on Facebook private from Professor Walt while also allowing him to view her school and work life. This characteristic of keeping the peer mentor's social life private was mentioned by all five of the peer mentors.

Mabel discussed another characteristic that made her trust in Professor Walt. She believed that Professor Walt had reached the right level of engagement. When prompted she stated that he was "really good, like over the summer when, especially, like, incoming freshman would ask questions, if none of us knew the answer or if someone had answered incorrectly, he would hop on and, like, post a link." When asked to explore the level of engagement further, she responded:

> I think it really just depends on the professor. I definitely think that some engagement is necessary, but if they want to be all over the page and answer everybody's questions, I think then that's fine, but I also think the whole point is it's a group of peers and we can all sorta answer each other's questions.

When pressed though, Mabel did not think that a professor or program facilitator being all over the Facebook group was "fine."

Professor Walt was excited about the peer mentors taking more of an active role with the Facebook group. In his lunch-and-learn presentation he mentioned how having the peer mentors had made the group far easier for him to manage. The benefit of not having to answer all of the Facebook group posts was also a sign that he trusted his peer mentors. Professor Walt also was quite aware of the need to ensure his peer mentors were comfortable. When asked how and why he settled on Facebook, he responded, "It does seem that kids are using e-mail less and messaging kind of things more, so I am trying to figure out the most effective way to communicate that isn't violating, crossing their social life with their work life."

The peer mentors trusted, or grew to trust, Professor Walt. They trusted the incoming students, because, as Irene stated,

> I had a lot of trust in that [Facebook] group, knowing that all of us were [in the same program] kind of. I don't know, I knew where a lot of them came from, the background that they came from, so I had a good feeling that a lot of them were trustworthy kids.

The knowledge sharing, engagement, and trust within the Facebook group led to the discussion of social capital accrual with the peer mentors. The peer mentors all recognized some level of short- and long-range benefit for being peer mentors.

Social Capital

Bourdieu (1977) emphasized social capital as a material gain made from the participation in one's social group. The peer mentors focused mainly on concrete immediate benefits from participating in the Facebook group. The peer mentors discussed social capital in three distinct categories: (a) improved communication skills, (b) immediate gains, and (c)

networking. The knowledge that they had improved skills was a common element that all of the participants mentioned throughout the interviews.

The element of improved skills focused on increased communication skills. Irene noted that being a peer mentor in the Facebook group taught her how to better use Facebook. This would help her in the advocacy position she hoped to move into after graduation. She stated,

> So if the route that I'm planning on taking is maybe working or advocating, so I think it might be beneficial when I get older just because then I can advocate the . . . industry and, um, make it known to people fast, like, in a faster fashion. . . . It'd be easier to get a hold of two million people than 100, you know, that see my [printed advertisement].

Irene discussed another aspect of improved communication skills: the ability to talk with individuals she has just met. Though she did not credit this skill to just the Facebook group, she discussed the importance of this skill:

> I have learned how to talk to different types of people. Um, you can't really tell a person's personality through Facebook, so you have to learn to, um, talk in a way that you're not putting anyone down or, you know, making them feel uncomfortable, so you are saying things that are very general and you're not getting too, unless you know them, you're not getting too, like in depth, I don't know. You have to kind of learn to generalize it.

When prompted to think about how this may impact her professionally she stated:

> Well, they could help me because then I, when I first meet someone, I can talk to them in a way that I know won't make them feel uncomfortable and, I don't know

> how, that's really helped from Facebook but, I don't know, just the peer mentor thing in general, you kind of learn how to talk to people.

The other peer mentors discussed similar feelings that their communication skills improved. Nora found that she "really liked talking" to the mentees.

The peer mentors believed they were not just improving their communication skills, but that they also were building a social network that they thought might pay off for them in the future. Ida summed up how the other peer mentors described the benefit of building social capital:

> I think it will probably help a little bit with social networking, like, you know, the people that I'm still friends with now, if you are applying for a job at a company that they work at down the road, you could get back in contact with them and be like, you know, "Hi."

The purpose of that communication, according to Ida would be so that individuals could recommend her for an open position. Nora stated something similar: "So maybe down the road if I ever needed help or like a recommendation [laughs], I would talk with them, you know."

The idea of working together in the future seemed to be the main theme. Irene reinforced this idea: "Maybe look back and reconnect with some of my mentees, I could go on [Facebook] and find them, maybe someday I'll be their boss or they'll be my boss, something along those lines." Mabel had a similar statement about future communications in regards to employment. Carol had a slightly different view.

Carol talked about the gaining of social capital through networking as a building up of professional resources. When queried about her building of social capital now and whether that might impact her professionally, Carol responded:

> I think so. I've heard a lot about professors who will say, you know, "My roommate freshman year is now a Ph.D. candidate at this school." And they've stayed connected with people that they met really, really early in their career and used those as professional resources later in life. So I think that Facebook is the nice way for students to keep in touch with those friends that, you know, they would lose a phone number or, you know, change of address and you might not as easily have stayed connected with that person after, you know, your initial living together freshman year. I think that it would be a way to professionally keep in touch with them.

Carol's focus on professional resources and application was the lone specific answer to building of social capital and networking. Though all five peer mentors made mention of building those social networks, Carol was the only one who discussed those contacts within her network as professional resources.

The peer mentors, instead, focused mainly on more immediate benefits of building social capital. Nora discussed one of these benefits: building a larger current social circle. She mentioned how she believed that participating and sharing on the Facebook group had led her to build a better network of friends. Mabel noted she thought that the social capital benefit for her was that "I like being able to meet people through [the Facebook group], and I like that I can ask questions if I do have a question, even though I don't haven't." When I prompted her for long-range benefits she noted:

> It makes it easier to stay in touch with people, um, just because there's a whole group on Facebook that everybody has "Liked," so even if you have gone on and don't necessarily remember these people, I think it's, like, a good networking opportunity just because everybody is like right there.

Nora and Mabel mentioned immediate friendships, but when the benefits of those immediate friendships were explored, they both pointed to future networking. The one immediate benefit that was mentioned by multiple peer mentors was recommendations.

The peer mentors all expressed that they would most likely progress to graduate school, and three of them found that one piece of social capital that was accrued was the ability to request a positive recommendation from Professor Walt. Ida best expressed this by stating,

> So, like I said, I think I did a good job, so I think if I, you know, ever needed a recommendation from one of [the mentees] for something, they would definitely give it to me, and I think it has benefitted me also to know, like, Professor Walt, and I was one of the few peer mentors that would go to the lecture class, which wasn't required. I went to that every time too. So I think that if I asked him to write me a recommendation or something, he would.

Nora and Carol both specifically mentioned a recommendation from Professor Walt too.

The peer mentors knew that they were building up social capital through their work within the group. They discussed communication skills, understanding communicating through social media, and how those skills may serve them in the future. The peer mentors all discussed building up a network of contacts, with Carol thinking of her contacts as

professional resources. They all also found some immediate social capital benefits of new friends and recommendations from individuals as they progressed in their educational goals.

Program Facilitator's Expectations and Student Perceptions

The expectations and perceptions theme is focused on three areas: (a) what the program facilitator's plan and goal with the Facebook group was, (b) what the peer mentors perceived to be the goal of the Facebook group, and (3) what message the peer mentors would like to pass on to educators about the role and use of social media in the classroom. Professor Walt's goal for the group was introduced in Chapter 4. Reviewing his goal provides a framework for the peer mentors' perceptions.

Professor Walt explained that his original plan was "strictly for students to get to know each other and kind of see what the other students would be like coming in." When prompted to discuss the secondary goal of retention that he had referenced in his lunch-and-learn presentation, Professor Walt explained:

> We did a little [literature] review, and this Facebook project was part of a larger project where we created a program to assign advisors early and assign peer mentors early, so this was just a third throw-in piece to that bigger project, and it was based on literature that said that students that felt connected to their program had. That was the number one factor influencing first-year retention rate and the earlier [the connection] especially had an impact if it was prior to the first day of school. We were trying to come up with some things that we could do prior to the time [first-year students] arrived on campus. So connecting with an advisor, connecting with a peer mentor, connecting with each other, those were kind of our goals.

Professor Walt saw the goal of the Facebook group as to provide a way for incoming students to the program to develop connections that may help the department increase its retention rate.

When investigating the peer mentors' perception of using Facebook, the question of what they found the perceived goal of the group to be was addressed to each peer mentor. Carol stated, "I feel like it's a way for the peer mentors and for Professor Walt and for the department as a whole to connect with these incoming freshman and to answer the questions they have on a more personal basis." Irene related, "I don't think that, um, students are on there just socialize" and that the group was to help those first-year students.

Nora posited that the purpose was "just to create a community for people to talk, to reach people easier related to your major." She noted that "a lot of the [first-year] students are asking about their homework and stuff, so it's a good way to study and help each other." Mabel had a similar view that the Facebook group was for the program members to "share like advice or experiences with each other."

Ida gave the following description:

> Facebook is kind of a big thing, you know. Everyone has a Facebook these days it seems. . . . It's just kind of another way to get the students involved with each other. It's kind of like I said before, you know the people but you really don't have to be like involved with them, no direct involvement, but you can kind of just maybe be a little bit more comfortable. I think mostly it's just about helping students kind of feel more comfortable with their transition, like they can ask any questions they had and just kind of talking about stuff makes it easier and seeing like, yeah, there is a person that was homeschooled too, or you know, there's other international students.

Ida's description nearly summarizes the other four peer mentors' statements. Professor Walt did meet with all the peer mentors and discuss high level goals of the peer mentors in general. Ida summarized those goals and tied it into the Facebook group.

In discussing the peer mentors' understanding of the purpose of this specific Facebook group, the next queries investigated how the students perceived using Facebook in any educational setting. The peer mentors each had different statements on this topic. Ida noted that "if [educators] feel comfortable using [Facebook] it's worth a shot . . . but I don't think it's necessary, but it might make them more relatable to some students." Nora cautioned, "I would probably say use it more like a social, connecting [activity] with your students. I wouldn't use it like as a grading, hard academic sort of activity."

Mabel noted that she thought it was necessary to have a Facebook page:

> I think it's, uh, important to have a Facebook page because everybody is already on Facebook. It makes it easier for people to just "Like" it, and I think it makes people more comfortable asking questions that they may not just go ask the professor. Um, but I also think that professors should be engaged on the Facebook page instead of just, like, moderating it.

Mabel stated that she thought that "professors need to set, like, guidelines right away of how the Facebook page should be used."

Carol too gave specific information on the use of Facebook:

> Use [Facebook] in a group setting. Don't go [and] add all of your students, um, just, have it there as a tool for them to use to make yourself [the facilitator] more accessible in a setting where they don't feel like they have to be friends with you and don't feel like they have to share their entire profile with you to ask you a question.

> Um, yeah. I think the group setting is a way to keep [the interaction] from kind of going into that gray area of how far is too far when interacting with your students. Um, I think that would be the way to go.

Carol cautioned against the issue of sending a student a "friend request" on Facebook. She believed that this entered into a gray area where students and/or educators may not feel comfortable.

Irene discussed one narrow use of Facebook: For "the smaller classes, I think it would be beneficial because then [the educator] could throw out things and then [converse] about them." Irene used this example due to a similar discussion that had occurred in one of her classes. One of her other professors had asked the class what they thought about using Facebook for a discussion forum. When asked if the professor had actually created a group she responded, "No, he hasn't [pause] yet."

The goal of the program facilitator, and the perception of the group by the peer mentors, progressed into the discussion of the general use of Facebook in higher education. The students all believed that it would be beneficial if educators would use Facebook pages or groups to help with student engagement or course discussion. Nora also raised the point of making "students feel connected." The theme of connection is explored in the next section.

Connectedness

The theme of connectedness is one that was discussed as part of the previous three themes and was explored by all five of the peer mentors. Nora was the peer mentor who referenced the term and idea of connectedness multiple times in her interviews. She stated that Facebook "definitely helped keep me connected with a lot of people." The peer mentors

discussed connectedness in relation to future benefits, benefits for their mentees, virtual connectedness leading to face-to-face connectedness, and connectedness allowing for continued relationships with strong ties from their precollege time.

Nora stated that she saw a benefit in connecting with people on social media in terms of a job search. Irene believed this type of connectedness was important to her as well, stating, "Connecting with people I met here at [the university] . . . would probably be beneficial when I am older to maybe even get jobs." The theme of connectedness, in this respect, was mentioned by four of the five peer mentors. When the peer mentors discussed connectedness in this manner, they defined it as "interacting with" the other individuals and not just a passive listing of people in their social network. They also discussed the benefits the mentees received from being connected to the Facebook group.

Professor Walt named connectedness as one of the reasons for implementing the Facebook group. He noted "students that felt connected to their program . . . that was the number one factor, influencing first-year retention rate." Ida and Mabel both echoed the belief that the peer mentor connection helped them within the program. Irene discussed how this connectedness was beneficial for the mentees: "So coming to [the university] I was clueless about everything, but I feel like the kids that come in now actually know a general idea of what there is in store for them." The role of being connected to the Facebook group was seen as an immediate benefit for the mentees.

Nora further defined the benefit for mentees as a potential future benefit. She explained that to receive future benefits the mentees needed do one thing:

> Stay connected, um, [to] find out anything new that's happening in our community, 'cause like every year with the mentor program, we're trying to do something

> different, and so we'll most likely post that in the group, so if they're still part of the group, they will see that and can join in if they want to, 'cause it's a growing community. It's not just for freshman you know or transfer students, it's for everyone that's in the [program] group.

The connection to the Facebook group was viewed as a way to stay involved in what was happening within the program. Nora and Carol both mentioned being connected allowed the mentees to have access to information on clubs. This connectedness and access was viewed as a positive benefit that would continue into the future.

As part of the theme of connectedness, one area discussed was the aspect that being connected allowed for a virtual friend to become a face-to-face friend. Mabel referenced the Facebook group as a connection hub: "I kind of met [them] through the Facebook page, [and] like I met them in a class," and she recognized the person as a, "friend from [the Facebook group]." She knew the person from the program Facebook group, yet once they met in class they were already, in Mabel's opinion, friends. Irene discussed this same idea of connectedness. She stated:

> I have met a lot of new people through [the Facebook group], um, people that message you, and you see them in class, so then they [pause] you can kind of talk through Facebook, and it kind of helps you connect with them.

Nora mentioned the aspect of friendship and connectedness when discussing the main benefit of the program Facebook group. She stated, "Connecting with each other, and um, yeah, just connecting with each other and knowing more people and being more involved, that's mainly the purpose and benefit."

The peer mentors also made mention of the importance of being connected to past ties. Carol discussed how Facebook allowed her to remain connected to her family, specifically her aunt and grandmother. Irene, the former high school class president, discussed how she intended to use Facebook to connect to her high school class in order to make planning high school reunions easier. Ida, who graduated from high school in a different state than Irene, noted:

> I think [Facebook is] a nice way to kind of stay connected with people that you really wouldn't stay in touch with. Like, for my high school, our class president made like a Facebook page just for our class, so like, when she has to go plan a reunion, you know, how many ever years down the road, that will be way easier for her.

Mabel related a discussion she had had with her mother regarding connection and staying in contact with high school friends:

> I think that I'm like connected with my friends, especially my friends that I don't live near anymore. Um, a lot more, like when I talk to my mom about it she was like, "When we graduated high school, it was like, you didn't have your high school friends anymore." And I feel like we're still a really close-knit group, even though we don't live together. . . . I just like being able to share my life with my family and friends that I don't live near me.

Mabel's reflection on being connected, and the historical significance of still being connected with her high school friends, was representative of how the peer mentors described the connectedness of Facebook.

Summary

The addition of new friends and the ability to stay connected to old friends, the connectedness Facebook allowed both academically and socially, and the perceived positive benefits of that connection were themes that ran through all of the coded themes. My presentation of findings included the themes of the peer mentors' perception of the virtual learning community, the building of social capital, and the expectations and perceptions of the use of a social tool in an academic setting. The connecting theme of connectedness was the final theme presented.

In the first section, "Student Mentors' Perception of Facebook and the Virtual Learning Community," I identified the perceived benefits to using Facebook as a virtual learning community. The initial data discussed were the peer mentors' own perceived technical skill. All of the peer mentors discussed Facebook as being a tool that is "straightforward" and did not require users to have extensive technical skills. The peer mentors' perceptions of using Facebook ranged from those who found it essential, to Ida, who thought it was useful but not essential. Nora's thoughts on being overconnected were explored, and the peer mentors agreed that being on Facebook required a balanced approach from the program facilitator.

The next section, "The Use of Facebook and Building of Social Capital," examined themes of knowledge sharing, engagement, trust, and the building of social capital. The peer mentors defined social capital as some sort of general benefit, and clarification of social capital as being a tangible gain led only to slightly more in-depth answers. The peer mentors generally believed it was their duty to share knowledge with the mentees and that any knowledge gained on their part was an extra benefit. The participants all stated that the

Facebook group encouraged them to be more engaged in the program and university. The peer mentors believed this engagement was a positive benefit. They also found that the more engaged they were, the more engaged their mentees became.

In discussing their level of trust within the Facebook group, the peer mentors pointed to two specific items that increased their trust. First was the role and engagement level of the program facilitator. The peer mentors believed that he allowed them to act as group leaders and to address all questions and issues, and he would step in only when a question was not addressed. The second item that increased the peer mentors' trust level was the fact that the mentees came from a background similar to that of the peer mentors; the similarity in background allowed the peer mentors to see the mentees as younger, trustworthy examples of themselves.

In the examination of building of social capital, the peer mentors all discussed the improved communication skills they had learned due to engagement with the Facebook group. The ability to ensure what they typed and submitted was written in such a way as to not offend was a key benefit that many of the peer mentors touched upon. The peer mentors also discussed the immediate gain of new additions to their social circle. The one piece of social capital that all peer mentors referenced was the future ability to network. Only one peer mentor expressed the desire to build a set of "professional contacts" and not just merely have a listing of individuals who might be able to help with landing a job.

The final theme examined was in the fourth section, "Connectedness." The theme of connectedness was present throughout all the other themes. The peer mentors perceived that the Facebook group made them a far more connected program. They also believed that social capital that was accrued included a large group with which they could connect later in

their careers for job opportunities. The peer mentors stated they would encourage educators to use Facebook in order to help the educators and students connect. Carol summarized the connectedness theme by stating:

> I'd say, use [Facebook] if it's here. Obviously students are using it, so I would say use it to its full advantage, for incoming freshman and even for classes. I know, not any of my classes, but I know there are other classes that have Facebook pages that allow them to ask questions of their professors. I think it's a great way for students to connect with their mentors and their professors, um, in a setting that they're comfortable in, and, um, it's not foreign to them, they know the format, they know how it works, and so I think it can be a little informal at times, but as a whole I think it's great for students to connect to their universities.

In Chapter 6, I discuss the findings in regards to my three guiding research questions. I state my research conclusions and the implications these conclusions will have on future research. I examine potential practices that could be enhanced based upon my case study. Finally, I re-examine my positionality as a researcher and reflect on the process of conducting this research study.

CHAPTER 6. FINDINGS, IMPLICATIONS, AND REFLECTION

The purposes of this chapter are to: (a) provide a brief summary of the case, (b) present findings based on the three research questions and discuss the findings, (c) offer thoughts on potential improvements to current practices for creating virtual learning communities using Facebook, (d) consider how the results and potential process improvements contribute to current literature, (e) offer my ideas for future study based upon my findings in the case study, and (f) provide my personal reflections on the research process.

Summary

The purpose of this qualitative case study was to examine how peer mentors in a specific program utilized Facebook as a virtual leaning community, how they made meaning out of their role as a peer mentor in the Facebook group, and the role of the program facilitator in the development of the virtual learning community. Qualitative inquiry was the best fit for my study, as I was giving voice to the peer mentors' thoughts and feelings on their involvement in the virtual learning community.

My study was significant for several reasons. First, the case study gave voice to the peer mentors. The significance of using the voice of the peer mentors was noted by Daniel et al. (2003), who stated "the nature of social capital in virtual communities may be embedded in the stories told by the participants" (p. 10). In giving voice to the peer mentors, I also explored how peer mentors perceived their own building of social capital in a virtual learning community. Second, by examining how students perceived the building of social capital, I explored Coleman's (1988) belief that building social capital would be eased by the use of social media. Third, in exploring how the program facilitator and peer mentors both

perceived the group, I am able to offer useful information to educators who may be exploring the use of social media in their courses. This case study of Facebook as virtual learning community also adds to the qualitative literature on the use of Facebook. There are several quantitative studies (Chen & Hung, 2010; Cheung et al., 2011; Chiu et al., 2006; Ellison et al., 2007, 2011; Junco, 2012a, 2012b) that examined student usage of social media, student interactions on social media, and the impact to students who use social media. The voice of student users of social media has been relatively absent from the examination of the educational impacts of using social media in higher education.

Findings and Discussion

For the findings and discussion section of this chapter I return to the three research questions. I address each question and discuss the results of my study and how those results helped to answer the question. Then the results will then be compared against the existing literature that informed my study.

Research Question 1: How did the peer mentors perceive their experiences in using Facebook as a virtual learning community for a specific program?

The first research question was designed to give the peer mentors the opportunity to give voice to their participation in the virtual learning community. The peer mentors shared specific feelings about being a peer mentor, how they thought the virtual learning community should be used, and their feelings about being involved in the program's Facebook group as both mentees and peer mentors.

Peer mentorship. The peer mentors expressed that they believed their mentees had some advantages because of the quality of the virtual learning community. Carol and Ida both stated that the Facebook group encouraged the mentees to be more engaged, both inside

and outside of the classroom. The peer mentors also addressed the feeling of being helpful to the mentees. Irene, specifically, believed it was her duty to inform all of the mentees of potential issues they should know about in order to make their transition to college life easier.

The Facebook group provided a virtual community for the mentees, which would further enhance these advantages. Karcher et al. (2010) found that mentored students need time spent with a peer mentor to see increased benefits, and the virtual learning community of Facebook provided a space where time was not as relevant regarding peer mentor-to-mentee interactions. The mentees could search through Facebook postings to find helpful information instead of having to absorb and retain specific information during a one-time meeting. The peer mentors discussed the idea that the mentees had not only their individual peer mentor's availability, but with the Facebook group, the mentees had the entire collected wisdom of all of the peer mentors available to them. The peer mentors discussed how they noticed that most situations needed to be addressed only once with the mentees, because the mentees learned to check the Facebook group to see if someone else had had a situation similar to theirs.

They also discussed how they viewed being a peer mentor as an honor. Several mentioned that their behavior as a peer mentor reflected the type of professional they would become. They hoped to translate being a highly competent peer mentor into a good recommendation for entry into graduate school. They also saw the honor of being a peer mentor which came with the duty of setting a "high bar" for the following groups of peer mentors. Although none of the peer mentors used the word, they were proud to be peer mentors. During the interview phase, the peer mentors would pause and straighten their posture before addressing the peer mentor question. I noticed those movements in my first

interview and tracked it through all 10 of my individual interviews with the five peer mentors. When I first addressed questions on peer mentorship to them, they all stopped and adjusted their posture. They also all smiled. Their behavior and statements during the interview process made it appear as if they enjoyed being a peer mentor.

The peer mentors addressed the issue of the evolution of the peer mentor's role in the virtual learning community. Several of the peer mentors expressed a belief that the previous peer mentors did not live up to their expectations. These expectations caused the peer mentors to attempt to set the metaphorical bar higher. They also stated that starting earlier, prior to the mentees arrival on campus, was highly beneficial. The peer mentors expressed that bonding before the mentees arrived on campus allowed for a better community. The feeling of community was another benefit discussed by the peer mentors.

They believed that because of the tight community, they could advocate for the mentees to get involved in a variety of different activities. The peer mentors all expressed that they believed the mentees who did not join the Facebook group were missing out. They discussed the fact these students who refused to join missed out on study groups, club announcement, and program-related activities.

The peer mentors also related how they were confident and free to take charge of the group. The training they received prior to becoming a peer mentor was described both as minimal and important. The other aspect that added to the stated belief of confidence and freedom was the knowledge that Professor Walt was available as a safety net.

How to use the Facebook group. When asked how they thought the Facebook group should be used, all related that they thought the 2012 Facebook group was an example of a successful implementation. The peer mentors stated that they found the 2012 group to be a

great way to connect with their mentees and that those connections contributed to building a solid virtual community. The peer mentors discussed not having "outsiders" able to come into the group and how the privacy of the group made them comfortable. The peer mentors all discussed privacy, but none noted that the 2012 group was a private Facebook group. The privacy of the group was mentioned as being a key factor in how to use the Facebook group. In order to have a successful Facebook group that functions as a virtual learning community, the privacy settings need to be addressed.

Another factor in the success of the group was the role of the program facilitator. Several peer mentors stated they were confident that Professor Walt would offer a correction if one was needed, but he would not embarrass the peer mentor. The role of the program facilitator is an important factor in the success of Facebook being used as a virtual learning community. The peer mentors stated, if a system with peer mentors was used, then it is important for the facilitator to allow them the authority to be seen as the leaders in the virtual community. The peer mentors also discussed how it was important that they were not Facebook friends with their program facilitators. The mentees and the peer mentors did not need to be friends to join the Facebook group that was created by the program facilitator.

Another role the program facilitator should engage in, according to the peer mentors, is one of chief publicist. The peer mentors noted it was significant for the program facilitator to stress to the mentees the importance of joining the group. The facilitator lends, as one peer mentor stated, a "serious attitude" to the Facebook group. Several of the peer mentors also noted, the program facilitator needed to explain to the mentees that being outside the group would make it harder for the student to adjust to college life, though when pressed on

making the Facebook group required, they all equivocally said to keep group membership optional.

The reason for keeping group membership optional, according to the peer mentors, was to ensure that the mentees were comfortable asking social and academic questions. Many of the peer mentors believed requiring group membership would give it the appearance of being purely academic and might decrease the usefulness of the virtual learning community. One other important caution, which was raised by two of the peer mentors, was to make sure educators did not confuse Facebook with a learning management system like Blackboard. The peer mentors stated that, although many of the same features (e.g., discussion boards and messaging) were available through Blackboard, students did not use those features. Carol noted that the students spent hours a week on Facebook, but did not use Blackboard nearly as much.

The role of the program facilitator is seen as a supporter for the peer mentors, allowing the peer mentors to function as leaders within the Facebook group. Lenning and Ebbers (1999) noted that planning and implementing successful learning communities ensures those desiring to form the community must "provide collaborative leadership" (p. 78). The peer mentors' desire to function as the leaders, but still rely on Professor Walt to help out on items which they could not address, provided a collaborative leadership model. The peer mentors believed that this method of support was one item which made the Facebook group a success.

The peer mentors noted in planning and implementing a successful Facebook group it is important to allow the group to address cocurricular needs, and not only academic issues. Junco (2012a), in addressing items he noted which needed further study, stated that "it is

entirely possible that student use of Facebook is related to co-curricular involvement in some ways that maximize student academic success" (p. 169). The peer mentors believed the Facebook group would not be a successful group without the cocurricular aspects to the virtual learning community.

Thoughts and feelings about the Facebook group. The thoughts and feelings of the peer mentors were clustered around opinions on the impact to the mentees, thoughts on the immediate value created for the peer mentors, and how the virtual learning community functioned in the university program.

When the peer mentors were questioned on how they thought and perceived the effectiveness of the virtual learning community, four referenced the mentees. They believed that their presence as peer mentors allowed for the new mentees to be more involved and that it created a level of understanding of the program that they did not have when they were first-year students. Three of the peer mentors mentioned the mentees also had an advantage when coming to the university. They thought that the university, as a research intensive university, was large and possibly intimidating; yet, they believed that, as peer mentors, they helped mitigate the feelings of intimidation for those mentees. Finally, all five of the peer mentors stated that they believed that the Facebook group allowed them to know their mentees far better than just meeting with the mentees face to face.

Three of the peer mentors expressed that the Facebook group allowed for a good balance between social and school life. Nora repeatedly commented on how not having Professor Walt as a friend, but having him in the group, was an ideal situation. Carol, Irene, and Mabel also stated something similar. Ida thought a good policy was to not have professors as Facebook friends, but she also stated she had nothing on Facebook to worry

about. The important balance between Facebook being a tool that was both academic and social in nature was one aspect of the group that the peer mentors discussed as being highly beneficial.

The peer mentors also talked about feeling that they had a duty to become a peer mentor. Carol stated, "I feel like it's my turn to be the person to help the younger student that is coming in, who has no idea what is going on, to be that mentor to someone where someone was that mentor to me before." In discussing the feeling of honor and duty, another feeling was brought up; the peer mentors all discussed the feeling of being needed, of being valued, of being important, of being a leader. Irene stated that being a peer mentor "makes you feel a little important in a way, because the students are asking questions to you and they're wanting you to answer the questions."

When the peer mentors discussed how they would feel about other educators using Facebook, the consensus opinion was that they should. The peer mentors paused, two even replied, "Good question," when asked about other educators using Facebook. The peer mentors thought of Facebook as an important tool to be used to help foster communication, and they did not understand why other professors had not tried what Professor Walt had. The peer mentors' confusion was discussed by Rice (2011) in a blog posting where she noted that students are expecting to see classes led by educators who use the same tools they do, that students expect "to see classes taught more like how they live their lives" (para. 11).

Summary: Research Question 1. The peer mentors believed that the 2012 Facebook group was a successful virtual learning community. The success was due to the privacy of the group, the role of the program facilitator, their ability to be viewed as leaders, and their own feelings of being duty bound to perform well as peer mentors. The important role of the

program facilitator, preparing and delivering a short training, setting expectations, and supporting the peer mentors, was something all five of the peer mentors mentioned. The ability to be viewed as the leaders of the Facebook group inspired confidence in the peer mentors. As the peer mentors gained confidence, they increased engagement in the virtual learning community. These factors, plus the feeling of importance and the duty to answer the mentees' questions, left all five of the peer mentors feeling pleased with, and excited about, their role within the virtual learning community.

Research Question 2: How did the use of Facebook impact the development of virtual learning communities and the building of social capital?

The second research question was designed to lead to a better understanding of the peer mentors' perception of social capital accrual and how they believed being part of the virtual learning community on Facebook impacted the building of social capital. In order to answer this question, I focused on discovering what the peer mentors thought about trust within the Facebook group, expectations of reciprocity, knowledge sharing within the Facebook group, and what they perceived to be the social capital they gained as peer mentors.

Trust. Daniel et al. (2003) noted that trust is a key element to encourage knowledge sharing and is one of the key components to effective and meaningful knowledge sharing. In order to build social capital the peer mentors had to feel that they could trust the Facebook group to be open, receptive, and accepting of their help.

Some of the peer mentors spoke of building trust as part of the feeling of safety within the community. They spoke of the privacy settings, the fact the group was a private group and required special permission to join, and the meeting with Professor Walt prior to

the first-year students being added to the group. Nora discussed how she lacked trust, but through a few more conversations with Professor Walt, she believed that she could trust herself to post within the group and be taken seriously.

Another aspect of building trust, mentioned by three of the peer mentors, was witnessing how receptive the first-year students were to the getting-to-know-you posts. The peer mentors each posted a question to help break the ice. The receptiveness and thankfulness exhibited by the mentees encouraged the peer mentors to contribute more within the group. The peer mentors believed that, as the group became more active as a whole, it was important for them to contribute more as well.

Daniel et al. (2003) stated that trust is not always carried from one group to another; yet, the peer mentors who had been mentees believed that they could implicitly trust the group. They knew that the students were serious, and the seriousness of their questions, combined with past experience as mentees, was enough to instill trust in two of the peer mentors. As the mentees increasingly asked what the peer mentors viewed as serious questions, the peer mentors determined that their answers needed to be as in depth and as serious as possible.

The peer mentors so believed that the students in the Facebook group were similar enough to their own backgrounds that the question of trust seemed to shock some of them. Ida asked, "Why wouldn't I trust [the mentees]?" The feeling of trust by the peer mentors was expressed by four of the five, and the fifth one, Nora, took only slightly longer to feel trust within the community.

Reciprocity. The peer mentors viewed reciprocity as an immediate benefit within the community. The peer mentors believed that there were three distinct pieces of reciprocity

they built: (a) improved communication skills, (b) immediate social benefits, and (c) a near-term *quid pro quo* benefit with Professor Walt.

All five of the peer mentors discussed that one benefit they received from their contributions to the virtual learning community was increased communication skills. The peer mentors believed they improved their face-to-face communication skills, as they were required to meet with and lead their mentees in face-to-face meetings. The other communication skill discussed was the ability to generate appropriate text for social media. Carol discussed the need to double check all of her links and to make sure that her steps coincided with the proper links. Irene noted that she had to make sure that her Facebook group responses were not written in such a way that someone would take the response as an insult. The importance of increased communication skills and the ability to communicate successfully on social media were both viewed as highly valuable skills that that all five peer mentors believed were important to their future professional lives.

Three of the peer mentors discussed the immediate benefit that they increased their social circles. They mentioned that, by being active participating members of the Facebook group, the mentees would also come up and talk with them in the hallways and before and after class. One of the peer mentors mentioned that it was a pleasant, unlooked-for benefit, as she did not have many friends within the program the previous year. Another immediate benefit was a strengthened program community. All five of the peer mentors discussed the benefit of increased connectedness and community.

One benefit all five of the peer mentors discussed was their belief that they would receive a recommendation for graduate school. The peer mentors believed that the work they were doing as peer mentors would automatically balance out with a recommendation from

Professor Walt. Several stated that, if they were active contributing members to the Facebook group, they were guaranteed to receive a positive recommendation from Professor Walt. The peer mentors all mentioned the recommendation in a matter-of-fact manner.

Knowledge sharing. The peer mentors discussed how they believed it was important for them to share knowledge. They stated that it was what was required of them if they wanted to be perceived as a quality peer mentor. Cyr and Choo (2010) and M. H. Hsu et al. (2007) noted that for effective knowledge sharing to occur within virtual communities the benefits of sharing the knowledge and individual intrinsic motivation to share must both be present. The peer mentors believed that the biggest benefit to them was the recommendation for graduate school from Professor Walt.

The peer mentors' desire to be viewed as a high quality peer mentor was the required intrinsic motivation required for successful knowledge sharing as defined by Cyr and Choo (2010) and M. H. Hsu et al. (2007). The peer mentors also discussed how they wanted the community to be a valuable experience for all participants. The ease in trusting, the expected reciprocity, and the desire for a strong community combine for effective knowledge sharing. I created the simple diagram in Figure 5 to show how the three elements work together to produce effective knowledge sharing.

Each element in Figure 5 is equally important. For effective and ongoing knowledge sharing to occur, there needs to be a community of willing participants who, according to Vygotsky's (1962) theory, participate in increasing their own knowledge. There needs to be trust between the participants that their knowledge will be both accepted and appreciated, and finally, the expectation of reciprocity of knowledge sharing must be fulfilled. Community

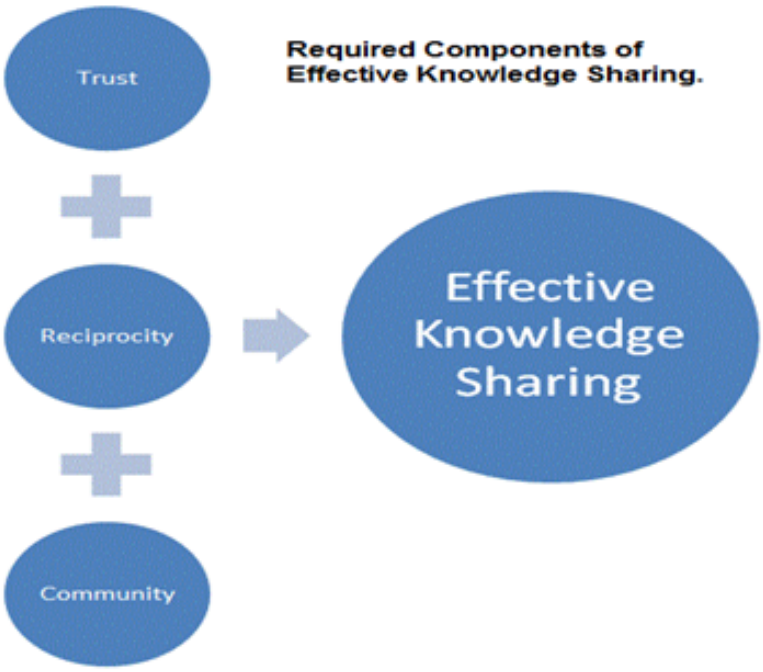

Figure 5. Model illustrating effective knowledge sharing.

members must feel as if they are getting something of value in return for sharing their knowledge or they will discontinue sharing within the community.

The peer mentors trusted their mentees and Professor Walt, they fully expected that their work as peer mentors would be reciprocated with a letter of recommendation, and they perceived a connection and a sense of belonging within the virtual learning community. These factors combined to produce effective knowledge sharing from the peer mentors. The effective knowledge sharing is an essential part in the peer mentors' accrual of social capital.

Social capital. The peer mentors were mostly focused on the immediate gains of improved communication skills and additional peer friendships. When they were asked what social capital they thought they had built up, three of the five needed to have social capital described for them. The lack of social capital as part of their vocabulary was easily remedied

but also indicative an underlying problem. The students were building up social capital, but they did not fully understand what that meant.

All five of the peer mentors mentioned that the social capital they were accruing was that of building a network of peers and mentees who may one day help them procure a job. Carol was the lone peer mentor to reference the networked contacts as professional contacts. She believed that they could be helpful to her during her schooling as well as in her professional life. Junco (2012b) discussed that social capital may be created, but that the college student may not fully understand how to utilize those contacts or what those contacts may mean for their future.

Summary: Research Question 2. The peer mentors found Facebook to be a safe and effective method for sharing knowledge and building social capital. The virtual learning community that was created, in this instance, allowed for the peer mentors to not have high concerns about the trust level with the group. The peer mentors all believed that they were building social capital, but they were unsure of how take advantage of that social capital other than to assume they might one day use that social capital to land a new job.

Research Question 3: How did the program facilitator aid the growth of a virtual learning community through the use of Facebook?

The third research question was formulated to explore how intentional the creation of the community was and what, if any, of the steps outlined by Lenning and Ebbers (1999) were used in the creation and development of the learning communities. The interview with the program facilitator revealed that he had been refining the virtual learning community every year, but he had not been following an intentional plan as outlined by Lenning and Ebbers (pp. 78–82). The program facilitator's intention was to create a community to

connect the students more closely with the program of study. Each year Professor Walt had taken different steps to improve the community. The 2012 Facebook group was the one he deemed most successful, and his peer mentors agreed.

The peer mentors found that the initial meeting to discuss the peer mentors' roles and responsibilities was a helpful first step. They believed this set a tone of support for the peer mentors that helped increase their feelings of belonging. The peer mentors also believed that Professor Walt had struck the correct balance of engagement for an educator. He trusted the peer mentors, allowed them to be the main leaders of the community, and would address comments to the community if a question or issue required him to do so.

The peer mentors also noted that the privacy features of the group allowed for them to join the group without becoming Facebook friends with all the mentees and with Professor Walt. They believed that this balance of social and professional life was an ideal state. Professor Walt noted that the balance was important for him as well. He believed that if the students had to share too much of their personal lives, they would not participate in the Facebook group.

Professor Walt also had a single group for all incoming students and did not segregate transfer students and traditional students into different groups. In 2010, he had created two different groups and found that the groups were not utilized. The single group was present in 2011, but the privacy settings on the group were low, and anyone could join the group. This caused some spamming, as noted by both Professor Walt and two peer mentors. In 2012, the increased leadership role of peer mentors on Facebook, the increased security settings, and the adoption of icebreaking introduction questions by the peer mentors created a virtual learning community that the peer mentors believed to be highly valuable.

Summary: Research Question 3. The creation of the virtual learning community did not follow a proscribed plan. Rather, Professor Walt used a trial-and-error method to create his virtual learning community. The peer mentors and Professor Walt all worked together to find a balance between social and professional lives when creating the virtual learning community. The use of high security settings and peer mentors as leaders within the group were seen as additional factors for success.

Potential Improvements

In this section I will: (a) revisit the theories of Vygotsky (1962) and Bandura (1977), (b) address the problem statement, and (c) discuss a model that can be utilized, in some situations, to improve how educators use Facebook as a virtual learning community.

Social Learning Theories

Vygotsky's (1962) theory of social learning and Bandura's (1977) social cognitive theory indicate the possible future success of virtual learning communities. Virtual learning communities have requirements that, once met, support the theories of both Vygotsky and Bandura. The implication of Vygotsky's theory, that all learning is social, supports the premise that a virtual learning community is a viable means for student learning. There are several key pieces that are needed to build a successful virtual learning community, including the addition of Bandura's social cognitive theory to Vygotsky's social learning theory.

Bandura's (1977) belief that the acquisition of new knowledge is an arduous process that can be made easier through social interaction supports the findings that virtual learning communities, such as the Facebook group studied, are useful sources of new knowledge. The peer mentors would share knowledge on the Facebook group, and the mentees could

acquire that knowledge by visiting the group and reading through the posts. The Facebook search feature also would allow the mentees to search the group to see if a similar issue had already been addressed before they created a new post. The Facebook group virtual learning community that Professor Walt created had a low threshold of difficulty for the mentees to acquire new knowledge.

Problem Statement

My research questions were formulated to address the problem statement: Facebook presents itself as an ideal vehicle for a virtual learning community, but it is not known how students perceive the use of a social tool in an educational setting. The peer mentors view the extension of Facebook into their academic world as a positive extension of their social world, with some caveats. The key factors to successfully using the social tool Facebook in an educational setting is to: (a) use the Facebook Group feature, (b) ensure the Facebook group is private, (c) ensure the peer mentors feel that they are leaders within the community, (d) encourage participation, and (e) ensure that the program facilitator does not overengage, friend the peer mentors or mentees, or disappear entirely from the group.

The peer mentors believed that the Facebook group feature allowed the program facilitator and students to interact without having to become friends on Facebook. The group feature also allowed for the peer mentors to have access to, and support, the group without being friends with all of the mentees. This is important because the peer mentors did not friend all of their mentees on Facebook; they left the choice up to the mentees. The peer mentors also strongly advocated for high privacy settings for the Facebook group. This means that individuals were allowed into the group only once an administrator gave them access.

One aspect that the peer mentors discussed was the need for the students and peer mentors to interact. They believed this encouraged the mentees to be more open, and they also stated that they could rely on Professor Walt to monitor questions and handle those that might go unanswered. The peer mentors also thought that the role of the program facilitator was to encourage participation within the group. They believed program facilitators should boost participation throughout the life of the group by regularly advertising the importance and existence of the group.

Finally, the peer mentors stated that the program facilitator played a crucial role throughout the life of the virtual learning community. They believed that Professor Walt was required to be engaged enough to know that his help might be needed but to not overstep those bounds. Also, the peer mentors wanted the program facilitator to avoid being the central point of contact for the virtual learning community. Finally, the peer mentors wanted to ensure that educators knew that students do not want to Facebook friend their professors while they are still in class.

Proposed Model

In review of the problem statement, important steps for using Facebook as a virtual learning community in my case study were examined. I have created a model (Figure 6) that can be used in a wider array of circumstances to explain how Facebook may be implemented in order to create a virtual learning community. The model is a two phase model, with the first phase of the model consisting of creating a standard learning community. The model I propose is general and provides an examination of how to create a virtual learning community to augment a traditional learning community. The broader view provides a base model that can be modified as necessary.

The proposed model for constructing a virtual learning community using the Facebook group feature begins with the assumption that all parties involved—the program facilitator, the peer leaders,

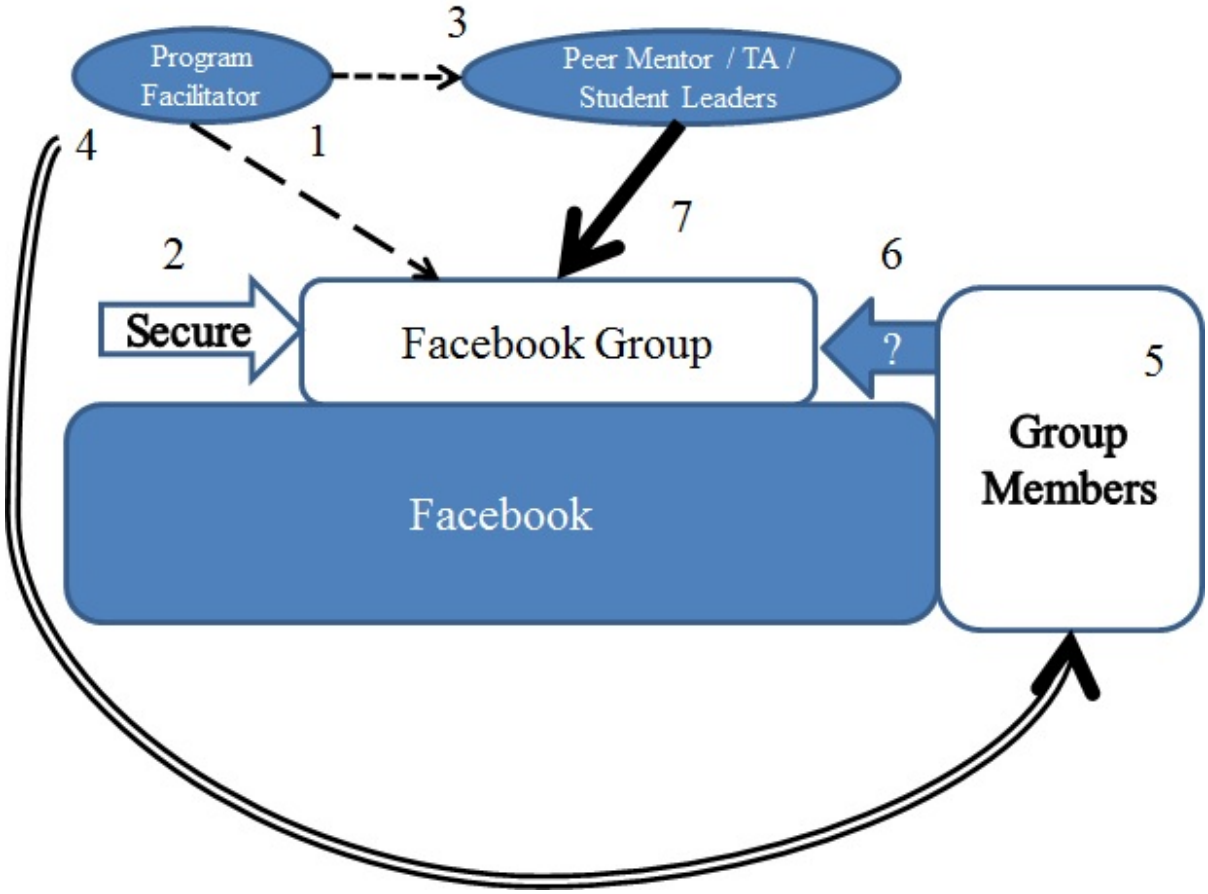

Figure 6. Model for construction of a virtual learning community using Facebook.

and the group members—all have Facebook accounts. The virtual learning community creation progresses with the following steps:

1. The program facilitator creates the Facebook group. The key is to create a Facebook group name that is descriptive but not overly long.

2. The program facilitator creates the Facebook group as a secure group that requires new members to request access.
3. The program facilitator locates suitable peer leaders, peer mentors, teaching assistants, or a group of student leaders. The important aspect here is to have a layer of leadership between the group members and the program facilitator. Note, this may not always be possible when using smaller classes as groups, but the ideal situation would be to encourage a few participants to step up and become *de facto* leaders.
4. The program facilitator advertises the group to the prospective group members. Note that there is a double line on this arrow, so that the program facilitator knows to encourage the use of the group at other times in addition to the original launch.
5. Group members request access to the group. The peer leaders and program facilitators can verify the group members and grant them access.
6. Require the new group members to answer some introductory questions posed by the peer leaders. It is important that the peer leaders ask the questions, so the group members will see them as a legitimate source of leadership. The peer mentors in my study stated this step increased their trust with the group members.
7. The peer leaders monitor and answer inquiries made to the virtual learning community. The program facilitator is not off the hook, as it is implicitly implied that he or she will also monitor the Facebook group that he or she created.

The proposed model is a holistic view of creating new Facebook groups as virtual learning communities. For existing groups, constant re-evaluation and improvement should

be implemented. Following Professor Walt's trial-and-error approach may not be as effective as following a model, but aspects from the proposed model can be included in new iterations of older virtual learning communities.

In creating this model I thought back to Professor Walt's lunch-and-learn presentation. In the audience was one educator who was quite nervous about the use of Facebook in her courses. A model describing the important aspects would be a beneficial item for educators who wanted to try something new in regards to Facebook yet did not feel confident with the technology to strike out on their own and create their own model.

Contribution to Current Literature

This qualitative case study is an addition to the growing body of literature that is currently growing around using Facebook as a virtual learning community. It includes the voice of peer mentors, who influenced the creation of the proposed model for constructing a virtual learning community using the Facebook group feature. The inclusion of the voice of the main users of the social medium is an important step not seen in many pieces of current literature on Facebook as virtual learning community. The inclusion of the peer mentors highlights that the peer mentors interviewed believe that more educators should be using Facebook in an academic manner.

As Creswell (2013) noted, a case study is a starting point that leads to further studies. This qualitative case study provides a foundation for examining, in greater detail, the engagement of students within virtual learning communities, the use of Facebook as a virtual learning community, and the validity of the proposed model for creating a virtual learning community using the Facebook group feature.

Future Research

The implication for future studies based upon this qualitative case study and upon the existing literature indicates that there are multiple areas that need to be examined. Future research I would encourage individuals to focus on are: (a) social capital, (b) longitudinal virtual learning communities on Facebook, (c) student performance and engagement through the use of Facebook as a virtual learning community, and (d) whether students are feeling overconnected.

Based upon the peer mentors' response to social capital inquiries during my interviews, one aspect of future research should focus on how students view the creation and use of social capital. Another area of possible future research that could be examined is if student leaders and student members of virtual learning communities understand the importance of networking and social capital. The fact that only one peer mentor recognized that those professional contacts created during her time as a peer mentor could help her throughout her professional career, and not just once to secure a job, indicates that college students are not fully aware of the benefits of networking and social capital accrual within virtual learning communities.

Another aspect of study would be to examine Facebook groups being used as virtual learning communities that are longitudinal in nature. The Facebook group in my case study was not used beyond a one-year time frame. The peer mentors believed that this 2012 group might have been used longer because of how well the community had grown, but the design of the group was not that of a long-term group. It would be interesting to study how a long-term Facebook group that is used throughout a program of study, and not just as an introduction to the program, develops and functions. The potential examination of trust,

group dynamics, and social capital accrual studies would add to the body of literature on virtual learning communities. Another fascinating aspect of a longitudinal study on Facebook as a virtual learning community would be the inspection of the connectedness reported by the peer mentors and whether connectedness impacts retention.

Junco (2012a) applied several quantitative measures to student GPA and the use of Facebook for purely social means. Using the survey instruments created by Junco (2012a, 2012b) and applying them to peer mentors and mentees in a virtual learning community would provide results that some may find interesting. The ability to measure the academic impact of using a piece of social media in higher education would further the discussion of the appropriate role of virtual learning communities in higher education. This type of research study could also measure student engagement and the possible impacts to student engagement Facebook may have on a virtual learning community.

Finally, one item that came up in the semistructured interviews that I would like to revisit involves one of Nora's responses. When Nora related how she perceived using Facebook, she commented:

> I feel like sometimes I wish [Facebook] wasn't there because it's such a distraction. I mean, when we didn't have it, I feel like people were a lot more involved and did a lot more things instead of always concerned about what's on Facebook. Like we used to go outside and talk to each other, and now it's all about, you know, texting and Facebook stuff.

When I came back to Nora's feelings of being constantly connected, she replied that she did not mind the constant availability, just that she felt like "sometimes I wish it wasn't there because it's such a distraction," and that the use of texting and Facebook kept her connected,

but the technology also "keeps you distant." When, I asked her to elaborate on that feeling of distance, she replied,

> Well I don't know, like, when you're in a table studying, you know, most people are on their Facebook, but we used to just talk with each other, but now everybody's on their Facebook. I think it's just a matter of technology, you know, people are just less willing to talk person-to-person, more they like to do it through something rather than face-to-face, and it's just a concern [laughs].

With the ubiquitous term of digital natives being used to describe the current traditional students in higher education, I found the above statements about overconnectedness to be out of step with both current belief of digital natives and Nora's own self-reported use of connecting technology. It would be interesting to examine how the digital natives cope with the constant feeling of being connected and what impact that has on their college lives.

Reflexivity Statement

In reflecting upon my qualitative case study I start with my positionality as discussed in Chapter 3. As a constructivist who believes that our social interactions construct meaning, and as someone who is intrinsically motivated in studying the use of technology in higher education, the study of Facebook as a virtual learning community was an intriguing proposition. In gathering data from multiple sources I realized that my interpretations as the primary investigator were impacted by my positionality.

I found myself making a special effort to avoid appearing as a technical guru when I began interviewing my participants. During the review of audio transcripts, I would listen and focus on all aspects of the participants' answers. To help me focus on the voice of the

peer mentors and not just their view of the technology, around my office I had posted notes telling myself to focus on the voice of the peer mentor. I also decided to continually listen to my audio transcripts as often as possible. I would keep one recorder in my car and listen to individual interviews while commuting. In taking these steps and focusing on the peer mentors' voices, I produced a thick, rich, description of the case, as described in Chapter 4.

My goal for this study was to give a voice to the peer mentors and to determine how they perceived using a social tool in an educational setting. During this study, I grew as a researcher, as a student, and as a person. My skills in interviewing individuals for corporate positions did not translate as well as I had have hoped. I found that I was glad that I separated my interviews for each participant into two parts. This allowed me to not only improve my interviewing form but also to focus on each participant as a student. I also believe that the peer mentors were more comfortable with me as an interviewer after the initial interview and that feeling of trust was highly beneficial during the interview process.

I profess to be a life-long learner. During the course of this study I found myself doing more research on peer mentors I needed to move forward; yet, it was important to gain an understanding of the importance of peer mentors before I progressed too far into my study. I grew as a student because writing a dissertation is a humbling experience and one does not get to the end without suffering through edits, rewrites, and moments of despair. In overcoming those obstacles, I learned new and valuable lessons. I confirmed for myself that learning is a constant and, as Bandura (1977) believed, arduous task. Most importantly, I learned to accept all criticisms and compliments with equal aplomb.

I grew as person because I had to step into multiple, different roles to complete this study. When stepping into those roles and acting as an observer, I found that I became more

understanding. In interviewing the program facilitator and five peer mentors, I encountered a wide range of individuals. All of my participants were bound geographically and programmatically to this study, yet they were all unique individuals. I feel privileged that Professor Walt would open up the group to me and share information he had gathered from 2010. I feel honored that all five of my peer mentors returned for their second interview, read and approved the items I sent to them for member checking, and remained helpful and gracious throughout the process.

In reflecting upon the study itself, I am excited. Learning communities are not new, but this is an age when technology is pushing communication methods. Virtual learning communities are one important piece of the future of higher education. Being able to contribute, even if it is just in some small way, is an honor and a privilege. More importantly, as the peer mentors indicated, students in higher education are excited to use those new technologies. That excitement and drive by the students is an important part of the future of higher education.

Closing Comments

In conclusion, it is important to note that the peer mentors' perception was that Facebook is an effective way to create a virtual learning community. Educators need to be aware that Facebook has become a steady presence in their students' daily lives. The peer mentors welcomed the use of Facebook providing it did not become too intrusive into their social life. Professor Walt and the peer mentors wanted to keep a clear separation between their social lives and the school work associated with a virtual learning community. These factors and several others are combined in my proposed model. By utilizing my model for

constructing a virtual learning community using the Facebook group feature, program facilitators will have a method for constructing an effective virtual learning community.

The peer mentors also discussed the importance of the program facilitator being engaged at the appropriate level. Program facilitators who form a virtual learning community need to be willing to allow the students to assume a leadership role within the virtual learning community. Educators also need to be aware of the desire for security that the peer mentors focused on during my research. To successfully create a virtual learning community, educators and program facilitators need to create a secure group that encourages effective knowledge sharing.

My proposed model takes into consideration all of the different components of using Facebook groups to successfully build a virtual learning community. My research, as well as current literature, illustrates that the successful use of learning communities can transition from a face-to-face setting to a virtual community. My research of Facebook groups and virtual learning communities led to my proposed model. Program facilitators and educators who may be planning some form of virtual learning community creation will be able to use the model to effectively construct Facebook groups to build a virtual learning community.

APPENDIX A. LITERATURE MAP

APPENDIX B. FACEBOOK INTENSITY EXAMPLE

Below is a section from Ellison, Steinfeld, and Lampe's (2007) journal article, "The Benefits of Facebook 'Friends': Social Capital and College Students' Use of Online Social Network Sites." It is one section of their Facebook intensity scale they used in their quantitative research.

Table 2 Summary statistics for Facebook intensity

Individual Items and Scale	Mean	S.D.
Facebook Intensity[1] (Cronbach's alpha = 0.83)	**−0.08**	**0.79**
About how many total Facebook friends do you have at MSU or elsewhere? 0 = 10 or less, 1 = 11–50, 2 = 51–100, 3 = 101–150, 4 = 151–200, 5 = 201–250, 6 = 251–300, 7 = 301–400, 8 = more than 400	4.39	2.12
In the past week, on average, approximately how many minutes per day have you spent on Facebook? 0 = less than 10, 1 = 10–30, 2 = 31–60, 3 = 1–2 hours, 4 = 2–3 hours, 5 = more than 3 hours	1.07	1.16
Facebook is part of my everyday activity	3.12	1.26
I am proud to tell people I'm on Facebook	3.24	0.89
Facebook has become part of my daily routine	2.96	1.32
I feel out of touch when I haven't logged onto Facebook for a while	2.29	1.20
I feel I am part of the Facebook community	3.30	1.01
I would be sorry if Facebook shut down	3.45	1.14

Notes: [1]Individual items were first standardized before taking an average to create scale due to differing item scale ranges. [2]Unless provided, response categories ranged from 1 = strongly disagree to 5 = strongly agree.

APPENDIX C. INSTITUTIONAL APPROVAL

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office for Responsible Research
Vice President for Research
1138 Pearson Hall
Ames, Iowa 50011-2207
515 294-4566
FAX 515 294-4267

Date: 10/12/2012

To: Jerome A Hilscher II
15719 Tanglewood Dr
Urbandale, IA 50323

CC: Dr. Larry Ebbers
N256 Lagomarcino Hall

From: Office for Responsible Research

Title: A Case Study of the Perceived Effectiveness of Using Facebook as a Virtual Learning Community

IRB ID: 12-456

Study Review Date: 10/11/2012

The project referenced above has been declared exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b) because it meets the following federal requirements for exemption:

- (1) Research conducted in established or commonly accepted education settings involving normal education practices, such as:
  - Research on regular and special education instructional strategies; or
  - Research on the effectiveness of, or the comparison among, instructional techniques, curricula, or classroom management methods.

- (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey or interview procedures with adults or observation of public behavior where
  - Information obtained is recorded in such a manner that human subjects cannot be identified directly or through identifiers linked to the subjects; or
  - Any disclosure of the human subjects' responses outside the research could not reasonably place the subject at risk of criminal or civil liability or be damaging to their financial standing, employability, or reputation.

The determination of exemption means that:

- **You do not need to submit an application for annual continuing review.**

- **You must carry out the research as described in the IRB application.** Review by IRB staff is required prior to implementing modifications that may change the exempt status of the research. In general, review is required for any modifications to the research procedures (e.g., method of data collection, nature or scope of information to be collected, changes in confidentiality measures, etc.), modifications that result in the inclusion of participants from vulnerable populations, and/or any change that may increase the risk or discomfort to participants. Changes to key personnel must also be approved. The purpose of review is to determine if the project still meets the federal criteria for exemption.

  Non-exempt research is subject to many regulatory requirements that must be addressed prior to implementation of the study. Conducting non-exempt research without IRB review and approval may constitute non-compliance with federal regulations and/or academic misconduct according to ISU policy.

  Detailed information about requirements for submission of modifications can be found on the Exempt Study Modification Form. A Personnel Change Form may be submitted when the only modification involves changes in study staff. If it is determined that exemption is no longer warranted, then an Application for Approval of Research Involving Humans Form will need to be submitted and approved before proceeding with data collection.

Please note that you must submit all research involving human participants for review. **Only the IRB or designees may make the determination of exemption**, even if you conduct a study in the future that is exactly like this study.

IRB ID: 12-456

INSTITUTIONAL REVIEW BOARD (IRB)
Application for Approval of Research Involving Humans

RECEIVED
SEP 06 2012
By IRB

Title of Project: A Case Study of the perceived effectiveness of using Facebook as a virtual learning community

Principal Investigator (PI): **Jerome A. Hilscher II**		Degrees: MS - Ed. C&I
University ID: **60095758769410714**	Phone: 5155547148	Email Address: hilscher@iastate.edu
Correspondence Address: 15719 Tanglewood Dr		
Department: School of Education		College/Center/Institute: Human Sciences

PI Level: ☐ Tenured, Tenure-Eligible, & NTER Faculty ☐ Adjunct/Affiliate Faculty ☐ Collaborator Faculty ☐ Emeritus Faculty
☐ Visiting Faculty/Scientist ☐ Senior Lecturer/Clinician ☐ Lecturer/Clinician, Ph.D. or DVM ☐ P&S Employee, P37 & above
☐ Extension to Families/Youth Specialist ☐ Field Specialist III ☐ Postdoctoral Associate ☒ Graduate/Undergrad Student ☐ Other (specify:)

FOR STUDENT PROJECTS *(Required when the principal investigator is a student)*

Name of Major Professor/Supervising Faculty: Dr. Larry Ebbers		
University ID:	Phone: 515-294-8067	Email Address: lebbers@iastate.edu
Campus Address: N221A Lagomarcino		Department: School of Education

Type of Project (check all that apply): ☒ Thesis/Dissertation ☐ Class Project ☐ Other (specify:)

Alternate Contact Person:	Email Address:
Correspondence Address:	Phone:

ASSURANCE

- I certify that the information provided in this application is complete and accurate and consistent with any proposal(s) submitted to external funding agencies. Misrepresentation of the research described in this or any other IRB application may constitute non-compliance with federal regulations and/or academic misconduct according to ISU policy.
- I agree to provide proper surveillance of this project to ensure that the rights and welfare of the human subjects are protected. I will report any problems to the IRB.
- I agree that modifications to the originally approved project will not take place without prior review and approval by the IRB.
- I agree that the research will not take place without the receipt of permission from any cooperating institutions, when applicable.
- I agree to obtain approval from other appropriate committees as needed for this project, such as the IACUC (if the research includes animals), the IBC (for research involving biohazards), the Radiation Safety Committee (for research involving x-rays or other radiation producing devices or procedures), etc.
- I agree that all activities will be performed in accordance with all applicable federal, state, local, and Iowa State University policies.

Jerome A. Hilscher 9/4/12
Signature of Principal Investigator Date

9-4-12
Signature of Major Professor/Supervising Faculty Date
(Required when the principal investigator is a student)

- I have reviewed this application and determined that departmental requirements are met, the investigator(s) has/have adequate resources to conduct the research, and the research design is scientifically sound and has scientific merit.

for LCR
Signature of ~~Department Chair~~ Director Date

For IRB Use Only	Full Committee Review: ☐	Review Date: October 11, 2012
	EXPEDITED per 45 CFR 46.110(b): Category Letter	Approval/Determination Date: October 11, 2012
Approval Not Required: ☐		Approval Expiration Date: N/A
Not Research: ☐	EXEMPT per 45 CFR 46.101(b): 1, 2	
No Human Subjects: ☐	Not Approved: ☐	Risk: Minimal ☒ More than Minimal ☐

IRB Reviewer's Signature Nate Howard

APPENDIX D. CONFIDENTIALITY AGREEMENT

CONFIDENTIALITY AGREEMENT

Transcription Services

I, _____, transcriptionist, editor, and/or reviewer, agree to maintain full confidentiality in regards to any and all audiotapes and documentation received from Jerome Hilscher related to his doctoral study: A Case Study of the perceived effectiveness of using Facebook as a virtual learning community. Furthermore, I agree:

1. To hold in strictest confidence the identification of any individual that may be inadvertently revealed during the transcription of audio-taped interviews, or in any associated documents;
2. To not make copies of any audiotapes or computerized files of the transcribed interview texts, unless specifically requested to do so by Jerome Hilscher;
3. To store all study-related audiotapes and materials in a safe, secure location as long as they are in my possession;
4. To return all audiotapes and study-related documents to Jerome Hilscher in a complete and timely manner.
5. To delete all electronic files containing study-related documents from my computer hard drive and any backup devices.

I am aware that I can be held legally liable for any breach of this confidentiality agreement, and for any harm incurred by individuals if I disclose identifiable information contained in the audiotapes and/or files to which I will have access.

Transcriber's name (printed) _____

Transcriber's signature _____

Date _____

APPENDIX E. SEMISTRUCTURED INTERVIEW QUESTIONS

Interview Protocol - Faculty

Background Questions

1. Tell me about your use of technology throughout your career.
2. What is your personal experience with Facebook?
3. Have you used Facebook in other courses or prior to creating the Animal Science group?
4. What led you to creating the Facebook group?

Group Usage

5. Why do you think a Facebook group is a good idea?
6. What was your plan for the usage of the Facebook group?
7. How do you use the Facebook group?
8. How do you encourage usage of the group?
    a. I've noticed you ask your students questions on occasion; do you plan on increasing that in the future?
9. What is the potential for the use of Facebook?
10. What do you see as the limitations for the use of Facebook?
11. Do you worry about the use of Facebook during classes that may distract from student engagement?

Goals

12. What are your goals for the Facebook Group?
13. What benefits, for you, have you found in using the Facebook group?
14. What unexpected benefits have you encountered?
15. What benefits for your students have you encountered?
    a. Did you anticipate these benefits?
    b. Are you "happy" with these benefits?

16. Are there any goals you may have had in mind, or set, that you have not achieved?

17. Do you have any future changes you may make to the Facebook group?

Wrap-up

18. How do you feel about the usage of Facebook within course work?

19. Do you plan to expand your use of social media?

20. Do you have any other items you wish to add? Statements to make on the use of Facebook?

Interview Protocol – Peer Mentors

Background Questions

1. Tell me about your family and where you grew up.

2. What type of computer and social media usage was available to you at your home?

Social Media Background and Technical Experience

3. Tell me about when you first began using social media, what social media platforms were you engaged in?

4. Where there any individuals who had an impact on your use of social media?

5. Did you use social media in determining which school to apply to?

    a. Tell me about the use of social media in your college search.

6. How technically adept are you? To what level are you engaged in the use of technology and social media?

7. What are positive aspects of using social media such as Facebook?

8. What are some of the negative aspects of using social media?

    a. Have you ever experienced cyber-bullying or known someone who has? How did this impact your use of social media?

9. Tell me about your use of technology and social media in high school.

Transition to College

10. Tell me about your arrival at Iowa State.
    a. How quickly did you add individuals to your social networks?
    b. How often do you communicate via social media with friends who did not attend Iowa State?
        i. Do you think this higher/lower than expected?

Closing Questions

11. Is there anything else you'd like to share with me about your experience?

Academic Usage of Social Media

1. Do you find yourself using social media during classes?
2. Do you find social media makes you more or less engaged in those classes?

Social Usage

3. How have you used social media here at Iowa State to engage in social activities?
4. Are you concerned with over-sharing on social networks?

Reflection

5. Last time we discussed your past use of Facebook and other social media, I would like you to reflect on how social media impacted your life so far.
6. Please share with me how you first became involved with the Animal Science Facebook group?

The Facebook Group

7. What, in your opinion, is the purpose of the Animal Science Facebook Group?
8. How engaged are you in the Facebook group?
9. What have you gained from being a member of the group?
10. When you started in the group how comfortable were you with sharing?
    a. What happened to make you stay engaged/grow/share more?
11. What do you think of using Facebook in this manner?

a. What would you tell your other professors/instructors about using Facebook like this?

12. Please share some personal stories of your involvement in this group….

    a. Prompt – membership/other's usage

13. How do you think your college experience would be different if you were not a part of this group?

    a. Both academically and socially

14. How would you like to see social media and Facebook used by instructors?

    a. What personal message might you pass along to your instructors?

15. What do you think of instructors using Facebook on a personal level?

Impact/Gains

16. At the start of today we discussed the academic impacts, social usage, and reflections upon the use of social media in general. Now that we have spent quite a bit of time discussing the Animal Science Facebook group, can you please take a moment and reflect on the overall use of Facebook and what it means to you?

17. What do you think the long term impact of Facebook will be on you personally and professionally?

    a. Do you think that contacts you make now will impact you professionally once you leave Iowa State?

18. What benefits have you received (or gained) from being part of the Facebook group?

    a. What do these benefits mean to you?

    b. What future benefits do you expect?

Wrap-up

19. What does being part of the Animal Science Facebook Group mean to you?

20. What else would you like to share with me on the impact of Facebook and the Animal Science Facebook group on your life and academic career?

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