Social Capital in Online Courses

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*A*s colleges and universities increase their online course offerings, student social experiences in online learning environments require further examination, specifically for nonresidential students who may already be less integrated into college social networks. A social capital framework was used to guide this qualitative study of 17 nonresidential students and two faculty from two regional campuses of a public Midwestern university. Student participants reported different experiences in online courses compared to face-to-face (FTF) courses, expressly reporting the development of fewer friendships in their online courses, a lack of a sense of community, and an increase in the mechanical nature of their online course interactions. Participants described spontaneous interactions and physical presence as benefits to FTF classrooms over online classrooms. Addressing these issues will require a review of practices, processes, attitudes, and expectations.

Social Capital in Online Courses

On a college campus, students can engage in a variety of academic and social activities that influence their overall educational experience. These activities occur both inside and outside the classroom, and they are often unplanned or spontaneous. With the rise of online course offerings, however, the social experiences of students are changing. As of 2014, 27% of students attending public institutions reported enrolling in at least one online course (Allen, Seaman, Poulin, & Straut, 2016). Of particular concern are the social experiences of nonresidential students in online classrooms who, due to their nonresident status, may have few opportunities to develop social capital by connecting and interacting with fellow students and faculty in a supportive community.

Social capital in higher education has been well studied; however, the literature on social capital formation in online courses is still developing. Coleman (1988) defines social capital as follows:

> Social capital is defined by its function. It is not a single entity, but a variety of different entities, with two elements in common: They all consist of some aspect of social structure, and they facilitate certain actions of actors—whether persons or corporate actors—within the structure. (p. S98)

Coleman continues, stating "…social capital inheres in the structure of the relations between actors and among actors" (p. S98). Additionally, Coleman discusses the concept of network closure, where individuals feel a special obligation to the community and its members. With online learning experiences, a significant concern is not only focused on how social capital forms, but also on student attitudes toward and expectations for community development. This is an important issue in educational environments as a number of studies have reported social capital's role in a variety of academic outcomes (i.e. Al-Hussami, Saleh, Hayajney, Abdalkader,

& Mahadeen, 2011; Çelik & Ekinci, 2012; Cherng, Calarco, & Kao, 2013; Dika, 2012; Kim & Sax, 2011; Laurea, 2011; Leana & Pil, 2006; Perna & Titus, 2005).

This study focuses on the experiences of nonresidential students who had completed both face-to-face (FTF) and online courses thus far during their degree program, and specifically on the participants' observations and experiences with the formation of social capital in online courses. The problem addressed in this study is the lack of social capital formation in online courses, which may limit nonresidential students' opportunity to build networks with peers and faculty. This problem is affected by the lack of time spent FTF and by varying expectations of students for connecting with others in FTF classes versus online learning environments. The lack of facilitation of social interactions in online courses can be problematic if students have an expectation to build a network with peers and faculty during their college careers.

> The two research questions guiding this study are:
> - *In what ways is connecting with others important to nonresidential students?*
> - *In what ways do nonresidential students make connections and create a sense of community in online classes?*

To address these questions, the researcher applied the social capital framework developed by Grootaert, Narayan, Jones, and Woolcock (2004) and the application of the framework for qualitative research described by Dudwick, Kuehncast, Jones, and Woolcock (2006). The framework includes the measurement of six dimensions of social capital: groups and networks, trust and solidarity, collective action and cooperation, information and communication, social cohesion and inclusion, and empowerment and political action (Grootaert et al, 2004). This approach involves examining not only the connections students make, but also the depth of their relationships as measured by the other social capital dimensions.

Foundational Literature

Research on social capital formation in college has examined how connections and networks develop, the quality of these relationships, and the resulting outcomes. Social capital formation occurs within classrooms, across campus, and in online learning environments. Whether describing social capital formation in FTF or online environments, there are common elements to this phenomenon.

Inside the classroom, formal class networks are enhanced through student participation guided by class norms, with the teacher acting as a gatekeeper. Combined with the encouragement of two-way communication, this environment is known to facilitate social capital formation (Balatti, Black, & Falk, 2007). Student participation in service learning projects can also result in improved social capital development (D'Agustino, 2010).

Student-faculty interaction outside of the classroom also tends to generate social capital. These interactions can include academic advising, project collaboration, and discussions about coursework (Dika, 2012). In a similar manner, student-mentor connections provide a path for social capital (Goodwin, Stevens, & Bellamy, 1998; Smith, 2007). Administrative stability, alumni interaction, and locally based advisory boards have also been found to positively affect

social capital formation (Oberman & Hill, 2008). Importantly, whether social capital is created as a result of these relationships depends on the existence of mutual trust (Smith, 2007).

In online learning environments, network building, communication, and information sharing can be aided by the use of technology tools such as video conferencing, prerecorded lectures, discussion forums, and online collaborative tools (Aleksic-Maslac & Magzan, 2012; Lu, Yang, & Yu, 2013). In addition to these tools, the course design can facilitate interactions to build and strengthen an online community, through small group activities, the promotion of dialogue among students, and the enhancement of social presence (Rovai, 2002). Despite the availability of these resources, researchers have noted barriers to social capital formation in online classes. Most notably, students experience difficulty trusting other students in online courses (Schoenicker, 2009). In a comparison of modalities, Carceller, Dawson, and Lockyer (2015) found the relationships formed in courses that blended FTF and online interactions resulted in greater social capital formation compared to relationships formed in courses with only online interaction.

Theoretical Framework

Grootaert et al.'s (2004) six dimensional social capital framework has been used in multiple research studies on online learning and social capital formation (see Lu, Yang, & Yu, 2013; Schoenecker, 2012; Shiengold, Hahn, & Hofmeyer, 2013). The six dimensions in the social capital framework include groups and networks, trust and solidarity, collective action and cooperation, information and communication, social cohesion and inclusion, and empowerment and political action. Groups and networks represent the connections individuals make with others as well as membership in groups. Grootaert et al. (2004) notes that "…a network is seen as a circle of close friends" (p. 11). Group membership can involve affiliation with academic, athletic, religious, or other types of organizations. Trust and solidarity refers to the trust a person has in other individuals, including strangers. Collective action and cooperation refers to the degree to which individuals work together collectively. Information and communication comprises not only the information that individuals can access, but also the individual's choice of and frequency of use of communication mediums. Social cohesion and inclusion reflects the differences and similarities among individuals as well as the degree of social interaction. Empowerment and political action refers to both an individual's self-efficacy and participation in political interest.

Shoenecker (2009) described each social capital dimension within the context of an educational environment. For example, groups and networks could be connections made in particular classes as well as in other school organizations. Trust and solidarity is evidenced when there is open discussion and positive feedback among and between classmates, instructors, and others on campus. Examples of collective action and cooperation are demonstrated through collaborative work, such as service learning or other projects. Social cohesion and inclusion is reflected in how friendly and accepting individuals are with each other. Information and communication involves the helpful sharing of information using multiple communication channels. Empowerment and political action is demonstrated through individuals voicing their own opinions as well as respecting the views expressed by others. This approach to measuring social capital reinforces the idea that social capital involves multiple facets, extending beyond simply the formation of a network of individuals.

Methods

This qualitative study followed Merriam's (2009) basic qualitative approach commonly used in applied fields including education. Merriam stated that the purpose of the qualitative research method "…is to understand how people make sense of their lives and their experiences" (p. 23). Data collection for basic qualitative study often involves interviews, document analysis, and observations. The collected data are then analyzed to identify patterns that may form themes (Merriam, 2009). Data for this study were collected through semi-structured interviews. The interview questions were informed by Grootaert et al.'s (2004) six dimensional social capital framework. Based on Grootaert et al.'s (2004) theory, Dudwick et al. (2006) provided example interview questions for qualitative studies using the six dimensional framework. These examples informed the researcher's development of the interview questions used in this study.

Setting and Participants

The study targeted students at the regional campuses of a public Midwestern university. Enrollment on these campuses was approximately 5,000 students total. The sample was purposely created to include students from a wide range of academic disciplines who had completed hybrid or online courses at the institution. In order to create a diverse sample, five faculty members with online teaching experience and one staff member were asked to identify students they knew had completed a hybrid or online course. The researcher emphasized the need for broad representation across disciplines since faculty and departments at the institution were given broad control over development of their online courses; thus, online course experiences could differ across the institution. The identified students were invited to participate in the study, resulting in 19 participants completing interviews. Student participants included two freshmen, two sophomores, five juniors, and eight seniors for a total of 17 undergraduate students. The sample included seven males and 12 females representing 14 degree programs. To provide an additional perspective, the researcher interviewed two faculty members who had FTF and online teaching experience at the institution.

In this study, online courses are defined as involving asynchronous contact, with all coursework completed in the online environment and no required FTF meetings. Hybrid courses include a mix of FTF and online coursework. FTF courses involve traditional FTF classroom meetings only. Of the 14 student participants who had taken a fully online course, five reported completing less than 10% of their college courses online, three reported completing between 10% and 25% of their courses online, five reported completing between 26% and 50% of their courses online, and one reported completing 75% of their courses online. Three participants reported completing hybrid courses. All student participants were nonresidential students, living off campus and commuting to attend FTF classes. Table 1 lists the study participants.

Table 1

Interview Participants' Pseudonym, Age, Sex, Race, Rank, and Field of Study

Pseudonym	Age	Sex	Race	Rank	Major / Field of Study
Beth	46	Female	White	Junior	Engineering Technology
Blaine	53	Male	White	Sophomore	Cross-Cultural Leadership
Clarissa	32	Female	White	Faculty	English
Denise	40	Female	White	Senior	Kinesiology
Eleanor	43	Female	African American	Faculty	Business Technology
Frederick	22	Male	Asian American	Junior	Cross-Cultural Leadership
George	21	Male	White	Senior	English
Jack	21	Male	White	Sophomore	Healthcare Administration
Jenny	22	Female	White	Senior	Organizational Leadership
Karen	22	Female	White	Senior	Healthcare Administration
Katie	24	Female	White	Junior	Applied Sociology
Kelly	21	Female	African American	First-year	Business Finance
Lionel	20	Male	White	Junior	Black World Studies
Madalyn	26	Female	White	Senior	Visual and Cultural Media
Meagan	20	Female	White	Senior	Cross-Cultural Leadership
Momba	22	Male	African	Junior	Business Technology
Robert	20	Male	White	First-year	Accounting
Sapphire	42	Female	African American	Senior	Family Studies
Suzie Lou	20	Female	White	Senior	Nursing

Note: Many participants reported multiple fields of study. To reduce the risk of deductive disclosure of participant identity, only the first field of study is listed.

Interview Procedures

The researcher collected data via 19 semi-structured interviews which lasted anywhere from 30 to 90 minutes and which were conducted at private locations on campus convenient to the participant. Participants completed a consent form, and the researcher asked each participant to establish a pseudonym to protect their identity. Interviews were recorded for later transcription. After the researcher had prepared the participants' transcriptions, each participant was invited to review their own transcript for accuracy. Three participants responded to the invitation to review and indicated no revisions to the transcripts. The interview question sets are available in Appendix A (student participants) and Appendix B (faculty participants).

Data Analysis

A constant comparative method was used to review and analyze data throughout the data collection process. Strauss and Corbin (1998) described three phases of coding and an analytical process that involves breaking down data, identifying codes and categories, and discovering emerging themes. These phases should be considered parts of an iterative process, and not individual steps to be completed in sequence (Corbin & Strauss, 2007).

As the interviews were transcribed, the transcriptions were uploaded to Dedoose.com (2015), an Internet-based tool used for qualitative data analysis. The researcher generated codes, categorizing them using the six social capital dimensions. The researcher also noted codes that corresponded with the interview questions. Several themes, such as community and friendship, emerged.

To improve credibility, the researcher maintained a reflective journal, as described by Lincoln and Guba (1985), and an audit trail of the coding process. Corbin and Strauss (2015) describe the impact of journaling as helping a researcher identify his or her own biases as well as the researcher's influence on the research process and results. For this study, the researcher's journal served as a tool for reflection including a review the influences of his own personal and professional experiences. The researcher has designed and taught online courses for four years, and his position prior to conducting this study was that community and social capital can develop in online classrooms.

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Findings

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Preliminary questions at the start of the interview asked each student participant why they decided to attend college as well as how important college was for them. The participants gave similar reasons for choosing to attend college, namely, earning a degree, improving their financial future, and networking with others. All but one participant mentioned earning a degree as a reason they matriculated. While four participants initially mentioned financial goals as a reason for attending, when specifically asked in a follow-up question if finances were important, all participants agreed that they also considered the impact on their financial future. Eleven of the participants initially described networking as a reason for attending. When the researcher explicitly asked about networking, all but two participants said it was important.

Creating Friends and Establishing a Network

To address the first research question (In what ways is connecting with others important to nonresidential students?), participants were asked about the kinds of connections they had made through their classes, both online and FTF; the differences between their online and FTF class experiences; their interactions with others on campus; and the sense of community they experienced overall.

Participants' networks were not limited solely to fellow students but also often included faculty, with three participants specifically describing close friendships with a faculty member. However, two other participants mentioned it was important to them not to network or make friends, stating that social engagement would distract from their coursework. Other participants explicitly described the importance of connecting with others, and several included descriptions of close friendships they had formed on campus. Madalyn explained how important connecting to others was to her:

> Now that I'm here I know that there are so many other benefits. I don't even really care about the income so much anymore. I have made so many connections with not only other students. I mean some of my best friends I met here.

Robert talked about why creating new friendships was important, and how making new connections was a key component in developing his professional network. Robert also discussed longer term reasons for creating friendships in college:

> In my opinion, I think that's probably the most important thing about college. It really helps you discover who you are and make contacts and friendships that hopefully will last for a while.

Eleven participants mentioned networking or making connections as important to their college experience. Jack said, "I mean for me, I met most of my closest friends here. I mean you meet a lot of people and connections and networks to better things in the future." Katie also discussed how making connections in college was important to her:

> I want it to be a learning experience of everything so it's just the thing I can grow on and I tell my kids, "When I went to college, this is what I learned, this is what I did. These are the people I've met, and I'm still friends with them."

Eleven participants addressed the importance of connecting with faculty. These connections were described as not only beneficial to the participants during school, but also potentially beneficial after graduation. Participants often smiled or nodded their heads when discussing their connections with teachers. Denise, Beth, and Norman described at least one faculty member as a friend. Beth said it was easier to connect with her online teachers compared to students since her online teachers remained in "constant communication" with them via email and phone.

Connections and Community in Online Classes

The second research question (In what ways do nonresidential students make connections and create a sense of community in online classes?) resulted in some consensus that students find it very difficult to have a sense of community in online courses. During the interviews, participants were asked to define what "community" meant to them. Several common phrases and conceptualizations emerged from the responses. Participants described how community could exist not only within classrooms, but also in study groups, student organizations, and athletic teams. Two important components of community were the sharing of similar interests and shared experiences. Furthermore, students felt a community could serve not only as a place for members to spend time with each other and bond, but also as a support mechanism.

Participants reported that online courses tended to focus on individual work and that the interactions they did experience in groups were mechanical or prescribed in nature. Participants felt they developed fewer friendships in online courses, and associated the lack of both physical presence and the opportunity for spontaneous interactions among classmates as obstacles to classroom community. All but two participants (15 of 17) said that making connections and creating a sense of community were more difficult in online classes. Two participants remarked that a sense of community was not possible, noting, as other participants had, the lack of FTF interaction. Considering the generally shared idea that connecting with others was important in college, both student and faculty participants raised concerns about the lack of opportunity to develop relationships in online courses.

In general online classes were described as completing individualized work with mechanical and prescribed interactions. Denise indicated that her online work was individualized, with interaction occurring only if discussion forums were assigned. As described by Sapphire, many online courses were organized in such a way as to promote individual work:

> It depends on an online class because a lot of the online classes are just about individual work. I think for the classes that require group work or group affiliation and within the class, I think there's a community. I don't think just doing the work and submitting it is enough. I think there should be some group formation in all online classes.

Both Eleanor (a faculty member) and Sapphire believed that many students preferred an authentic team experience in their classes; however, not all participants wanted group assignments in their online courses, generally due to the nature of the interactions that take place. Most participants described negative experiences with online group work. For example, while Suzie Lou had earlier noted the importance of networking in school, she did not like working in online groups. "I think they're stupid because we're not having a group project, we're just sending back emails back and forth," she said. Eleanor confirmed from the perspective of an instructor that students tend to prefer individualized work in online courses because they get frustrated with group assignments. She discussed the difficulties in developing community. "To me, it's [sense of community] definitely stronger face-to-face. In my [online] class specifically, I have tried to facilitate groups, like I have groups that they keep all year long, and honestly, feedback has not been good."

Difficulties such as these relate to what could be described as prescribed and mechanical interactions in online courses. This lack of authentic interaction was present for Meagan. She explained her experience:

> If there's not like a team project, then I feel like there's really no interaction. Oh, actually you know what? I take that back. I forgot about the forum. Some people do the forum, some people the wikilogs, some people even do blogs and they [faculty] make you interact, at least respond to one or two students. We also have to do an introduction when the term starts. And so I feel like a lot of people read those and most of my teachers require you to respond to at least a couple. It's part of the grade, so I feel like you kind of do some interacting. After each assignment, I always have to interact and respond to others. So that's interaction.

George and Momba similarly described the mechanical nature of some online work as well as the lack of a sense of community. Momba commented on his experiences with online forums, employing sarcasm in his response:

> I mean you're required to reply to three different discussions, whether you want to talk about or not, it's great. And you could tell if you would look at the forums, you see how people are talking. They don't really care.

Reflecting on his experience in discussion forums, Momba remarked that students were often required to reply a certain number of times to other discussion posts, and he saw that as part of a mechanical process. "It has to be done, so do it." This process was also reflected in Meagan's experiences, as quoted above, as she stressed, "…and they make you interact…"

Regarding his experiences with online discussion forums, George said they did not create a sense of community, instead describing forums as "prescribed." He also stressed his need to see peoples' faces to build community:

> Oh, you need to go do this posting and comment on others. It doesn't contribute to a sense of community, but then I don't know quite how you go about getting a sense of community in an online classroom. I need faces to associate with people. And I can't do anything online because I don't have a face.

Madalyn reported one experience where she said a sense of community existed, although the aspect of community surrounded perceived negative emotions shared by members of the class:

> I think the only sense of community we had was there was a forum where we would just write each other if we have questions or things. And a lot of times somebody would get frustrated and state that they were frustrated, and then everyone else would say that they were frustrated. So we were all kind of bonded in our frustration. Or somebody wanted to rant about something. It was like a little online forum. That's exactly what it was, and it was almost like it was separate from the course.

Only three participants discussed positive experiences with completing online group projects, although a common experience among these participants involved FTF interaction in completing the group project. Both Blaine and Katie were able to meet others in person for their online group projects. Katie said the project compelled her to communicate with her classmates. However, it was meeting in person that led her to experience positive group work experiences. She said:

> Like, if I didn't have this group project I probably would have never really communicated with anyone. I never would have been like, "Hey, how are you?" But with the group project, that made me have to connect with those people and really have to have a conversation with them. Get to know them, whereas before I wouldn't have to if I don't have a group project.

Ten participants specifically mentioned being able to "see" others as an important aspect of connecting and communicating with them. For instance, Jack noted the following:

> In class when you actually see that person and you can read their body language when you ask them a question, or say if the group is meeting, like what they're asking, how they're asking it and you can get a teacher's response quicker than you do if you're sitting at home doing your online [work] where you have to wait for the response to happen.

Jack said that for individuals to make a connection, it was necessary to meet in person: "It's different when you're in the classroom working with people and seeing people than it is just emailing them and waiting for a response."

Blaine was critical of online learning, noting, "You lost that ability to interact with … the instructor." However, Blaine's interpretation was based on a personal experience, in which emails to faculty had not been returned in what Blaine considered a reasonable timeframe. He also noted that in an FTF classroom, a student could physically turn to another student, ask a question, and receive an immediate response. Suzie Lou also said that the time before and after class was important in seeking help with class projects. Momba similarly noted this informal time as beneficial for sharing information, stating there was nothing comparable in online classrooms. Kelly identified unplanned interactions as helping to establish a greater sense of community, but also found these interactions did not occur in online classrooms. Kelly specifically mentioned the time immediately before and after class, noting the conversations may or may not deal with class material. For Kelly, hybrid classes helped address the lack of interaction online.

Madalyn stated that her extroverted nature was better suited to an FTF environment. She identified the following benefits of an FTF classroom experience: synchronous communication, spontaneous interaction, and visual recognition. Referring to visual recognition, Madalyn noted the following:

> Not that it matters, but if I saw them out somewhere I couldn't be like, "Hey, I know you
> from this class because," unless they have their name, their first and last name, clearly
> printed on their shirt, I would have no idea of who they were.

Meagan said that developing respect for others was facilitated through FTF interaction. She recalled a first-day activity in FTF classes where students shared something important in which they personally believed. Meagan expressed difficulty in understanding how something that was so personal, something that had helped her bond with her FTF classmates, could be recreated in an online classroom.

> I think it's just because you don't have that one-on-one interaction. It's just through the
> Internet. You can't really see face to face. I still think it's in the classroom because in an
> online course I feel like I'm more of an individual looking out for myself.

Madalyn reported similar experiences:

> Whereas in the classroom, you get together in groups, and you start to form more of a
> community on campus and that's kind of your classroom community. And I feel like
> without that it's just very difficult to really connect and to thrive, I guess, in that learning
> environment.

Five student participants described positive online community experiences that had occurred because they had previously met fellow online students in an FTF course. Jenny reflected on the students she had met initially in person, then again in an online course: "It was an interesting mix because then I did get to know them and their personalities in [the FTF] class and then that made the online stuff kind of better." Jenny said that getting to know fellow students in her FTF classes improved her online learning experience. She likened it to her Facebook friends with whom she first had met in-person and then reconnected online.

Suzie Lou said she knew online students better if she had met them first in an FTF course. She was a part of a program cohort, and said she was able to feel a sense of community in some of her online courses because she already knew many of her classmates from previous experiences. Denise also described her FTF relationships as being stronger than the relationships developed in online courses, noting these connections flowed into her online classrooms as she recognized names on class rosters.

Jenny described the online environment as a way to provide shy students with greater opportunities to participate in class, though she believed small group FTF interactions could help students overcome shyness as well. For instance, an individual's persona may change, or may appear to change, depending on whether they interact FTF or online. Jenny recalled an experience with building trust in her online marketing class. Her team's online interactions did not give Jenny much confidence in the competence of one particular group member. However, after meeting the group members FTF, Jenny reported that there was a greater sense of trust in the group, improving group functioning. In the following comments, Jenny described meeting one group member in particular:

I didn't know that until we met. So she was young, she needed to, I guess develop her written skills a little bit more. But she actually blew me away when we actually met with the ideas and the things that she had. But I mean I still had to drag them out of her. Like we were all brainstorming. And once she felt comfortable, it was all girls, it was all women, they were all younger than me again. I was the older one. But once she felt comfortable with us in that group setting when we met here, going forward, her online contribution and how she replied back to us and I understood her more and she understood the group more. And it flowed better after that.

Both Frederick and George stated that a sense of community was easier to develop in an FTF classroom, and Karen described online classroom communities as having less "depth" than FTF classroom communities. Her online classroom experience included the use of web conferencing technologies where she could see others in her class, but she reported the quality of connections she made FTF were better because of the ability to see facial expressions and body language. Beth described closer relationships with students in her FTF classes in comparison to her online classes. When asked if the FTF classroom had a stronger sense of community, she replied, "Absolutely."

Participants were asked about their campus networks and the friends they had made. A friend was defined in the interview protocol as someone the participant would feel comfortable meeting off campus for a meal. Many participants remarked on the friendships they created through participating on teams, as a member of a campus group, or in FTF classrooms. Three reported making friends solely through online classes while 15 reported making friends in FTF classes.

After being asked an interview question on creating friendships in online classes, some participants responded with facial expressions that the researcher interpreted as communicating confusion regarding the chance to establish friendships in online courses. In contrast, when the researcher posed the same question regarding FTF classes or group memberships, participants gave affirmative nonverbal reactions including smiles.

A learning environment not conducive to creating friendships was not negative for all participants. When asked if he had made any connections or friends online, Momba replied, "No way." Momba said he had little interest in making friends in college, and in fact, the lack of social connections with others was what attracted him to online courses. "As far as socially, I prefer online classes as of now."

Participants clearly associated the development of friendships with in-person interactions before, during, or after FTF class periods, using these informal meetings to engage in both social and academic discussions. Such interactions were reportedly beneficial to students beyond simply establishing social friendships; they offered the potential for the development of professional relationships and an expanded network for access after graduation in the form of personal references and employment opportunities. This type of personal interaction was generally described as not being possible in online classrooms.

Summary

While the majority of participants described a desire to connect with others in college, this outcome was not reflected in their reported online classroom experiences. Furthermore, participants reported the opportunity to connect with others in online courses was limited. The participants' remarks about prescribed and mechanical interactions combined with the lack of in-person time may support these perspectives.

Discussion

Using the six dimensional social capital model described by Grootaert et al. (2004), participants' online experiences did not reflect much social capital formation unless in-person contact with other students occurred. Participants reported establishing relationships reflecting elements of trust, collaboration, communication, and social cohesion when in-person meetings—outside of the online environment—occurred and participants could see and interact with others. This formation of social capital mimicked participants' descriptions of their FTF classroom experiences. However, the majority of participants were pessimistic regarding the possibility of creating community in online classrooms, citing both prescribed and mechanical online interactions as obstacles. This is of particular concern as most of the student participants identified networking as an important part of the college experience. The following discussion of the data is organized using the social capital framework described by Grootaert et al. (2004), as well as relevant literature.

Groups and Networks

While most student participants reported a desire to expand their social networks in college, they also questioned the likelihood of making connections in online courses. In FTF classroom experiences, participants referenced personal contact as well as the capacity to see and interact with others in real time as essential to connecting with others and building a community. Participants also described spontaneous interactions before, during, and after class as conducive to forming connections. Regarding online class experiences, participants mentioned forums and group projects as ways to connect with fellow students, although participants reported these connections were not as strong as those made in FTF classrooms. They did, however, note that online connections with other students they knew from FTF classes were more satisfying. Participants stated making connections was difficult during online group projects, but meeting in person helped group members to connect with one another.

Online learning can be isolating for students (Nor, Hamat, & Embi, 2012) and fostering student-to-student interaction can be difficult (Taverna, Kushnir, Berry, & Harrison, 2015), though Carter (2004) found that if students had a desire to create connections through online interactions it was possible to do so. Taverna et al. (2015) found that online students expressed a desire to interact FTF with their peers and their instructors. Similarly, Meyer (2006) found that students preferred in-person discussions over online discussion forums. However, students' reported feelings of isolation decreased with the instructor's use of video for lectures and announcements (Taverna et al., 2015). Similarly, Lu et al. (2013) found evidence of community development through instructor email communication with students and the use of web conferencing software.

The importance of instructors' attempts to provide opportunities for interactions is reflected in Carceller et al.'s (2015) findings that students with larger social networks scored higher in the course.

Olson and Olson (2000) discussed the importance of students sharing common ground that can foster connections. People who worked together in person were more easily able to establish common ground compared to those who met remotely (Olson & Olson, 2000). This raises an important question of how technologies and course design are best used to foster the development of groups and networks. For instance, the participants in this study specifically mentioned discussion forums as unhelpful in creating community. If teachers were using such tools, purposefully intending to increase engagement and interaction among students, but students were skeptical about the effectiveness of discussion forums, then students may not have capitalized on available opportunities to discover common ground and create meaningful connections.

Trust and Solidarity

The success of online learning can be dependent on student trust among participants (Bhagat, Wu, & Chang, 2016). During the interviews for this study, aspects of trust and solidarity were mentioned by students, but not discussed at length. Meagan noted that in her FTF classes, personal disclosures were often made during discussions, and she believed trust was an important part of the process. Jennifer noted the importance of a supportive social structure created with fellow students, which reflected a need to trust others. In online classrooms, Madalyn observed in one forum that students were expressing frustrations about their class, which demonstrated a degree of trust among the forum discussants. Additionally, Jack and Meagan mentioned the lack of trust they had with others in online classes, specifically regarding group work. Clarissa, a faculty member in the English department, talked about the difficulty of building trust in online courses. In her experiences, students were hesitant to share ideas in forums as well as participate in group projects due to a lack of trust in their peers.

In Schoenacher's (2009) study on social capital development and discussion forums, when students were given the ability to control discussion forum topics, social capital developed, specifically in the trust and solidarity dimension. Beranek and French (2011) suggested that increasing particular interactions among students can also increase trust. Their study involved the requirement of online students to engage in group activities early in an academic term as well as their continued collaboration on analysis of a series of case studies throughout the term. The researchers theorized that early and ongoing student interaction may have played a role in developing and maintaining trust among students (Beranek & French, 2011).

Collective Action and Cooperation

Participants reported mixed reactions to online group work experiences. For some, group projects resulted in the division of the project into pieces to be completed by individuals, with no collaboration occurring; however, the online group experience was described as positive if the participant knew others in the group from previous courses. Zhao, Sullivan, and Mellenius (2014) found that collaboration was difficult in asynchronous online discussions, noting that

participation in a discussion did not necessarily lead to a collaborative experience. Beranek and French (2011) suggested that requiring interaction such as peer evaluation in online courses throughout a term would benefit students by promoting a more collaborative environment. While student collaboration was considered possible, many of the faculty in Casey and Kroth's (2013) study reported little confidence that efforts to improve collaboration would be successful. In particular, the faculty expressed concern over student acceptance of, and engagement in, collaborative efforts.

Information and Communication

Two participants described how unplanned or spontaneous FTF interactions with others were beneficial for sharing information. One participant said facial expressions were important in understanding the full meaning of what is being communicated. In online classrooms, participants mentioned sharing information through team projects and forums; however, Karen stated that no "full on" communication occurred online. Additionally, participants described forum communication as "mechanical" and "prescribed." Under these conditions, the effectiveness of communication and information sharing is limited.

When instructors communicate information through assignment feedback (LaBarbera, 2013), personalized emails (LaBarbera, 2013; Lu et al., 2013), and web conferencing (Lu et al., 2013) the results can include perceived connectedness and community. For example, Hommes et al. (2012) reported that students more centrally located in a social network had a greater number of interpersonal connections and improved access to information. Additionally, students centrally located in a network learned more than those on the fringes of a network, who have fewer connections. Successful online information sharing may depend partially on the instructor's effective use of communication tools as well as the development of a connected class of students.

Social Cohesion and Inclusion

Participants described a dichotomy between the sense of community and social cohesion in FTF classrooms versus online classrooms. Almost half of the participants said FTF meetings led to deeper connections with others. For online classrooms, participants described weak connections, in particular noting a limited sense of community developing through discussion forums. Carceller et al. (2015) reported that student-student connections were stronger in a hybrid course compared to a fully online course. Carceller et al. (2015) described Lin's (2008) layers in relationship development, noting that the progression toward stronger relationship layers was slower in online courses. While Schoenacker (2009) found that student-driven discussion forums resulted in evidence of social cohesion, Maurino and Schoenecher (2009) reported that students did not believe discussion forums strengthened connections in class.

Empowerment and Political Action

Three participants were associated with social justice oriented student groups on campus, but other participants described political interest on campus as weak, with few students actively engaged. Several participants described the college experience as empowering, helping them to become better students and critical thinkers. Participants who discussed changes to their political

involvement and interest, as well as their sense of empowerment, connected those changes to experiences in FTF classrooms. Participants described little evidence of empowerment, especially via political action, resulting from their online course interactions.

In an example of how the dimensions of social capital relate to each other, Schoenecker (2009) found that empowering students to take the responsibility of designing their own discussion questions led to the development of social capital, specifically within Grootaert et al.'s (2004) dimensions of trust and solidarity and empowerment and political action. Comparatively, Lu et al. (2013) did not find evidence of the development of empowerment and political action in their studied online courses. The findings presented in this paper also provide little in the way of the participant's formation of social capital in this dimension.

Presence and Sense of Community

Participants in this study associated in-person and spontaneous interactions with both physical presence and the development of a sense of community, which encapsulates the issues facing this study's student and faculty participants. Lehman and Conceição (2010) described online presence as existing when the student feels he or she is the focus of the course, and the student feels he or she can clearly access the instructor as well as other students. However, Picciano (2002) noted "…because it is a perception, presence can and does vary from individual to individual. It can also be situational and vary across time for the same person, making it a complex subject for research" (p. 24). Dow (2008) found that meaningful student awareness of each other was problematic in online courses, reporting that participants missed nonverbal communication and lacked trust.

The literature covers multiple practices to address presence and community development in online courses. Price and Tovar (2014) reported that group projects, student collaboration outside of class, peer tutoring, and faculty-student discussion all promoted engagement (Price & Tovar, 2014). Dunlap and Lowenthal (2014) suggested several low-technology practices they discovered through interviewing students who had completed online courses, finding that students perceived small group work and informal communication to be beneficial. Personal feedback, opportunities for collaborative student relationships, and faculty accessibility were noted as enhancing social presence. Lehman and Conceição (2010) recommended regularly posting course announcements, having electronic office hours, providing feedback on assignments, using discussions and debates, and encouraging the use of digital storytelling approaches by students. From a course development perspective, Liu, Magjuka, Bonk, and Lee (2007) noted the importance of planning and pedagogy rather than focusing on technology alone.

Further Study

Further study should include reviews of learning management systems (LMS) as well as faculty adoption and use of interactive tools and approaches that foster presence in online classes. The integration of these tools varies by LMS; thus further research may need to examine the role of the LMS in integrating tools to improve communication and connectedness. Questions should be asked regarding the role and use of the LMS and related tools, specifically if course designers and faculty regularly utilize tools and approaches that enhance student-student and student-

teacher interaction. Examples of these tools and approaches include small group work, peer reviews, chat sessions, and web conferencing. Additionally, surveying faculty for training needs may help identify key areas for improvement. Furthermore, there are instruments already developed that can be used to measure community and study course development and student experiences that may reveal specific areas for improvement (i.e. Arbaugh, Cleveland-Innes, Diaz, Garrison, Ice, Richardson, & Swan, 2008; Garrison, Anderson, & Archer, 2000)

Continuing research on social capital formation in the online classroom is critical for online education to be successful at more than simply delivering content, but also at meeting the wide variety of goals students wish to reach during their higher education experience. Issues related to nonresidential students, particularly, need to be further researched, as these students who do not live on campus may find it difficult to develop a traditional campus networking experience. Additionally, the conceptual overlap of social capital and presence needs further attention (Oztok, Zingaro, and Makos, 2013). In a review of research on social presence and online learning, Oztok and Brett (2011) concluded future research was needed in understanding cultural and social issues in online learning, specifically at the level of the individual student.

Liu et al. (2007) found a variety of attitudes existed among students and instructors with regard to the need to build community in online classrooms. Additionally, Drouin and Vartanian (2010) found that online students had less of a desire for community in their online courses compared to their FTF courses. Student and instructor attitudes toward online learning, specifically whether they expect or believe it is possible to make connections and create community in online classrooms, merits further exploration (Bhagat et al., 2016). Research should examine culture on a macro level, including an institution's online learning culture. In particular, both faculty and student expectations of social interactions in online courses should be examined. This may reveal potential ways to deploy interactive technologies to develop a sense of community in online environments.

Limitations

This study has several limitations. The results of this study are not intended to be generalized to a larger population, but they are instead intended to inform the reader about the online learning experiences related to social capital formation of the study participants. Additionally, data collection and analysis was influenced by the researcher's experiences as a faculty member at the institution in question, and interview responses may have been influenced by participant knowledge of the researcher's role at the institution. Furthermore, questions specific to the LMS were not included in the interviews. While the LMS included tools that could enhance communication and connectedness in online classes, it is uncertain to what degree they were applied in the participants' online courses at the institution. There are also limitations due to differences in how instructors manage their online course. Some may provide a very positive experience while others do not.

Conclusion

Given the experiences of the participants in this study, educators should be concerned about the impact of creating positive classroom experiences for students. For nonresidential students

particularly, whether FTF or online, courses may be their only way to connect with students and faculty. If creating a network and developing social capital is important, then online course design and facilitation needs to prioritize these outcomes.

The online classroom can pose challenges to social capital formation in part due to limited or nonexistent in-person interactions as well as a lack of synchronous communication. Given these difficulties, scholars have researched and recommended methods to increase presence in online courses. In this study, participants noted the importance of connecting with others and of cultivating a social network in college. Not only did participants report fewer connections with others in online classes than in FTF classes, but participants also reported a sense of community did not exist, and likely could not develop, in online classrooms. Considering participant attitudes as well as their previous experiences is important. If students do not believe that a sense of community can exist in online classrooms, then instructors and institutions who want to improve online community may face difficulties. Similarly, if teachers do not focus on creating online classrooms that leverage tools to facilitate connectedness, then the community development and the formation of social capital may be harder to accomplish despite intention.

Beyond expanding studies on the differences in the social experiences of students in online and FTF course environments, further research should also examine how the lack of social interaction in online courses impacts student outcomes after graduation, particularly regarding the possibility of possessing a shallower and less expansive network. Several participants mentioned they spent little time on campus outside of the classroom. Analyzing the differences in behaviors and expectations of residential and nonresidential students may also help educators understand the issues in social capital formation in online courses. In addition, instructors and course designers should explore methods for establishing common ground to support the development of social capital.

Although it may be potentially more time consuming to design and manage online content promoting meaningful interactions between students, encouraging collaborative efforts and leveraging online interactive technologies are two strategies that can nonetheless serve as ways to aid the development of an online sense of community. As online course offerings are expanded, nonresidential students may spend even less time on campus. To acknowledge the importance of social interaction as an integral part of learning, online teachers and course designers should incorporate tools and methods that enhance collaboration, and both students and faculty may need to be convinced of the importance. This will become more significant as nonresidential students complete more of their courses online, especially if they expect college to help them connect with others and build a supportive network of fellow students and faculty.

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Appendix A
Interview Question Set for Student Participants

Why did you select [institution]?

Why is going to college important?

About what percent of your classes have been online?

What kinds of friendships have you made on campus?

Describe what sense of community means inside the classroom? How does the differ in online classes?

Are you involved in volunteering activities on campus? Why do you volunteer? Can you describe one of these activities?

Do you connect or meet with faculty outside of the classroom?

Have you found that others on campus value the same things you do? How have you come to realize this? Was there a particular event, conversation, group membership, etc.?

How has your interest in politics changed since starting college?

How helpful are people on campus? Students? Faculty? Staff?

Can you describe an instance where you trusted someone on campus?

In what ways do you communicate with fellow students? Faculty?

In what ways have you changed since coming to college?

Are you looking forward to graduating? Why or why not?

Think about your connections and associations on campus [for the following questions].

Are you a member of any campus groups or clubs? Which ones?

How many friends have you made in your face-to-face classes?

How many friends have you made in your online classes?

Do you connect with staff, faculty, or administrators outside of the classroom? Can you describe these connections?

Identify which connections or ties are strongest and weakest (i.e., best friends versus acquaintances).

Appendix B
Interview Question Set for Faculty Participants

Describe what sense of community means inside the classroom? How does this differ in online classes?

Do you connect or meet with students outside of the classroom?

How active are students in campus organizations?

Have you found that students have a shared set of values?

How helpful are people on campus? Students? Faculty? Staff?

Can you describe situations where people have trusted one another on campus?

In what ways do you communicate with students?

How is political activism manifested on campus?