

Opportunities and Challenges for Students in an Online Seminar-Style Course in LIS Education: A Qualitative Case Study

Omer Farooq

Kent State University, Email: ofarooq@kent.edu

Miriam Matteson

Kent State University, Email: mmattes1@kent.edu

Online enrollments in U.S. higher education programs continue to grow, a trend that is also seen in LIS education where in some cases entire MLIS programs are being offered online. Synchronous online seminar-style courses present interesting challenges for both radical inclusion and innovation. This qualitative case study explored the effectiveness of a synchronous, online seminar conducted via Google Hangout in an online program. The findings revealed similarities and differences between a face-to-face seminar and a synchronous online seminar. Factors such as meaningful interactions, group collaborations, and technology literacy—hallmarks of a social constructivist learning environment, play critical roles in optimizing the experience. These findings emphasize the need for a stronger pedagogical framework to guide online LIS education.

Keywords: LIS education; online education; synchronous e-learning; seminar-style instruction; social constructivism

Introduction

Many higher education institutions in the U.S currently offer both graduate and undergraduate coursework online, including entire programs of study ranging from liberal arts, humanities, to professional degrees (Allen & Seaman, 2013). Over the last decade, online enrollments in the U.S. have continued to grow with the most recent data suggesting the trend will continue (Allen & Seaman, 2013). A similar trend can be seen in Library and Information Science (LIS) education where entire masters programs are being offered online (Barron, 2002), and formation of consortia such as WISE (Web-based Information Science Education) to broaden opportunities for LIS students (wiseeducation.org, 2015).

One of the highlights of graduate education in LIS is the seminar-style course

that actively engages students through real-time discussion about issues of research and practice. The shift towards online learning in higher education is driving the implementation of synchronous (real-time) online instruction suitable for seminar-style courses. Traditionally, a seminar brings together small groups of students to actively engage on particular topics over a semester. This is often accomplished through an ongoing dialogue and discussion with a seminar moderator or instructor, or through a more formal presentation of research (Casteel & Bridges, 2007). The idea behind the seminar style class is to familiarize students more extensively with the methodology and theoretical frameworks of their chosen discipline and also to allow them to interact with examples of the practical issues that may occur during research and practice.

Seminar-style classes provide a unique

learning experience that allows students to participate in discussion of ideas within a specific discipline. Sharing ideas, debating positions, and providing feedback in response to comments are the hallmarks of a seminar-style class. The quality of a good seminar depends on vibrant and responsive participation. Students bring fresh ideas based on critical reflection and provide substantive information to the discussion. The collection of information becomes constructed knowledge; the knowledge is built in that moment. In that sense, no two seminars are similar even when they use the same set of readings and the same instructor. Discussion is the learning technique at the heart of the seminar. In their seminal work, *Discussion as a Way of Teaching*, Brookfield and Preskill (1999) point out that through discussion, “participants take a critical stance; they are committed to questioning and exploring even the most widely accepted ideas and beliefs. Conversing critically implies an openness to rethinking cherished assumptions and to subjecting those assumptions to continuous round of questioning, argument, and counterargument” (Brookfield & Preskill, 1999, p. 7).

Through the use of qualitative methods, this case study explored the challenges and opportunities students encountered in a seminar style class offered online to graduate students enrolled in a School of Library and Information Science at an ALA-accredited institution. The overarching theme of this study was to explore how an intellectually engaging seminar discourse can be created in an online learning environment.

Literature Review

Brookfield and Preskill’s (1999) book argues for the value and benefits of discussion in facilitating the learning process. They suggest that when certain basic conditions such as openness, respect, and collegial environment are met, group discussion can strengthen the students’ learning

process. Through discussion, Brookfield and Preskill argue, students gain benefits such as:

- explore a diversity of opinions
- raise their awareness of and tolerance for ambiguity or complexity
- recognize and investigate their assumptions
- become attentive, respectful listeners
- appreciate continuing differences
- increase intellectual agility
- connect to a topic
- respect other voices and opinions
- learn democratic discourse
- become co-creators of knowledge
- develop capacity for clear communication of ideas
- develop habits of collaborative learning
- become more empathic
- develop skills of synthesis and integration

Hedley (1994) points out that in-depth discussion in a collaborative learning environment has the potential to develop critical thinking skills in students. Similarly, Abowitz (1990) examined discussion as a pedagogical approach towards developing greater student enthusiasm and a deeper understanding and retention of course material.

However, seminar-style instruction is not best suited for all courses. Some courses may be best taught through traditional lecture method depending on the content and the level of previous experience and preparedness of students. Hollander (2002) points out two main reasons discussion-based classes are unsatisfying: (1) both students and teachers tend to emphasize the individual contributions rather than the collective process of discussion, and (2) teachers tend to emphasize the discussion performance rather than the development of discussion skills. Brookfield and Preskill (1999) describe the facilitation of discussion as a complex process and warn teachers that attempts at discussion-based teaching may take several attempts to accomplish desired results. The inherent

weaknesses in teaching with discussion include mismatch of content and pedagogical style, unrealistic expectations about the method, students not prepared for the experience, not having basic ground rules for discussion, and not having an explicit connection between the value of discussion and the material taught (Brookfield & Preskill, 1999).

There are a number of research studies on the capacity, effectiveness, design, and assessment of asynchronous (any-time) online instruction, but very few that address exclusively synchronous interactive online instruction. Even though these technologies are relatively new, this gap is becoming more prominent as online instructional delivery systems employ synchronous technologies embedded in online tools such as Blackboard Collaborate (Blackboard Inc., 2016), Adobe Connect (Adobe Systems Incorporated, 2016), Elluminate Live (Blackboard Inc., 2016), GoToMeeting (Citrix Systems, Inc., 2016), or WebEx (Cisco, 2016).

Petrides (2002) conducted a qualitative study to find out the perspectives of students using web-based asynchronous learning environment in addition to weekly face-to-face class time. The purpose of this additional asynchronous discussion format was to allow students to share their interests among themselves about topics discussed in class along with questions regarding assignments and readings. The students reported that they tended to think more deeply about the subject areas when responding in writing as compared to giving verbal responses. Students also valued other's ideas about the topics that emerged as a result of these asynchronous discussions. They further explained that they were able to continually reflect on their fellow students' responses because of the nature of permanent display of discussion postings on the Web (Petrides, 2002). The study, however, pointed out a few downsides to the asynchronous discussions. Some students expressed reservations about this style of learning, questioning the

expertise of other students. Additionally, students with limited access to computer/Internet outside the classroom expressed frustration with asynchronous discussions. This study points out that online asynchronous discussions can potentially compliment student learning in traditional face-to-face seminars. Students' experience reflected that this blended experience facilitated more knowledge sharing and helped them turn their spoken ideas into writing (Petrides, 2002).

In a blended synchronous setting in a graduate-level online course, Armstrong and Thornton (2012) investigate the practical and theoretical aspects of group talk covering topics such as dialogue, discourse, conversation, and discussion using Brookfield and Preskill's (1999) Dispositions of Democratic Discussion. According to Brookfield and Preskill (1999), the benefits of using discussion as a teaching strategy include (1) developing a deeper understanding of the content domain, (2) improving self-awareness and self-critiquing, (3) appreciating diverse and culturally different viewpoints that emerge from the group discussion, and (4) triggering informed action and change (Brookfield & Preskill, 1999). Following each synchronous Adobe Connect session, Armstrong and Thornton (2012) asked students to post a Critical Incident Questionnaire (CIQ) with their perceptions of the experience. In addition, qualitative data were gathered from student posts in the final week of the course, and anonymous student responses on the end of course evaluations. Student responses on the CIQ were evaluated in terms of importance placed on democratic instruction, social presence, cognitive presence, and teaching presence. Students cited democratic instruction, social presence, and cognitive presence as important to their educational experience. In addition, students valued welcoming attitude and organization of the instructor, participation, mindfulness, and deliberation of fellow students. Students' responses reflected

two scenarios where they felt frustration during sessions because of disconnections when technology infrastructure failed. Other scenario included students' inability or lack of technical literacy to interact with the software and anxiety felt when other students came unprepared, participated in discussions using unfamiliar terms, or digressed from topic of discussion (Armstrong & Thornton, 2012).

Drawing from the findings of dialogue facilitation in face-to-face settings, Asterhan and Schwarz (2010) provide insight into some of the difficulties and characteristics of moderation in synchronous e-discussions. The two main conclusions in their review on face-to-face dialogue are: (1) student engagement depends on the depth and the quality of dialogue, and (2) students do not engage in these ideas without support from the mediator (Asterhan & Schwarz, 2010). Their analyses revealed that the role of the e-moderator in synchronous peer discussions is a complex one. The role of the moderator is one of a mediator for critical reasoning, as pointed out by some of the student responses such as "raises perspectives that have not been touched in the discussion," "asks stimulating questions," "encourages elaboration of ideas," and "encourages expressions of different opinions (Asterhan & Schwarz, 2010, p. 270). The comparisons drawn from findings on moderation in other communication formats (e.g. asynchronous and face-to-face) show that effective instructional practices in these formats cannot be simply transferred to synchronous learning environment.

Elaborating this point, Asterhan and Schwarz (2010) argue that one of the obstacles in a synchronous learning environment is the complex role of the mediator. The mediator often has to juggle between the role of teacher support, scaffolding student thinking and reasoning through thoughtful indirect prompts. The mediator also provides social support creating a pleasant atmosphere and managerial support such as addressing technical concerns

and providing help accordingly. Compared to asynchronous format, the time frame is short, so the dynamics of communication are more similar to face-to-face interaction but with the added technical support role and increased chances of conversational incoherence (Asterhan & Schwarz, 2010). Asterhan and Schwarz (2010) add that not only the role of the mediator is more demanding in terms of time pressure and cognitive load, but the understanding of the affordances of the platform and anticipating related technical concerns is critical to conducting effective synchronous discussions. Different software and platforms, hence, impose different constraints on the human support required for moderating synchronous online discussions.

Social constructivism as a theory of learning states that knowledge is constructed by learners through interactions, collaboration, and social exchanges in the learning context (Driscoll, 1994). Based on this theoretical orientation, Woo and Reeves (2007) predict that through a social constructivist learning environment, instructors engage students in authentic learning tasks, create opportunities for meaningful discussions, engage students in recognizing multiple perspectives, and use debate to analyze the topic of discussion (Woo & Reeves, 2007). Ward, Peters, & Shelley (2010) suggest that there are significant implications of integrating principles of social constructivism into an interactive online learning environment. The understanding of instructional affordances of interactive technologies along with the design of such interactive student and discussion-centered environment in an online setting is critical to creating a successful constructivist learning experience (Ward, Peters, & Shelley 2010). Both interaction and engagement are at the heart of social constructivist learning and the quality of this interaction depends heavily on how effectively these technologies can be employed to principles of constructivism. Ward, Peters, & Shelley (2010) argue

that “the nature of interaction is, by extension, an important consideration in the design of online learning and in students’ evaluation of the quality of their experiences in such courses” (p.62). Woo and Reeves (2007) point out that “despite the obvious advantages of the Web, relatively few authentic web-based programs have been developed and implemented at various levels of education” (p. 21).

Collaboration among students has been studied in various online learning and instructional modalities: face-to-face, online synchronous and online asynchronous. According to Mabrito (2006), students tend to collaborate more extensively in the face-to-face and synchronous learning environments. Conversely, Meyer (2003) notes that students’ perceptions of the contributions in asynchronous environment were better primarily because of the extended availability of time to write as well as edit and review their contributions. Wang and Woo (2007) found that the responsiveness of the instructor, interaction and communication between class participants, and the quality of the overall learning environment were lower in asynchronous learning environments than in face-to-face instruction. Woo and Reeves (2007) argue that there is tremendous potential for constructivist learning approaches to enhance web-based learning and instruction but that potential is still largely untapped in higher education. These findings call for further research into synchronous face-to-face online learning to study the effectiveness of facilitation, discussion, and collaboration and to compare these findings to existing research in face-to-face and online asynchronous learning.

Methodology

The purpose of this qualitative case study (Merriam, 1998) was to add to the current body of research by examining the unique aspects of facilitating a LIS seminar-style course in an online synchronous learning environment. The implications of

this study for LIS education are twofold: (1) to broaden the scope of scholarship of teaching and learning in LIS education, and (2) to transition traditional face-to-face LIS coursework into online learning environments. With these broad goals in mind, this study focused on two primary research questions:

- RQ1. What are the challenges and opportunities for LIS students in an online seminar-style class?
- RQ2. What are the barriers to facilitating an intellectually engaging dialogue in an online environment?

The participants in this study were LIS students enrolled in “The Academic Library,” which is a seminar offered by an ALA-accredited school of Library and Information Science. The course is described as “governance, administration, and services of libraries in institutions of postsecondary institutions” (Personal Correspondence, 2015). Through weekly assigned readings, students were introduced to primary topics in academic librarianship such as library services to students, faculty and staff, information literacy, scholarly communication, collection management, information technology, and management of academic libraries (Personal Correspondence, 2015). Students were required to write weekly thought papers based on the readings. Grading of these papers was based on students’ critical analysis and integration of the ideas in the readings.

A major component of the grade in the course was based on the instructor’s assessment of the level of engagement of students in class discussions. Since this was a seminar-style course, the instructor’s expectation of students was that they contribute both qualitatively and quantitatively to class discussions. To facilitate discussions, some thought question prompts were included in the syllabus to guide students in their thought process as they read the assigned pieces on weekly

topics (M. Matteson, personal communication, January 5, 2015). The students had the option to sign up for one of four online face-to-face discussion sessions, lasting 1.5 hours. Attending one of these online face-to-face sessions was a weekly requirement. The sessions were conducted using Google Hangout platform (Google, 2016).

After the approval of the institutional review board, data were collected through student responses to reflection questions submitted via e-mail after each session. Out of 25 students enrolled in the course, 9 students agreed to participate in the study. Participation in the study was completely voluntary. Neither extra course credit nor monetary compensation was offered for participating in the study. The instructor was also asked to provide her reflections to a set of questions about teaching the seminar at the end of the semester. Student and instructor reflection questions are included in Appendix I.

Data analysis for this study was conducted using inductive methods such as open coding, axial coding, and constant comparison. Inductive approach, sometimes also called “bottom up” approach is one of the key characteristic of interpretive research in which broader generalizations are made from specific instances and observations (Marshall & Rossman, 2015). For the purpose of this study, a systematic approach to coding led to a clear pathway to combine the data collected from student reflections for themes, ideas, and categories and then mark similar passages of text with a code label so they could be easily retrieved at a later stage of the analysis for further comparison. The first round of analysis of the text was conducted using open coding approaches to breakdown and categorize data using descriptive, in vivo, process, and emotion coding methods (Miles, Huberman, & Saldaña, 2014). The second round of coding consisted of axial coding method in which connections were made to already existing codes from the first round.

Findings and Discussion

The purpose of this study was to examine the challenges and opportunities of participating in an online seminar. Students’ reflections provided rich descriptions of their learning experience throughout the semester. There are many factors that contribute to a successful learning experience in an online course and participating in an online seminar presented its own unique experience. The major findings of the study are discussed here by theme.

Constructivist Learning Experience in the Synchronous Online Environment

Being able to create a back and forth dialog and co-construct knowledge on the spot is one of the key characteristics of traditional seminars conducted face-to-face and requires a more intimate setting in which one can observe and become an active participant in the discussion. This element was recognized as something helpful that enabled students to engage in discussions in the synchronous online environment:

“I feel I am learning quite a bit in this environment because it allows me to exchange ideas with my classmates with negligible distraction. The experience is starting to feel much more personal to me than a classroom or discussion board because the Google Hangouts environment allows us to interact directly with one another. We aren’t all facing one direction like you would in a traditional classroom and we are all present at the same time unlike discussion boards. This allows for a lively exchange of ideas in real time.”

Another element that fosters this engagement is finding out who is talking and being able to see the face of the speaker which adds to that human contact experience:

“The look and feel in this sense is seeing each of the students and having them see each other. I think it’s really helpful to have that human contact. It’s also interest-

ing to see people in their own environments.”

Some students tied this directly to synchronous online experience through Google Hangout stating:

“The Google Hangout program has the ability to see all of your classmates simultaneously and also has an option chat window should an issue . . . stop video etc.”

These reflections attest that students recognized the positive aspects of the online environment and valued these contributing factors which helped them actively discuss the topics covered during the sessions and become active participants. The ability to interact face-to-face online also appeared to positively enhance class engagement and interaction through social interactions. The recognition of other features of the platform such as optional chat window illustrates that students viewed these features as tools complimenting their experience in online discussions. Consistent with Petrides (2002), students in this study expressed the value in being present in real time to exchange ideas. It is often difficult to operationalize the degree of “knowledge sharing” but these comments suggest that the social interactions facilitated knowledge sharing in this context. The core aspects of a graduate seminar—critical analysis and reflection of ideas, cogent arguments as sources for debate in response, and acknowledging the diversity of views that emerge from discussions, are apparent in these comments.

Additionally, as Armstrong and Thornton (2012) point out, online synchronous discussion as an instructional strategy can leverage the social and emotional characteristics of face-to-face communication. Oral discourse is an essential component in Socratic dialogue and offers students the opportunity for deep reflection and critical thinking. Social interaction and engagement enhances the quality of dialogue, as apparent in some of the students’ comments highlighted above.

Technology Issues

Synchronous sessions also had their negative aspects. Some of the technological issues included lag in sound and video, slow internet connections, and microphone feedback. Students also commented on external issues such as not being able to connect to the university account to access articles, problems logging into their Gmail account to start the Hangout, and getting disconnected from the Hangout. These technological issues were especially prominent in the early reflections, but as the semester progressed, students and the instructor were able to resolve these problems by rebooting their Internet routers, clearing the browser, resending the link or creating a new link for the Hangout. These experiences reflect that there is an inherent layer of technology literacy that manifests itself when it comes to interacting with others in this environment. The teaching role of the instructor, in addition to facilitation and scaffolding purposeful critical reflection, also included monitoring the ongoing technical concerns during the session. As Asterhan and Schwarz (2010) argue, the role of the e-moderator is complex—one that requires pedagogical, technical, emotional, and administrative support.

Students also found interacting with multiple people a challenge. Some hinted on their prior experience with synchronous tools such as WebEx which gives users the option to “raise their hand” so the other speaker knows that there are others waiting to talk. One of the limitations of using Google Hangout is that it lacks this specific feature:

“I found this part to be the most distracting. It was hard to know when it was a good time to participate. I like the interface in Web-Ex where you can raise your hand (click on the hand icon) when you want to speak. I also found the tendency for some to not mute their mics when they were not talking to annoying but not impossible.”

Another student noted:

“There were a few times I wanted to participate with the discussion and was unable to as others were speaking and the distance limits one’s ability to make it clear that one wants to speak.”

These comments highlight the technical issues specific to Google Hangout as a platform for discussion sessions. Students’ familiarity with other platforms and acknowledging the limitations of using Google Hangout in this case points to the fact that students recognized some of the platform specific issues along with lack of social and non-verbal cues in this environment.

Traditional Classroom and Asynchronous Learning Comparisons

The experience of an online seminar is certainly different from the face-to-face experience. The notable “in the moment” conversations and dialogs that take place in a physical classroom setting are not as pronounced in the online setting:

“I enjoy the fact that we can have a seminar-like experience, although it is not quite the same. I often feel more “on-the-spot” in this environment because of the video element. In a traditional classroom setting, members of the class do pay attention to other students and what they have to say, but the online synchronous sessions seem to emphasize each person that is talking. It will take some getting used to!”

Comments like these suggest that students recognize the differences and barriers that tools such as Google Hangout present in participating in an intellectually engaging dialog in this online environment.

Students with prior experience of taking asynchronous online courses reflected on the differences in class discussions between asynchronous and synchronous settings. Similar themes of interaction with other students and the instructor echoed here as well:

“I like having these sessions because unlike posting on discussion boards where you have to wait until others comment, which could possibly be days, you can have a real conversation. I think this helps with the flow of ideas when discussing different topics.”

During one of the weeks in the semester, the discussions took place asynchronously because of a holiday. After this particular week’s discussion postings, one student reflected that:

“After going to the asynchronous chats for a week, I definitely appreciate the Google Hangouts sessions more! Reading through all of the threads got to be really overwhelming after a while; it’s difficult to keep up with the conversation this way.”

Another student recognized the spontaneity of exchange of ideas as:

“Watching a lecture video, as is done in other classes, or reading notes does not allow for this exchange of ideas and off-the-cuff responses that happen in the synchronous environment.”

This direct connection and extemporaneous nature of exchange of ideas requires synchronicity and is a characteristic most respondents valued.

Classmates and Instructor as Discussion Facilitators

In-depth discussions in any setting require a collaborative effort that fosters critical thinking skills and encourages students to think of recently learned content in innovative ways. Developing a deeper understanding of course content requires constant self-reflection and being aware of diverging viewpoints that emerge during discussions. One student highlighted:

“It was really nice to hear the experience that others had with the assignments for the week. Their comments helped me to think about the subject matter in new ways.”

Recognizing what made this experience dynamic, one student commented:

“My class had very great points they brought up in this week’s discussion. It is easier to keep talking about things when your classmates have good conversations.”

Other students noted that sharing of examples from the readings, adding personal and professional perspectives to the assigned readings, and hearing contrasting opinions created dynamic discussions that fostered an environment in which:

“Everyone can learn something new that may not have even been present in the course material for the week.”

Similarly, reflecting on the influence that both the instructor and other classmates had in creating a dynamic discussion, one student stated:

“The experience with the classmates is similar to that of the instructor. We can trade experiences or ideas without sounding like we are bragging and allows for a more natural flow in conversation.”

Comments such as these provide further credit to, and acknowledgment of, the influence of social constructivist learning experience during these sessions. This suggests that the learning was a product of meaningful interactions, collaborations, and social exchanges. Asterhan and Schwarz (2010) argue that the extent to which students learn through collaborative exchange of ideas also depends on the depth and quality of dialogue. Students’ acknowledgement of the importance of the role of their classmates and instructor in facilitating their learning is consistent with prior studies (Asterhan & Schwarz, 2010; Ward, Peters, & Shelley, 2010).

However, these meaningful opportunities would not be possible without the instructor acting as a facilitator in engaging students in recognizing the multiple perspectives, and creating a discussion-centered and critical pedagogical approach

resulting in a successful constructivist learning environment.

The instructor’s role as a facilitator of discussions in these sessions was a key theme in students’ reflections. To keep the discussions engaging, it is necessary to have a deep understanding of the content domain and to prompt students with questions that initiate discussion. Comparing other online classes that involve asynchronous discussions, one student noted of the instructor:

“She is very engaged in prompting discussion and adding to it too. She shares examples that are relevant—this creates a unique shared experience in real time that you normally do not get in online classes.”

And another reflected:

“[The] Instructor delivers question prompts during these sessions that enable me to think about the material in new and creative ways. I find I am able to make more connections based on her questions. She also answers any practical questions I may have about the material. The way she relates her personal experiences in academic libraries is often critical to my understanding of certain academic library-related topics.”

As noted before, students’ engagement also depends on the quality and depth of the dialog and active engagement in discussions rests heavily on the support from the instructor acting as a facilitator. The instructor needs to be involved at all times but without imposing personal opinions and agenda. Similarly, the instructor’s role calls for constant elicitation of critical thinking and reflection (Asterhan & Schwarz, 2010). As one student noted:

“The instructor, just like in the first session, was incredibly engaged and encouraged everyone to participate. She was noticeably prepared, and her enthusiasm about the subject helped to support the discussion for the session. With almost every comment from the students, the instructor

was able to respond and add to the discussion greatly.”

Referring to the instructor’s ability to keep track of the new themes that continuously emerged during these discussions along with their connections and relationships, one student commented:

“The instructor did a great job of facilitating and moderating the discussion. When a few people wanted to talk at once, she helped put comments in order.”

Another important role of the instructor in this context is to make students feel welcome and comfortable so that they can participate and share their views with others. Speaking of this characteristic, one student referred to the instructor as:

“Very welcoming, friendly professor. She has a way of making students feel comfortable speaking during sessions. I feel that the professor’s attitude in a situation like this can really set the mood for discussions.”

Despite some of the technological issues the students and the instructor experienced, the ability to stay positive and focused is absolutely necessary in this learning environment:

“The instructor was friendly and never seemed flustered by the inconsistencies in the connection. She was dropped once and when she rejoined the group she was just as friendly and positive. She tried to make sure to include everyone and give each student a chance to contribute.”

Reflecting on her experience teaching this online seminar, the instructor noted:

“I’m surprised how well I think it went. Except for a few reticent, non-participative students, I’m truly amazed by how well most sections could carry on a conversation, on topic, with interesting insights.”

Limitations

There are some limitations of the study. Case studies, in general, present a num-

ber of limitations. This study involved 9 students in a graduate course lasting 10 weeks. Analysis of student reflections from one semester course does not represent the full spectrum of issues that may arise in an online seminar. Furthermore, student responses fell towards the end of the semester. Additional sources of data such as mid and end of semester interviews with the students and instructor would have revealed a more nuanced understanding of teaching and participating in such a course and progression of their level of comfort in this learning environment. Triangulating these findings with other sources such as participant observation in virtual classroom would have added another layer to understanding the level of interaction and engagement in these sessions. Just as there are advantages of self-selection sampling, there are disadvantages as well. Since the students volunteered to take part in the study, there is likelihood of self-selection bias. Students’ decision to participate in the study may have been due to some inherent bias, special interest, and/or prior experience. Since this course was offered as a graduate seminar in a school of library and information science, similar approaches to online seminars in other disciplines would further substantiate the findings and illustrate any disciplinary differences in online seminar facilitation. Studies focusing primarily on the pedagogical experience from the instructor’s perspective would highlight the similarities and differences between instructor and student experience.

Conclusions and Implications

This case study highlights the experience of participating in an online seminar. The results suggest that there are unique challenges in conducting and participating in a seminar-style course in the online learning environment. As this study focused on graduate students in LIS, it reveals some important implications for teaching and learning in LIS education. From a strictly pedagogical perspective,

the findings of this study add insight in terms of transferring what have been traditional face-to-face delivery modes to online learning environments. There are both similarities and differences between a traditional graduate-level seminar conducted in a physical classroom and a seminar conducted online in a synchronous setting. Both require critical factors such as meaningful interactions, group collaborations, and social exchanges that foster a socially constructed learning environment conducive to free and open discussions. Conducting online seminar adds a layer of technology literacy to optimize the experience.

Additional research is needed in this direction to compare and contrast various different platforms available to promote learning in this setting and to explore their potential for recreating the traditional classroom 'feel' and removing some of the technical barriers that students acknowledged in this study. The extension of focus on the potentialities of digital technologies for the design, access, and quality of LIS education can improve how the next generation of LIS professionals is educated. The dual role of technology as an integral part of the curriculum and as a pedagogical tool, therefore, calls for more research on how to conduct seminar-style instruction in online learning environments.

This study also highlights the need for a stronger pedagogical framework as a guide for LIS education—one that incorporates theories and principles of learning in technology-rich environment. Further exploration of challenges in creating meaningful discussions in online settings helps educators recognize the influences of other disciplines such as educational technology, computer science, and social and behavioral sciences through which LIS curriculum may be revised and reframed.

References

Abowitz, D. A. (1990). Teaching demography to undergraduates: A pedagogical dilemma. *Teaching Sociology, 18*(1), 63–68.

- Adobe Systems Incorporated. (2015). Adobe Connect. Retrieved from <http://www.adobe.com/products/adobeconnect.html>
- Allen, I. E., & Seaman, J. (2013). *Changing Course: Ten Years of Tracking Online Education in the United States*. Sloan Consortium. Retrieved from <http://www.onlinelearningsurvey.com/reports/changingcourse.pdf>
- Armstrong, A., & Thornton, N. (2012). Incorporating Brookfield's discussion techniques synchronously into asynchronous online courses. *Quarterly Review of Distance Education, 13*(1), 1–9.
- Asterhan, C. S. C., & Schwarz, B. B. (2010). Online moderation of synchronous e-argumentation. *International Journal of Computer-Supported Collaborative Learning, 5*(3), 259–282. doi: 10.1007/s11412-010-9088-2.
- Barron, D. (2002). Introduction to special issue on distance education: Distance education in library and information science: A long road traveled. *Journal of Education for Library and Information Science, 43*(1), 3–5.
- BlackBoard Inc. (2015). *Blackboard*. Retrieved from <http://www.blackboard.com>
- BlackBoard Inc. (2015). *Illuminate Live! V10*. Retrieved from http://www.illuminate.com/Services/Training/Elluminate_Live!/?id=418
- Brookfield, S. D., & Preskill, S. (1999). *Discussion as a way of teaching*. San Francisco, CA: Jossey-Bass.
- Casteel, M. A., & Bridges, K. (2007). Faculty Forum: Goodbye Lecture: A Student-Led Seminar Approach for Teaching Upper Division Courses. *Teaching of Psychology, 34*(2), 107–110. doi:10.1080/00986280701293123
- Cisco. (2015). *WebEx*. Retrieved from <http://www.webex.com/>
- Citrix Systems, Inc. (2015). *GoToMeeting*. Retrieved from <http://www.gotomeeting.com/online/>
- Driscoll, M. P. (1994). *Psychology of Learning for Instruction*. Needham Heights, MA: Allyn & Bacon.
- Google. (2015). *Google +*. Retrieved from <http://www.google.com/+learnmore/hangouts/>
- Hedley, R. (1994). Positive reinforcement now. *Teaching Sociology, 22*(4), 337–340.
- Hollander, J. A. (2002). Learning to discuss: strategies for improving the quality of class discussion. *Teaching Sociology, 30*(3), 317–327.
- Mabrito, M. (2006). A study of synchronous versus asynchronous collaboration in an online business writing class. *American Journal of Distance Education, 20*(2), 93–107. doi: 10.1207/s15389286ajde2002lowbar4

- Marshall, C., & Rossman, G. (2015). *Designing qualitative research*. Newbury Park, CA: Sage Publications.
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco, CA: Jossey-Bass.
- Meyer, K. A. (2003). Face-to-face versus threaded discussions: The role of time and high-order thinking. *Journal of Asynchronous Learning Networks*, 7(3), 55–65.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed). Thousand Oaks, CA: Sage.
- Petrides, L.A. (2002). Web-based technologies for distributed (or distance) learning: Creating learning-centered educational experiences in the higher education classroom. *International Journal of Instructional Media*, 29(1), 69–77.
- Strauss, A., & Corbin, J. M. (1997). *Grounded theory in practice*. Thousand Oaks, CA: Sage.
- Ward, M. E., Peters, G., & Shelley, K. (2010). Student and faculty perceptions of the quality of online learning experiences. *International Review of Research in Open & Distance Learning*, 11(3), 57–77.
- wiseeducation.org. (2015). *WISE*. Retrieved from <http://www.wiseeducation.org/>
- Wolcott, H. F. (2002). Writing up qualitative research . . . better. *Qualitative Health Research*, 12(1), 91–103.
- Woo, Y., & Reeves, T. C. (2007). Meaningful interaction in web-based learning: A social constructivist interpretation. *The Internet and Higher Education*, 10, 15–25. doi:10.1016/j.iheduc.2006.10.005

APPENDIX I: Reflection Questions

- Q1. Describe any technological barriers and challenges you experience in this session.
- Q2. Reflect on elements, such as the look and feel of the online environment, that contribute to your learning.
- Q3. How did the instructor contribute to your experience in online seminar format?
- Q4. How did your classmates contribute to your experience in online seminar format?
- Q5. Was your experience in this online seminar this week different from the previous week?
- Q6. Comment on your overall experience in taking part in this online seminar class.
- Q7. Did your experience change over time? If so, how?
- Q8. What were some aspects of this online seminar that you liked and disliked?
- Q9. How would you compare your experience in your face-to-face classes with this online seminar class?
- Q10. How well do you feel you have met the learning objectives of the course?