How do student experiences differ in online LIS programs with and without

a residency?

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Abstract

As more librarians earn their master's degrees via online learning, it is important to understand how their educational experiences affect their professional practice. An important aspect of online learning in LIS has been the residency: the time distance learners spend on campus, creating bonds with their educational institutions and one another. Residencies are not practical or preferable for everyone. For example, some practitioners already working in libraries would find it difficult to provide continuous good service to their constituents if they left their posts for residencies of even two weeks' duration. Comparing the experiences of students and graduates of two online LIS programs, one with and one without a residency requirement, provides insights into the important differences between them. Findings of this analysis indicate students in the program without a residency had less sense of community, found group work less successful, and built fewer friendships among their student colleagues; they built networks and received support from local professional colleagues. Programs without a residency offer benefits for students and communities, such as providing the only means of professional education for a paraprofessional in an underserved community.

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1.0 Introduction and purpose

Many LIS programs have distance education components, and some offer their entire master's degrees online. Many online degree programs require students to spend time on campus, but others do not [1]. Research about programs that require residencies has indicated students find their time on campus invaluable for community-building and learning [2-4], yet students have many reasons to choose programs that do not require them to travel [5]. Reasons for avoiding on-campus requirements include family responsibilities, constraints of remote geography, work responsibilities, or financial concerns.

This paper reports on a research project carried out to address several questions arising from the comparison of online degree programs that do and do not require any residency: Do students in LIS programs without a required on-campus residency miss vital experiences? Do they find other ways to support their learning and build social and professional communities—and if so, what other support mechanisms do students develop? How can LIS educators improve the experience of students who never come to campus—and can those techniques be used to improve the experience of students in all distance programs, including those with on-campus requirements? Can the findings be used to allow more programs to offer travel-free options for students who need them?

In earlier studies, the researcher of this project explored community building and disengaging processes of students in a program that included an on-

campus component [3,6-9]. In a second data collection, the researcher explored students' community building, professional networking, and interpersonal support networks in a program without an on-campus component. The data collected from students and graduates of both programs are compared, according with grounded theory methodology, to understand the factors at play, and the findings of the comparison are presented in this paper. Because education of librarians is key to the practice of librarianship, and because distance learners in LIS are often embedded in communities [10], comparison of these factors provides an important basis for understanding how libraries staffed by librarians educated online serve their users, and how librarians educated online can contribute to the long-term health of the profession. While those are large-scale questions of long-term interest to the LIS field, this study focuses on the more immediate and pertinent problem of identifying the differences among students and graduates of online LIS programs with and without residences.

For example, earlier studies indicated students bonded during on-campus sessions, and then used information and communication technologies (ICT) to provide one another with emotional and task support when they were learning in the distributed mode. They renewed friendships during periodic on-campus visits and shifted gradually to using ICT for professional networking after graduation. If the on-campus session is taken away, what happens? Do students not bond? Do students who have never met face-to-face provide one another with task and/or emotional support via ICT while they are learning? Do they form lasting friendships and/or professional networks with each other? Or are emotional,

schoolwork, and professional support found elsewhere? If so, where? Such questions motivate this research study, its implications for LIS education, and its suggestions for further research.

2.0 Background

This paper explores differences between online distance learning programs in LIS. The purpose of this literature review is to provide a framework of the existing literature to reveal how residency, or its absence, is likely to matter to students and educators. The ways residency will matter—i.e., the aspects of LIS education and practice likely affected by the presence or absence of a residency requirement—shape the research questions, data analysis, and framing of the findings of this study. A review of the literature indicates the relevant aspects of online education break down into three conceptual groups: support for learning, interaction among students and instructors, and instructional delivery options.

Before explaining the three conceptual groups (support, interaction, and delivery), the general landscape of existing research about online learning needs to be outlined to indicate where this study falls.

2.1 Existing research in online learning

Few studies compare students' experiences with community building, networking, and advising support at the program level and across different types of distance education delivery (e.g., synchronous vs. asynchronous; fully-online vs. blended). At the program level, studies in online learning are normally (much-needed) single-program assessments [2, 4, 11]. Other studies in various disciplines have compared face-to-face with online learning at the course level

[12-14], accounting for factors such as communication media, co-location, and content delivery methods. Those factors become independent variables in comparisons of learning outcomes, learning processes, and student satisfaction in face-to-face and online classes.

2.1.1 Learning outcomes

The primary thrust of comparisons that evaluate online learning is students' learning outcomes, to demonstrate whether there is a significant difference between online and on-campus classes [15-17]. Learning outcomes are most often measured using course grades or examinations as an indicator [12, 18 p. 85]. In some cases other assessments of student work, such as examinations or portfolios, are used instead of course grades [19, 20]. In higher education in the US there is generally no standard examination to assess learning outcomes, excepting professional degrees that culminate in accreditation exams. For example, professional knowledge as measured by national accreditation examinations of Pharm. D. grads was shown to be the same or better for a non-traditional (online, post-baccalaureate) program than for a traditional face-to-face program [21].

2.1.2 Learning processes

Some research about online learning focuses on the processes of learning – rather than the outcomes – and how they compare with face-to-face learning processes [22, 23]. Such studies often compare the same activity or communications medium across different groups of students, or examine the effects of a pedagogical intervention.

Comparing asynchronous and synchronous online discussions, Schwier and Balbar [24] found it best to combine them. They found synchronous discussions helped students establish a sense of community and made online learning more convenient, but asynchronous discussions had more intellectual depth. They concluded that combining synchronous and asynchronous discussions for the same class promotes both engagement and depth. Also comparing asynchronous and synchronous online discussions, Davidson-Shivers, Muilenburg, and Tanner [25] found support for combining them in one class. They found chats included more interchange among students but were prone to confusing disorderliness, while asynchronous discussions were more convenient (in contrast to Schwier and Balbar's finding, above) and included more reflective contributions.

Examining the effects of synchronous discussion in the classroom, Ingram, Hathorn, and Evans [26] also concluded that a combination of synchronous and asynchronous delivery is best, because chat provides a sense of community and the ability to collaborate, but has many variables – tasks, class size, ability of the instructor to moderate – rendering it difficult to use as the sole interaction mechanism. Murphy and Collins [27] indicate similar findings in their study of synchronous discussions. Chat fostered collaboration and relationship-building but was prone to confusion because of multiple conversations happening at once.

Heckman and Annabi [28] focused on learning processes in a specific learning activity: case study discussions. Comparing face-to-face with

asynchronous online discussion, they concluded that asynchronous discussion generated better deep thinking, and a combination of asynchronous and face-to-face discussion might be beneficial for on-campus students. Haythornthwaite [29] examined multiple media and their use in an online class. She found the pedagogical method of assigning group work and thus dividing the students into teams affected their media choice and relationship building within the online class.

2.2 Factors associated with success

The study reported in this paper does not examine learning outcomes or learning processes, but focuses on program-level questions associated with support, interaction, and delivery options while touching briefly on student satisfaction [30, 31]. The literature and the author's prior research indicate that the factors most relevant for addressing student satisfaction and associated topics are likely to be support, interaction, and delivery options. Each is reviewed in turn immediately below.

2.2.1 Support

Online learners require support for many activities and get support from a variety of sources. Published research examining the spectrum of needed support and its influence on students' experiences online is slim, although professional standards exist [32, 33] as do reviews of existing policies and problems associated with student support [34, 35]. Existing research literature indicates that students need varying types of support. For example, they need technical support, administrative and financial services, faculty advising, and emotional support.

The need for many types of support is counterbalanced by online students' preference for having as few points of contact at the academic institution as possible. Students prefer seeking help at the school or college from one recognizable person who they can expect to be knowledgeable about their own idiosyncratic situations because of a persistent history of help-giving [36]. Centralized help is almost impossible because of the varied nature of help needed; but it is, from the students' perspective, an ideal [37].

Online learners require technical support [36, 38, 39]. The amount and type of support varies with the technical savvy of the students, from neophyte to advanced. On a similar practical note, administrative and academic services, including library services, financial aid and billing, course registration, and academic advising have often been slow to accommodate distance online learners [36, 40]. Such services continue to adapt to an online environment, driven by the needs of distance learners and evolving preferences of on-campus students for online access to services.

LIS master's students need faculty advising to help navigate the academic program: the curriculum, institutional setting, and aligning a personal plan of study with each student's career and/or educational goals. Online students need the same kind of advising plus assistance navigating the online learning environment [36]. Just like on-campus students, online students need faculty to write letters of recommendation for jobs, awards, and further graduate study. Research about faculty advising for online learners is, again, scant for the program level. Closely related to advising is mentoring, the process through

which (among other things) LIS students become LIS professionals. Off-campus learners are often mentored by professionals in their own geographic areas rather than by faculty associated with their school or college [6, 9]. Faculty mentoring and advising has the benefit that faculty are familiar with the courses offered; workplace mentors may be less aware of what is available academically.

Online students also need the same kind of task and emotional support that all students need. Research has indicated that online learners develop relationships together and rely on one another as friends as well as classmates [3]. Such support is important for online learners who may feel isolated from other students and simultaneously unconvinced that their local friends and family really understand what they are experiencing online. One may speculate however that this effect is diminishing as more people spend time online for tasks and socialization, at work and at home.

2.2.2 Interaction

Do online learners interact? Can online learners build learning communities? Research thus far indicates the answer is yes; given an appropriate sociotechnical framework [41], online learners can develop a sense of togetherness, a feeling of belonging, a shared history [42], and a feeling of community. The sense of community is indicated whether it is measured with a validated survey instrument [43], or emerges through a grounded analysis of interviews with students [3].

One component for developing online community is a sense of social presence [44], or the perception by the individual of the other people in the

mediated interaction as real and meaningful to the process at hand (here, learning). While social presence was originally presented as a characteristic of a communication medium, Gunawardena and Zittle [45] found that social presence could be cultured, implying the face-to-face sessions in a hybrid or blended learning approach might give students and instructors a venue in which to establish relationships that enhance perceived social presence online (also suggested by [3]).

Most interaction among online learners occurs online, using computer-mediated communication. According to the Sloan Consortium (Sloan-C), "An online course is defined as having at least 80% of the course content delivered online. Blended education courses are defined as having between 30% and 80% of the course content delivered online" [46 p. 4]. According to Sloan-C's definition, an online course "typically has no face-to-face meetings" [46 p. 4]. An online program that can deliver up to 20% of its content "offline" and still be considered "online" has time for face-to-face meetings however, and this is accomplished by some programs using periodic but brief on-campus sessions (e.g., Illinois's LEEP, Pittsburgh's FastTrack, and Syracuse's distance learning format). While the time spent on campus is apparently vital to students' experiences and building a learning community and nascent professional network [3, 4, 47-49], very little published research thus far compares "fully online" programs that do and do not have a brief residency requirement.

One method for creating a sense of community or cohesion among distance learners is the cohort [50]. A cohort is a group of students who begin a

program together and may or may not have to take all classes together. The FastTrack online master's program at the University of Pittsburgh uses a cohort model [2], as does the LEEP program at the University of Illinois [49] and the distance learning format at Syracuse [4]. In each case – although to varying extent across programs, and changing over time within programs as well – students find the cohort to be their home base learning community, the collegial group of which they first feel a part.

Within classes, students form groups (smaller than the cohort), often based on assigned projects. Groups fulfill four functions in online learning: they provide a method for delivery of course content; intensify interactions between students; allow students to share real-life experiences; and act as a touchstone of students' online learning experiences [51]. Of these, the first three are functions imposed or encouraged by the instructor; the fourth is an emergent function, identified via empirical research [3, 36]. Group work, when included in an online class, provides a means of collaboration that can shape the interaction patterns of the whole class [29].

2.2.3 Delivery options

Interaction, and the opportunities provided for it, lead to a discussion of how online programs are structured. The structure of an online program is in part shaped by the delivery options employed. Delivery options for ICT-mediated distance learning include: email, online texts, text chat, multimedia delivery offline (CD/DVD), audio streaming, audio conferencing, video streaming, and interactive television.

Delivery options may be combined so any instructional program, and instructors may use (or decline to use) a mix of technologies. Each delivery option and the combination and implementation of multiple delivery options will afford different types of interaction and learning; to exhaust every possible combination is not possible in this review.

The main dimension along which learning and interaction affordances vary is time/space. Students may interact with one another and their instructors on campus; at off-campus face-to-face meetings; or, most commonly, in a shared virtual space while individual participants simultaneously occupy their own learning spaces such as a work computers, home offices, or mobile computing locations [10]. Interaction may be asynchronous, in which each participant can read and contribute anytime [52, 53].

Assumptions are often made, explicitly [54] or implicitly [18, 55] that web-based online learning is always asynchronous. Such assumptions are not true; interaction may be synchronous, bringing participants together in time via video, audio, text, or a combination [26, 27]. For example the LEEP program at UIUC combines synchronous text-chat with one-way audio for class meetings. For some discussion of the problematized issues of a/synchronicity, see [56, 57].

Berge & Fjuk [58] empirically found three purposes of synchronous sessions: content, social, and administrative. The students found synchronous sessions important for creating community, and chose to attend and participate in the social aspects even if they thought the content could be delivered better in another mode. This is noteworthy because the students were busy adult learners,

who might be expected to eschew sessions that were not productive with respect to course content. Synchronous online delivery is also seen as a way to transition students and course material from a face-to-face (synchronous) environment to an online (mostly asynchronous) environment [27, 59].

The current trend in combining synchronous with asynchronous delivery and transitioning over the boundaries of together/apart, on-campus versus distance, learning is hybrid learning. Because the two programs compared in the current paper are fully online, the hybrid mode is not addressed in detail here. The interested reader who wishes to learn more about hybrid and blended learning might examine work by Bonk and Graham [60] and by Martyn [61].

3.0 Research questions

In LIS education, some schools offer online programs with required residencies while some offer programs that can be completed entirely online. Many avenues of research could be pursued to answer the overarching question: Does residency matter in online LIS education? The data analysis reported on in this article focuses on a specific aspect of that overarching question: What aspects of students' experience in online learning in LIS are different, as indicated by students and graduates of online programs, between a program with a residency requirement and one without?

The research questions pursued in this research were:

Between programs with and without a residency requirement:

1. How do students' perceptions of advising and mentoring compare?

2. How do students' perceptions of community building among online students compare?

3. How do students' sense of presence in the online environment compare?

4. How do students' perceptions of group work compare?

4.0 Procedures

To begin to answer these questions, the researcher undertook an interpretive case study of an online master's degree program that does not require students to come to campus. The data from this study were compared with data collected in an earlier study by the same researcher, working with students and graduates from an online master's degree program that does have a residency requirement.

The master's degree at the Florida State University College of Information (CI-FSU) has been offered online since 1996. In its initial years, it included an on-campus orientation. Since 2002 orientation has been available online and distance students have been able to complete the master's degree without visiting campus [62]. In 1996 CI-FSU used interactive television to deliver online course content. In 1997 it moved to a course management system developed in-house, and in 2004-2005 completed a shift to the Blackboard course management system. The master's degree at the University of Illinois at Urbana-Champaign Graduate School of Library and Information Science has also been offered online since 1996, in a program option called LEEP. LEEP students currently come to campus for a required ten-day orientation (boot camp), although the participants in this

research project entered LEEP when the boot camp was two weeks long. LEEP students are also required to come to campus once in the middle of each semester for a scheduled face-to-face meeting with their classmates and instructors.

Delivery of online courses at CI-FSU and LEEP are similar. Students meet weekly in a synchronous text chat room and participate in web-based threaded discussion boards asynchronously. The major difference in course delivery between the CI-FSU and LEEP programs – other than the absence of on-campus sessions at CI-FSU – is that LEEP synchronous sessions also include one-to-many audio broadcasts by the course instructor and/or guest speaker. When CI-FSU classes include audio, it is pre-recorded and students listen to it on demand. The major difference in program structure is that LEEP students form cohorts and strong cohort identities during the two-week on-campus sessions that mark their initiation to the LEEP program. CI-FSU students do not form cohorts.

Data collection for the first study comprised semi-structured interviews with 30 students and alumni of the LEEP program. Participants were LEEP students who were within two semesters of graduation. These students were identified by examining graduation lists, and by discussion with program administrators. Recruiting participants included making short presentations to LEEP classes during the mid-semester on-campus visit and follow-up mass emails. Each student who met the requirement of being within two semesters of graduation (or intended graduation) was considered for the study. Every student who agreed to participate in the study was included.

The interview questions guided participants to talk about their experiences at the end of their time in LEEP. Basic demographic and other instrumental data were also collected, to verify that the participants were appropriate for the study and to probe their attachment to, or engagement with, LEEP in general. Fifty-five interviews were conducted over the telephone, tape-recorded and transcribed. Eighteen students were interviewed twice, before and after they graduated. These interviews allowed the researcher to examine disengaging activities that occurred while students were still in the program and those that occurred afterward. Six students were interviewed twice after graduation, allowing a focus on post-departure disengaging activities. The remaining interviews took place with students before graduation. Data collection for this project began mid-summer, and all students and graduates within 2 months of graduation were considered appropriate; thus the initial data collection included graduates who finished the program in May as well as those who intended to finish in August. The thirty participants were typical of population of LEEP at the time with respect to gender (3 male, 10%; 27 female, 90%).

Data collection for the second study comprised semi-structured interviews with 45 students and alumni of the College of Information at Florida State University. A general call for participation was emailed to listservs maintained by the College for its master's students and alumni. Students within two months prior to graduation and graduates of the online program were considered appropriate for participation. Fifty-five responses to the initial call for participants yielded forty-five usable interviews or interview sequences. Five people did not respond

to further inquiries; five people agreed to participate in email interviews but did not answer any questions. The forty-five participants were typical of the population of CI-FSU at the time with respect to gender (10 male, 22%; 35 female, 78%).

The interview schedule was based on the earlier study completed with LEEP students, to allow for meaningful comparison. The interview schedule included questions to collect information about participants' time in the program including beginning and ending dates, why they chose the distance or on-campus option for earning the degree, and whether they took any on-campus classes. The rest of the interview schedule allowed participants to respond about: their jobs and careers; the use of technology in learning; the friends and colleagues they met in the program; how being in school interacted with other aspects of their lives; support networks; and how they talk about the program to others.

Eight of the interviews in the second study were completed by telephone and lasted from 45 to 90 minutes. The telephone interview schedule included 21 basic questions but allowed the interviewer to pursue topics as they emerged during the conversation. Thirty-seven interviews were pursued by email. Thirty of the email interviews comprised two exchanges. In the first exchange, research participants responded to the same 21 questions used for the telephone interviews. In the second exchange, the researcher posed follow-up questions based on the participants' first-round responses. The remaining 7 email interviews comprised one exchange in which the participants responded to the same 21 questions used

for the other interviews. In these 7 cases, participants did not respond to follow-up questions.

The data derived from both methods of interviewing (e-mail and telephone) were informative and rich [63]. E-mail interviews can allow increased time for reflection and greater control over the interview setting for participants [64]. Participants in this study embraced the convenience of email, and the researcher found the time to reflect on creating question probes led to better elicitation of explanatory data. Development of rapport in the two settings may be idiosyncratic to the researcher and participant. This researcher feels more comfortable online and introduced less stress into e-mail interviews when compared with telephone interviews. CI-FSU students have extensive experience interacting online without additional cues and seemed equally comfortable with email interviews. The telephone interview transcripts tended to be longer, but they also had more filler because the transcripts were so thorough (e.g., each "uh" and "you know" was included). There are other differences in the content in written communication; e.g., it tended to have fewer intra-utterance repairs by the participants because they could edit their responses before sending them [65]. In the end, the researcher found the e-mail interview process methodologically acceptable (not least because it does not involve transcription) and satisfied that the data collected could be used together in an analysis with telephone interview data.

Audiotaped telephone interviews were fully transcribed. The textual data from the audio transcriptions and from the email interviews were entered into a

FileMaker Pro database designed for this project. Data were analyzed according with grounded theory methods, using open coding, axial coding, memoing and constant comparison to examine emerging dimensions of the data [66].

After the first sequence of data analysis for the data collected from CI-FSU students and alumni, a participant validity check was performed [67]. A summary of research findings was shared with all 45 CI-FSU research participants, who were asked to comment on the verisimilitude of the conclusions. Twenty-nine participants responded with comments on the preliminary findings. Responses of participants to the initial conclusions indicated most findings were reflective of students' experiences. Only one initial finding (about group work, see below) was reported by almost every participant to be inaccurate, and feedback from participants helped guide further analysis of the data to accommodate alternative conclusions.

5.0 Findings

This section presents findings from the comparison across the two programs via analysis of the interview data. The findings are presented in four sections representing the primary aspects of difference and interest that emerged from the analysis. Because these primary aspects emerged from the analysis they do not match exactly the terminology used in the research questions. They are presented in a different order from the research questions because they have been re-organized to reflect the emphasis placed on each topic by the research participants. These primary aspects (each one coupled with the research question that generally connects to how the findings were elicited in the interviews) are:

persistence of relationships (RQ 2, community); satisfaction with group work (RQ 4, group work); effectiveness of technology (RQ 3, online presence); and faculty advising (RQ 1, advising and mentoring). This section concludes with some findings about the benefits of not having a residency as indicated by the CI-FSU participants.

Quotes from interviews in this section demonstrate how participants spoke about their experiences, and were selected because they exemplify sentiments expressed by other participants (i.e., they were selected expressly for their ordinariness rather than for uniqueness). Quotes are identified by the pseudonym of the participant who made the statement. Pseudonyms reflect the gender of the participant. Some quotes contain the mark […], which means that identifying details have been removed from the quote in order to protect the anonymity of participants. Quotes are from interviews with CI-FSU participants; for extensive quotes from LEEP participants see earlier reports of the research [6-8, 10].

5.1 Persistent relationships

Students in the program with a residency (LEEP) build a sense of community with each other and with the LEEP program as a whole. Students in the program without a residency (CI-FSU) do not build a sense of community with each other at the program level. Instead, students build friendships with classmates that last one semester, or one course, at a time, as Calvin explains:

I seemed to have some pretty tight relationships for a semester,

only to totally lose track of the others from the classes at the end of

the semester. (CI-FSU distance student Calvin)

The comparison of data undertaken in this study emphasized how important the on-campus visits were as a vital, significant part of the LEEP program and each student's experience. "Boot camp" serves several functions, purposeful and de facto:

1. Intensive introduction to the profession and program

2. Introduction to technology used for courses and communication

3. Behavioral modeling

4. Cohort bonding

5. Reassurance and contacts

Required semesterly visits allow:

1. Re-connecting with cohort

2. Re-connecting with school and university

3. Meeting professors and classmates face-to-face

4. Group work

5. Delivery of course content that is difficult to deliver online

Participants from CI-FSU do not indicate that the online orientation and solely-online courses (with no on-campus visit) at CI-FSU accomplish the functions of boot camp and on-campus visits listed above. Throughout semi-

structured questioning, CI-FSU participants did not mention orientation as an important component of their experience.

In LEEP, students' relationships and LEEP community ties last through their time in the program and continue after graduation. During the program, relationships provide emotional and course-task support; after graduation, relationships become professional networks providing career and job-task support [8]. At CI-FSU, professional networks are built almost exclusively among colleagues (fellow students and co-workers) physically local to the students. On-campus students build professional networks with other on-campus students and, if they have jobs, assistantships or internships in Tallahassee, with librarians in those work settings. Off-campus students build networks among work colleagues and other professionals in their areas; for example, CI-FSU students in Jacksonville, Florida, generally network with CI-FSU students and other librarians near Jacksonville. Tess indicates the importance of her library system and inter-library consortium to professional networking:

> The professional associations also occur locally rather than at a distance. I think this is because my professional networking (albeit small in my own case), is with those who either work in the same library system, or belong to the same library network. (CI-FSU distance student Tess)

The residency requirements of LEEP allow students to build persistent relationships: a sense of community, ongoing friendships, and professional networks. Distance students of CI-FSU, who can complete the program without ever visiting campus, do not normally build persistent relationships with each other.

5.2 Group work

Group work emerged from interviews with participants in both programs as an important component of their online experience. Students report they are dissatisfied with group work in the non-residency distance program. The initial data analysis concluded that dissatisfaction with group work emerged because without lasting social and professional ties, it is hard to build the trust necessary to support distributed group work in an educational setting. When preliminary findings were sent to participants for validation, participants indicated this conclusion did not reflect their experiences. Instead, participants clarified by explaining three different aspects of group work within the program.

First, they stated a tendency to blame group dysfunction on the online environment and coordination difficulties arising from ICT reliance. Blaming the technology was less risky than delving into the problems associated with group members, specific instructors, or assignments. In this quote, Elmira identifies mediated communication as a problem with group work online:

I think one reason for the dislike of group work online is that it is harder (for some) to "influence" your team via text messages,

email, sliding attachments and presentations around without the
benefit of voice and eye contact and "reaction" a direct meeting
would lend. Online group work is more efficient in documentation
of meetings, collation of project work, but either method there are
many factors that contribute or detract from a cohesive group. (CI-
FSU distance student Elmira)

Second, participants indicated a dislike of group work in any environment.
Dana's statement demonstrates this overall dislike: "I personally don't particularly
enjoy it F2F or online, and have found very few instances in either location where
it is overly successful." (Dana, CI-FSU on-campus student). Several participants
pointed out that they undertook online learning because they preferred to learn
alone and found it unproductive to work in groups in any settings.

Third, they asserted that when group members caused problems with
group projects, the problems had nothing to do with trust. Instead, the ability of
individuals to "disappear" both from sight and from electronic communication
made it easy for group members to slack off and hard for their group to pull them
back into the project. Tess summarizes (in the following long but cogent
statement) the participants' overall general conclusions about group work:

I grumbled throughout the program that I really disliked group
work; that it never seemed to click for me and I had a hard time
making it work. In some way, I think I was attributing the

dissatisfaction and non-success of my group work to the fact that it is so difficult to perform online. However, after more thought, I'm not so sure distance is the only factor. If going to class and all the work involved in earning the degree is possible in an online environment, why not group work too? Possibly, for me anyway, other factors make it difficult – such as the fact that I personally work better independently than with a group. Even doing group work in a face-to-face environment is difficult - the same factors are at play: there are varying personalities and different levels of expertise at work. You will always have those people who lead, those who give much effort and pull their own, but you will always have a slacker or two, here and there. And those are some of the things that either make the group work or not. I also heard arguments that that's the way it is in the real world, in the workplace, etc., some people pull their weight and some people don't. Maybe it's really not the distance factor that makes group work difficult.

On the other hand (!) - there are certain things about writing a paper, building a website or working on a project with people who are possibly thousands of miles away that really do make it difficult. I'm just not so sure anymore if that's the greatest factor in the dissatisfaction or not. (CI-FSU distance student Tess)

5.3 Technology

Overall, students in both programs were pleasantly surprised by the effectiveness of communicating and learning using technology. This finding is true at CI-FSU despite many participants being enrolled during a potentially disruptive shift from an in-house course management system to Blackboard. Warren describes his pleasure at discovering the effectiveness of technology for communicating and learning:

> The use of technology to communicate and learn was a pleasant surprise. When I entered the program I was not quite sure what to expect or how I would perform, but once I started I was very impressed with the effectiveness of it all, especially so regarding the chat sessions. Once one gets used to the format, it becomes as natural as F2F communication. (CI-FSU distance student Warren)

Selie exemplifies another finding common across both programs in this quote indicating technology expertise is a valuable addition to course content. She says, "A by-product of the online class experience was the wealth of knowledge and hands-on experience I gained using all types of applications/programs/software" (CI-FSU distance student Selie). Both online programs allow students to develop technical expertise in tandem with learning the material presented in their classes.

General satisfaction with technology comes with two stated caveats. First, participants say technology transitions, such as from one course management

system to another, or from student email to alumni email forwarding, require advance notice from program administrators who should also offer preparation guidelines for students. Participants indicate these requirements were often not met, leaving them relying on their expertise with technology—expertise built as a result of being online students, as Selie noted above—but wanting more institutional support [8, 68]. Second, although technology can support a range of successful pedagogical techniques, some instructional methods do not work well using specific technologies. It is important to match technology choices with pedagogical methods.

5.4 Advising

Students in online professional degree programs need advising to help navigate the online environment, design or choose their curricula, and prepare for their careers. Advising is supposed to be provided in LEEP and CI-FSU by a combination of faculty, administrative (program advisors and/or Associate/Assistant Deans), and campus resources. Problems with advising as a whole arise from not having a single contact point for assistance (off-campus students prefer a single contact point and ensuing triage instead of a range of available resources), and slowness of the university to adapt procedures to the needs of distance students (requiring delivery by hand of ink-signed forms, or in-person retrieval of academic regalia several days before graduation).

Problems with faculty advising emerged as a specific concern of students in both programs. Having a residency does not make a difference and trips to campus do not help with faculty advising. Students do not feel comfortable

contacting their faculty advisors although one is normally assigned. As Selie explains, "Maybe it was just because I was a distance student and didn't feel I had the opportunity to just knock on my advisor's door on campus, but I had no interaction with my advisor " (CI-FSU distance student Selie).

Participants indicate when they email or telephone their faculty advisors, the responses are slow, nonexistent, or not personal enough. Students prefer their faculty advisors to initiate contact and proactively help with course selection and career preparation, an expectation that may differ from faculty expectations of student advising.

Octavia expresses her dissatisfaction with faculty advising at a distance, and her opinion that the problem is an institutional perception that off-campus students pay tuition but require little assistance:

> I wondered what the point was to having one when they didn't
> know who you were and you could go through the entire program
> without once speaking to him/her. I am glad I took the
> concentration I did, but I am sorry it meant losing [...] my advisor.
> He seemed genuinely interested in all of us--[...]--he was very
> engaged and interested in our own ideas about our education or
> plans and that was really nice, to feel that someone, anyone down
> there in Tallahassee saw us as people rather than infrastructure-
> light tuition checks. (CI-FSU distance student Octavia)

5.5 Benefits of staying home

There are benefits of not having to travel to campus, and CI-FSU students identify several of these advantages. The most important benefit of not having a residency according to many students at CI-FSU is that it provides, as they say, their only chance to earn the degree. Some students needed to stay in jobs without relocating, or their jobs did not offer flexibility in scheduling to allow a two-week orientation plus semesterly visits. Adelaide explains, "I chose FSU because I could do the entire program online. I knew I would have to move once I graduated but couldn't afford to do that twice" (CI-FSU distance student). Other students had family limitations on their ability to travel, as exemplified by Delia: "With two teenagers at home, it was going to be awkward and expensive to go to, say, Urbana or Syracuse even for a weekend a semester" (CI-FSU distance student).

Others prefer distance learning because of their learning styles. While not precluding a program with residency, students like Fiona indicate that some students prefer a complete absence of face-to-face contact for a variety of reasons:

> I personally learn better alone, eyes glued to a book or a computer screen, and don't feel the need to have social ties with those I'm learning with. (I'm a nerd). Because of physical limitations (primarily not being able to drive at night, getting migraines when I drive long distances), I definitely prefer to meet online. I might find travel to a common physical meeting place to be too difficult. (CI-FSU distance student Fiona)

6.0 Limitations

Some limitations of this research emerge from the research approach. Because the data were collected from 75 students and alumni from only two graduate programs, the findings are of limited generalizability. While attempts were made to reach a wide number of students and alumni from each program, the content of the data is shaped by being collected from people who agreed to participate in time-consuming interviews that asked very personal questions.

The purpose of this data analysis was intended to be a comparison of one program without a campus requirement and one program with a campus requirement. It became apparent throughout analysis that the use of cohorts in LEEP and absence of cohorts at CI-FSU was confounding the comparison. This was true particularly because the on-campus events associated with LEEP (boot camp and campus visits) were undertaken with the cohort. Thus when LEEP students spoke about their on-campus experiences, those were intrinsically tied with the cohort experiences. If the CI-FSU students were organized into cohorts, even without adding an on-campus component to the program, it is possible their experiences would shift to being more similar to the LEEP students'. This possibility is so strongly indicated by the data that it is necessary to highlight it as a limitation of this research, while also pointing it out as a direction for future research.

Participants from CI-FSU include several on-campus students who took classes online. No on-campus students from UIUC-GSLIS participated in this

research, so comparing experiences of on-campus students in the programs is not possible based on available data. One finding about community building emerged from on-campus CI-FSU participants. Their experience of community within the College is somewhat fragmented by the prevalence of online classes, because it is not now possible to complete the on-campus MSLIS program within CI-FSU without taking online courses. For example, on-campus students often interact with one another in an online classroom rather than a face-to-face class, "distancing" what could be a proximate experience. Or, on-campus students sometimes find that they share more classes with particular online students than with other face-to-face students. This has the result of separating classwork-based interaction from socio-professional support for on-campus students. Such a separation is common for online students, who may have socio-professional networks primarily located at work and expect their classwork-based interactions to be separate. On-campus students however expect a more "traditional" integrated experience and are taken aback by the separation.

7.0 Implications

This section discusses some implications of this research for LIS education programs, to continue to improve the provision of professional service in libraries while simultaneously improving online learning in LIS. The implications are presented in six categories: improving advising for students; creating an overall sense of community; developing cohorts of students; improving group work and online pedagogy; facilitating technology transitions during and after online education; and suggestions for further research.

7.1 Advising

Findings from LEEP and CI-FSU indicate students from both programs perceive a weakness in faculty advising provided to them. In both cases, students are likely to identify a difficulty with advising as a problem with distance, because stopping by a professor's office is hard or impossible; and with the ICT, because they perceive it is hard to get to know a professor well enough online to ask advice outside a specific class. Faculty advising for online students may need to be improved. There are probably some simple ways to do that, such as online office hours, extra-curricular group activities, and online advising communities. What may also prove fruitful are alternative models of guiding students, such as peer advising and local mentoring for distance students. Better advising would improve students' experiences within library school programs and also ease their transition into working in libraries.

7.2 Community

The need for advising may also be one way students are expressing their need for an overall community for distance learners. LEEP students have persistently indicated they have a sense of community [3, 9], while the CI-FSU students do not. A sense of community among students is important for learning, and mechanisms for fostering it (other than face-to-face meetings) can be applied in programs without a residency. Some specific ways to foster online community among students without a residency include an online community environment, peer advising, and including online students in student sections of professional

associations. Hosting online versions of real-life rituals, such as end-of-semester pizza parties and virtual graduation, may also facilitate a sense of community.

7.3 Cohorts

As mentioned above, the data collected in this study imply (although it is not a strong enough conclusion to be called a finding) that the cohort structure, present in LEEP and absent at CI-FSU, accounts for some of the difficulties CI-FSU students have building community with each other. Findings about community building are confounded in this case, as indicated by the data, because students in the non-residency program are not cohorted as were students in the LEEP study. Available data are insufficient to allow a thorough examination of the cohort aspect, but imply that a cohort model would facilitate community building (see also [2]). Data being collected in the preliminary stages by the author of this paper also indicate the usefulness of a cohort model, even in a program without a residency requirement, but these findings have not yet been validated or published.

7.4 Groups

Students' dissatisfaction with group work in online classes at CI-FSU is in contrast to findings from the earlier study of LEEP but in line with conclusions by researchers of other online programs (e.g., [55]). Participants in this study identified some pedagogical methods which mitigate successfully against dissatisfaction with group work. Ways to facilitate group work online include allowing groups to self-select, making group work optional, and employing management techniques such as assigning specific roles to individual members or

allowing teams to "fire" members. Even though students assert there are successful and unsuccessful online teaching techniques, all classes do not need to be identical in their operation. Instead, participants suggest sharing best practices (or better practices, see [69, 70]) among instructors might help reduce the inconsistencies that most hinder student learning.

7.5 Technology

An unanticipated finding in the initial study of LEEP [68] was that transitioning away from the technology used in the distance learning program (subscription databases, university email and web server space, licensed software) was not always perceived as easy or straightforward by the students. This finding emerged again in the study of CI-FSU students, implying that, while it may not be completely generalizable, it is not idiosyncratic to LEEP. Students need support for a variety of technology transitions, including changing course management systems and managing multiple email addresses and forwarding. Because technology transitions are an integral part of the practice of librarianship, it is vital that students learn to accomplish them. If this does not logically happen while they are students, perhaps the transition that happens as they graduate from the program is a mentoring opportunity that will improve their professional practice and strengthen their ties to their schools.

7.6 Future research

Like any exploratory study, this study generates many potential ideas for further research. This section includes six promising suggestions for further research, based on this study and situated in the context of the ongoing progress

of online learning and what kinds of research have not been addressed yet in the LIS education research literature.

This study looks at an online program with an on-campus residency requirement and one without an on-campus residency. Campus is not the only possible location for face-to-face meetings of students and faculty. An area of future research encompasses online programs with off-campus face-to-face meetings, and comparing the experiences of students in those programs with experiences of students in the kinds of programs studied here.

This study only examines a limited number of students from two schools, and does not reflect a representative sample of anything. Studies that include more students, from more programs, and perhaps with a different type of methodological design to allow for representative samples, would be a welcome extension to this line of research.

The implications for practice described above are also research implications. Because the results of this study are not meant to be generalizable, the implications for practice suggest modifications that might work in specific settings. Implementing and evaluating them thus becomes another line for research.

The finding about the difference in professional networks built during school (among schoolmates for students in the program with residency, among local professional colleagues for students in program without residency) might be a topic for longitudinal study. For example, how do the professional networks change and function over the long term of people's careers?

Non-residency options may serve one oft-overlooked purpose. A few participants mentioned the freedom offered them by a non-residency program – not just because they were free not to travel, but because they could withhold from their classmates specific information about themselves such as their use of assistive animal companions or mobility devices. For these students, it was the first time in their academic careers they had power over the dissemination of this kind of personal information. While they acknowledge that they will live and work in situations where this information is freely available to colleagues and clients, they also take some pleasure in – just once! – "looking like" everybody else in class.

Finally, there are some indications in these data that part of the overwhelming sense of community experienced by students in web-based online programs in the late 1990s was a sense of shared pioneership. Students felt they were working together to break new ground and this allowed them to bond. It is worth future study with all the LIS online programs to try to identify how much this "pioneer" factor has lessened overall, to allow understanding of how socialization and professional networking will occur long term.

8.0 Conclusion

This research compared data collected via interviews with students from LIS online distance learning programs with and without residency requirements. Students in the online program without a residency missed some important aspects when compared with students from the program with a residency. They had less of a sense of community, they did not find group work in classes as

successful, and they built fewer friendships among their student colleagues.

Programs without a residency also have benefits for students and for communities

that should not be ignored. Providing the only means of professional library

education for a paraprofessional working in an otherwise underserved community

is a great strength. As well, online learners in the program without a residency

indicate that without a sense of community and close friends among their

classmates, they turn to local professional colleagues for networking and support.

Close local networks may provide a long term benefit for libraries and

communities. The findings of this study suggest that there is room in the

preparation of professional librarians for both modes of online learning in LIS.

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