

RIDING THE WAVES: A CASE STUDY OF LEARNERS AND LEADERS
IN LIBRARY AND INFORMATION SCIENCE EDUCATION

BY

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ABSTRACT

This study examines learners and learning in the context of an established, multimodal graduate degree program originally developed as a distance education option. It is a learner-centered inquiry, building on Deweyan understanding, considering processes of individual and collective transformation within a particular educational environment.

The context of the study is graduate education for library and information science (LIS), which provides exceptional possibilities for study of learners and learning. For instance, studying graduate level experience offers opportunities to consider learners as leaders. Additionally, disciplinary aspects of LIS are of particular significance. For example, LIS education is well suited to online environments because of the synergies that exist between technologies and professional practice based on information use. LIS, as this study, also generally emphasizes person-centered inquiry, an approach commonly referred to in LIS as user-centeredness.

This case study is based on LEEP, a multimodal (synchronous + asynchronous + residential) program option at the Graduate School of Library and Information Science at the University of Illinois at Urbana-Champaign, established in 1996. As LEEP is considered highly successful, in terms of growth, retention, data from course and program evaluations, awards, etc., it offers novel opportunities to explore emerging educational issues. Two aspects of this study deserve particular attention: program-level emphasis and hybridization. Program-level emphasis enables a consideration of learning experiences that extend between and beyond

individual classrooms. Hybridization is based on LEEP as a multimodal program attracting both on- and off-site students.

This research incorporates multifaceted data collection methods -- participant-observation, surveys, and focus groups. These approaches facilitate an investigation of complex issues based on students' experiences as they progress through studies.

Upon entry, students indicated intrinsic and extrinsic motivations and concerns related to joining the program. Students also shared details of the wide spectrum of competencies they bring into LEEP. During studies, students are involved in robust engagement spanning modalities at both the program and course levels. Within a context of ongoing support and interaction, they draw upon much of their pre-existing knowledge base as part of LEEP activities. In terms of collective engagement, as givers and receivers, students share encouragement, perspectives, information, and questions. Students' comments reveal the presence of an underlying competency based on service orientation plus communication. This seems to be the basis of leadership development in LEEP. Within their experiences, students also encounter challenges, which may be considered counterforces. Some of their struggles are reoriented as opportunities to develop new competencies and build understanding. Towards the end of their programs, students reflect upon their experience and manifest significant transformation.

The final section of the study proposes a model of learning and leading based on LEEP student experiences. This results in the development of new questions for future exploration.

To my mother

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CHAPTER 1: INTRODUCTION

1.1 Path of Inquiry

This chapter outlines a path of inquiry for this dissertation research exploring concepts of learners and learning. The study is situated in the context of a library and information science (LIS) program originally developed as a distance education option incorporating network-based technology. While research concerned with the online education realm is plentiful, there are still serious gaps in our knowledge base. For example, in describing issues of learning effectiveness, Swan (2003, p. 37), notes “these areas of inquiry are as young as online learning itself” and that further “more rigorous...and more creative research...is definitely needed.” Additionally, Gibson’s (2003) review of distance education literature in the United States, Canada, and Australia reveals that learners and learning are surprisingly absent. She heeds a call to increase research, particularly conceptually founded research that raises new awareness and new questions in this area. Moore (1989, p. 2) extends this notion stating,

Distance education scholars must do better in sharing their knowledge more widely and make the results of their research and practice better known. An important part of this is to explain their learner-centered approach, and to help conventional education understand more about the complex process of designing, delivering, and supporting learning at a distance.

As discussed in greater depth within the body of the study, many of the conceptual models for education, whether online, onsite, or some combination of both (hybrid), while often

incorporating student perspectives at some level, don't involve them as part of a locus of control. For example, student success may be considered as part of overall program success in terms of satisfaction or achieving learning outcomes. However, these measures are often bound by an imposed framework of predefined criteria. These types of approaches may not reflect the emergence of new learning or the role of students as active participants who effectively contribute to the success of the program (i.e., they do not include generalities or details based on an authentic scope of student attributes and perspectives). This research attempts to redirect the perspective by placing emphasis on students' roles. By repositioning the lens, we, as educators, have new opportunities to understand the learning environment. In this way, students are key contributors within processes of individual and collective transformation – learner-centered inquiry for a learner-centered environment.

Issues like these and the questions they evoke represent conceptualization based, at least in part, on an ecological model. They aim to gain understanding within a particular context, which may or may not be similar to others. However, the basic aspects – actors and relationships – transfer across situations. These core ecological elements exist within a developmental space. As Nardi & O'Day (1999, p. 49), describe, “An information ecology is a system of people, practices, values, and technologies in a particular environment.” In studies of information ecologies, “the spotlight is...on human activity.”

Human-centered approach to inquiry is widespread in LIS. Disciplinary research frequently considers users (e.g., information seekers, library users, etc.) and uses of information resources. Discussing this approach, Wildemuth (2003, ¶ 1), notes that conducting “a user

study requires a significant amount of time and effort,” but by taking up “the challenge of conducting studies that you view as most important” there is an opportunity to better understand complex issues and potentially improve practice.

This human-centered research is case-based. It is situated within the context of a particular learning environment. While this is explored in greater depth in the subsequent chapters, here I begin to introduce what this type of environment is expected to be (and often is) in terms of actions and effects. In general, as Salomon (1993, p. 128) describes, “one of the most crucial outcomes...of education is students’ ability to handle *new* situations and meet *new* intellectual challenges.” Contemporary educational processes are meant to bring about change leading to preparation for the unknown (Dede et al., 2005). This is a grandiose proposition. How is this manifest in graduate education for LIS?

While individual schools may have their own models of development, this study considers constituents and processes based on the situation of this particular case. As part of its mission, the Graduate School of Library and Information Science (GSLIS; 2006) at the University of Illinois at Urbana-Champaign (UIUC) based in Champaign, IL, USA emphasizes development based on preparation for change in terms of creating leadership:

- Graduate education for leaders in research and practice in the fields of library and information science;
- Groundbreaking research to advance preservation of and access to information in both traditional and digital libraries and in the many settings outside of libraries where large amounts of critical information are collected;

- Useful service to librarians and other information service providers, as well as to the citizens of Illinois.

How is this mission of educational development and leadership surrounded by research, teaching, and service manifest within GSLIS? As noted above, this study is not principally concerned with understanding the tools or structures within this learning environment; rather, it seeks to better understand the principal actors and their actions. How do the students represent the mission?

In the interest of focusing the investigation on a particular environment in line with the scope of case-based thesis research, one particular GSLIS program delivery option is included – LEEP. In 1996, LEEP was conceptualized within the auspices of the School as a principally online, subtly hybrid, learning environment. At the time of this inquiry, LEEP represented a well-established robust, multimodal program based on pedagogical principles of communication and collaboration (Lawton & Montague, 2004). LEEP is considered highly successful, in terms of growth, retention, completion, data from course and program evaluations, alumni involvement, awards¹, etc. and thus offers a unique opportunity to explore emerging educational issues. In addition, as a multimodal program, it affords new possibilities to move beyond the compare-contrast rut of online vs. onsite (Russell, 1999).

¹ For example, in 2001, LEEP was recognized as the Sloan-C Most Outstanding Asynchronous Learning Network Program (<http://www.sloan-c.org/aboutus/awards2001.asp>).

LEEP has developed into a complex program-level environment.² It has been at the center of a number of research studies related to computer mediated communication (CMC), computer-supported collaborative work (CSCW), and pedagogy mostly focused on gaining course-level understanding. Lawton and Montague, 2004 (see above) is in reference to a chapter of an anthology based on considering several issues from the early years of the program. This book emerged after the 2002 LEEP Retreat, which was organized to provide an opportunity for faculty, staff, students, and graduates involved in the first five years of LEEP (1996-2001) to consider emerging ‘best’ practices within this particular environment. As part of the Retreat, one of the questions posed, related to this study was -- “How does participating in LEEP change you?” Data collected and analyzed as part of the Retreat provided initial insights into the sorts of transformations LEEP students (and others) experienced based on their participation in this program as it emerged. Key themes include becoming a communal person and a reflective practitioner. Expanding on these concepts, specifically gaining a better understanding of students’ varied experiences and roles within this dynamic learning environment, is of significant importance for this research.

As noted above, many studies of online education focus on course-level understanding. While courses are foundational in considering modern educational practice, learners and their learning experiences extend between and beyond individual classrooms, whether onsite or online. This research seeks to focus the lens on students while, if you will, casting a broader net across program-level experience. It is hoped that this focus and this scope will

² This refers to LEEP being established as a scheduling option for a complete master’s degree program (not just a set of select courses). Additional details of the LEEP model are provided in Chapter 3.

enable new possibilities to understand the context and overarching theme – learners and learning.

1.2 Research Questions

With this orientation and within this environment, I begin a formalized process of inquiry intending to determine more about what LEEP is -- based on LEEPers³ and their actions.

Three principal questions guide this exploration:

1. Who are the learners?
2. How do learners interact and influence each other?
3. How do these interactions and influences contribute to learner transformation?

1.3 Organization of the Work

Fundamental to the construction of this inquiry is Dewey's (1897) notion of duality encompassed within the educational process. This is rooted in the valuing of both individual and collective perspectives as well as the synergetic changes that emerge when both are recognized and developed. This and other aspects of foundational underpinnings are explored in the subsequent chapter as part of the literature review. Following this, in Chapter 3, case study methodology, including focused description of the context, points of access (strategies and questions) and introduction to data analysis is described. Chapters 4, 5, and 6 provide detailed consideration of case components based on learner-centered understanding (initiating, moving through, and completing the program). This is facilitated by the use of a

³ LEEPers is a nickname for LEEP students.

lightly imposed metaphor. In the final chapter, research questions are revisited along with emergent underlying themes and new questions that arise in looking forward.

At this point, the inquiry launches into action. Among other things, it provides an opportunity to explore a topic sometimes considered far removed from standard educational practice (Kozol, 1991, Shapiro & Purpel, 1992, McLaren, 2002, etc.). How do we move toward learner-centeredness? Are we finally approaching Illich's "most radical alternative to school" where a network gives people a place for "creative, exploratory learning" and opportunities to share "current concern with others motivated by the same concern" (1970, p, 19)?

CHAPTER 2: LITERATURE REVIEW

This research investigates student experiences in a principally online LIS education program. It draws on theories and research across a variety of disciplines. Some of the areas discussed in this chapter contributed to the formulation of the research. Others were incorporated during later phases to inform data analysis and discussion. Where possible, throughout the review, student perspectives are emphasized.

In the first section of the chapter, a discussion of inquiry based on learners and learning in general is presented. Following this, students in LIS are considered more specifically. In the third section, models of learners and learning of particular relevance to this study are reviewed. In section four, a brief discussion of LIS curriculum is presented. Section five focuses on issues of online education. In the final section, emergent synergies based on LIS education online are explored.

2.1 Inquiry of Learners and Learning

Researchers began developing theories for considering students' experiences many years before online education emerged. Of central importance to this inquiry is Dewey's notion of the duality within the student-centered educational process. In describing his *Pedagogic Creed*, Dewey (1897, ¶ 3) stated, "the educational process has two sides – one psychological and one sociological; and...neither can be subordinated to the other or neglected without evil results following." Dewey's insights may be understood in terms of the importance of valuing both individual and collective contexts and the positive changes that emerge when

both are recognized and developed. Later in the *Creed*, emphasis is placed on this in terms of capacity building – learning that enables individuals to develop their potentials, which is also beneficial within social context(s).

There are more recent models that emphasize this dual developmental perspective. In describing collaborative learning groups, Johnson & Johnson (1991) note that each person involved as a member of this type of group emerges as a stronger individual. Within collaborative learning, the authors describe how, “individual accountability is the key to ensuring that all groups’ members are in fact strengthened by learning cooperatively” (p. 58). The notion of positive interdependence is also emphasized, not only in learning contexts, but also within professional realms. The need to develop individual and collective competencies to support working together is pervasive in many situations. Within this framework,

Individuals join together into a group that is structured around a mutual goal. The groups fit into the larger mosaic of groups working toward a larger goal. Those groups also form a mosaic working toward an even larger superordinate goal. Thus there are individuals who work within teams that work within departments that work within divisions that work within organizations... (p. 129)

In considering this notion further, Johnson & Johnson actually lament that in many situations, school-life is not real enough. That is, having individuals focus on only individual goals based on competition ignores the importance of positive interdependence. They urge those involved in education to enable processes to make classrooms “more realistic” (p.

129). Spitzer notes that this is not always easy, especially when, “technical, administrative, political, and financial considerations often dictate the kind of [educational] system that is designed” (1998, p. 54).

How, then, can we move toward more realistic learner-centered educational processes?

Considering a theory of engagement as distributed-actions may be helpful. Within this model, all members of groups have the option to become leaders by taking action to enable the group to complete a task while maintaining collaboration. Leadership within this context may be “fulfilled by different members performing a variety of relevant behaviors.

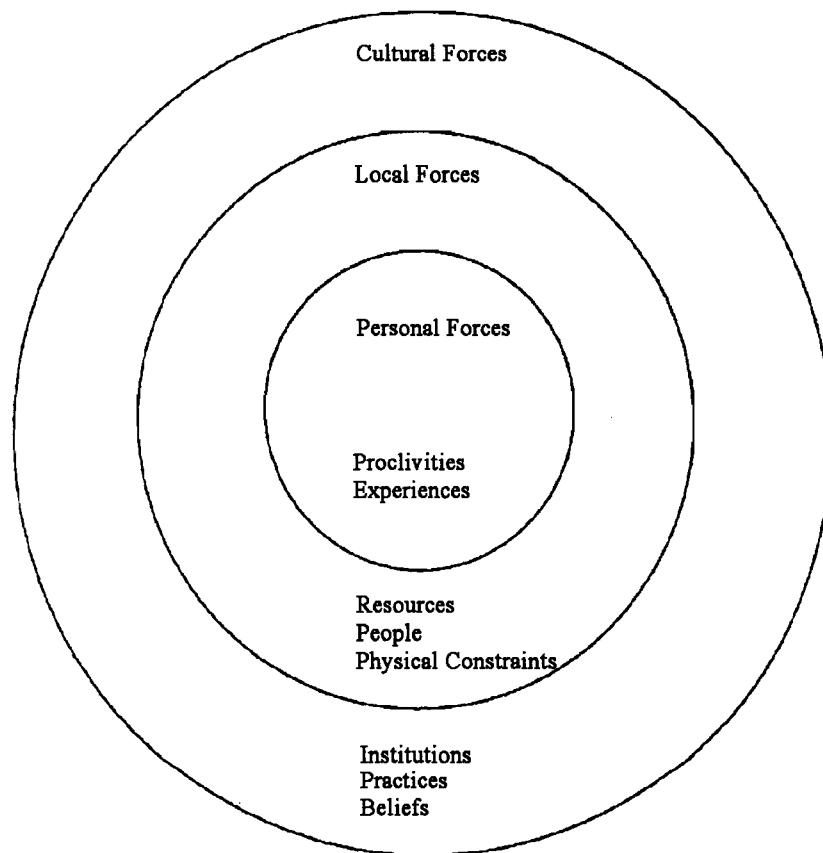
Leadership, therefore, is specific to a particular group in a particular situation” (p. 160).

Developmental processes are shared across members. Individual and group advancement both depend on flexibility, specifically “the ability to diagnose what behaviors are needed at a particular time in order for the group to function most efficiently, and the ability to fulfill these behaviors or get other members to fulfill them.” Further, distributed-actions theory is described both in terms of a philosophy and a “concrete and direct approach” enabling individual and collective growth (p. 161).

Another model that incorporates a merger of individual and collective relationships is Hatch & Gardner’s (1993) concentric model of cognition (shown below in Figure 2.1). In it, a series of concentric circles represent the various types of influences (forces) exerted in learning including personal, local, and cultural. In a complex case, such as one that considers learning in the context of an entire educational program environment, this model is particularly useful in differentiating layers of relational forces. Knowledge (widely

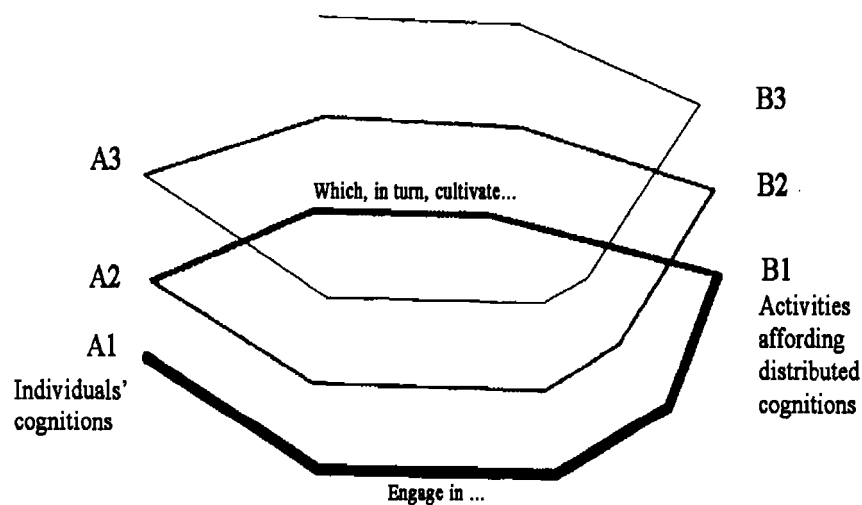
defined as consequences of learning) may emerge and exist (and exist and emerge) within individuals (the innermost area of the circular representation); within group-project teams; within course-level discussion; within program-level events; and within professional contexts, etc. (the outermost area of the circular representation within this context). In this environment, as dialogue emerges, the dynamic multi-level forces continually act between and among each other evoking shared experience and widened understanding.

Figure 2.1: Concentric Model of Cognition (Hatch & Gardner, p. 166)



The concentric circles present an illustration of how aspects of environmentally-bound learning relationships are layered together. Other theorists emphasize the relationships between layers. In considering options for understanding development within a specific context, Salomon (1993, in reference to Altman’s work; p. 122) describes that one may “choose to study a conglomerate...[or] separate the whole into its interacting units and study them for their own qualities.” As illustrated below (Figure 2.2), in Salomon’s model of distributed cognitions, developmental systems are comprised of linked components that affect each other in a back-and-forth, looping fashion. Within this framework, in order to “account for changes and developments in the performance of joint, distributed systems, one has to consider the role played by the individual partners...distributed cognitions and individuals’ cognitions need to be seen as affecting and developing each other. “ (p. 134)

Figure 2.2: Reciprocal Relations Model (Salomon, p. 123)



Work of other modern theorists also builds on the relational perspective. Examples include Moore's (1983) transactional distance, Harasim's (1990) model of computer-mediated communication, and Burbules' (1993) dialogue as inquiry. All three models emphasize knowledge construction through exchange. For example, dialogue as inquiry encourages learners engaged (together) in problem solving to consider, "a range of perspectives and approaches" (p. 116). In addition to generating potential solutions, dialogue as inquiry promotes the development of individuals and "communicative virtues" (p. 42) such as enhanced knowledge of listening, speaking, reading, and writing as well as appreciation for a range of perspectives. Salmon's (2002) "e-tivities" is also a helpful guide to consider in promoting action and development specifically in online realms.

All of the models described above relate back to the essence of understanding educational development, as Dewey, with a student-centered lens. Development within and between students is the essential theme. Nearly a century after the *Creed* emerged, Barr & Tagg (1995, ¶ 4) describe a similar philosophical paradigm within the modern educational context. Here, they remind us that the "mission [of education] is not instruction, but rather that of producing learning with every student by whatever means work best." While it may be important to study models of practice as well as practical implications for systematic developments, these efforts also have the potential to cloud the essential purpose of building understanding to enhance the experience of students (unless they remain grounded within a student-centered context). Barr & Tagg continue by naming the concept and explaining it further, stating, "the Learning Paradigm frames learning holistically, recognizing that the chief agent in the process is the learner. Thus, students must be active discoverers and

constructors of their own knowledge” (Learning Theory section, ¶ 2). Within this paradigm, as Dewey’s and Johnson & Johnson, etc., “learning environments and activities are learner-centered and learner-controlled” (Learning Theory section, ¶ 3). Additionally, they also warn that non-student centered approaches to development may be, at best counterproductive, or at worst, harmful. For example, they note another approach, called the “Instruction Paradigm” and describe that it, “reflects deeply rooted societal assumptions about talent, relationships, and accomplishments” (Learning Theory section, ¶ 11) based on actions as win-lose endeavors where defining success is limited to terms of individual achievement. Acknowledging the *Learning Paradigm* allows for consideration of holistic learner development within the context of an integrated environment involving learners who contribute to knowledge development through mutually-beneficial sharing of ideas and actions. This sort of development is reflected in principles of constructivist learning theory where students build authentic understanding through ample active engagement in learning activities. In order to construct new knowledge, students must be constructors – questioning, finding solutions to their problems, and correcting their mistakes (Gueldenzoph, 2003).

Understanding learning based on learners within a particular environment is the aim of this study. Therefore, discussion is based on perspectives and roles of this constituency.

However, it is also important to acknowledge that, in the context of this learning environment, others (e.g., faculty, family, and co-workers) also contribute to learners’ development. Recognition of these other constituents, while not emphasized, emerges naturally in discussions of student experience. As Nardi & O’Day (1999, pp. 50-51) describe, within a complex system of parts and relationships, diversity and experiences

emerge mutually as continual evolution. “Different parts of an ecology coevolve, changing together according to the relationships in the system.” Within this study, emphasis is centered on experiences and roles of the “keystone species” -- the students.

Below, basic elements of the study are considered through a review of the literature.

Borrowing from an ecological perspective, where understanding is formed by considering individuals and their actions within a certain space or context, aspects of the review include: students – their diversity; models of learners and learning; disciplinary context; and the format of their learning space. In the final section elements of an emerging synergetic model of theory and practice for LIS education online are introduced.

2.2 Who are LIS students?

In considering the ecology of LIS education, Van House & Sutton (1996, Ecology in General section, ¶ 2), explain that “the larger, more varied, and more flexible a population, the greater its ability to spread to new niches.” While the effects of adaptability and goals of LIS education (discussed below) go beyond spreading to new niches, disciplinary nimbleness based on a spectrum of participant-types forms an essential basis for thriving in our rapidly changing world (both specifically, in terms of the professional world and more broadly). Human resource (HR) literature also emphasizes the desirability of a system evoking dynamic engagement supported by diversity. For example, Loden & Rosener (1991) note that “a single, homogenized approach to management and problem solving” is far less likely to succeed than “creative solutions...from a broad, deep pool of diverse talents, perspectives, and life experiences” (p. 222).

Do LIS students represent a broad, deep pool of diverse talents, perspectives, and life experiences? Yes and no. Loden & Rosener (pp. 18-19) identify 14 dimensions of diversity, which may be used for an analysis of this sort. In this model, primary (innate) dimensions forming our core identity include age, ethnicity, gender, physical abilities, race, and sexual orientation. Secondary (mutable) dimensions include educational background, geographic location, income, marital status, military experience, parental status, religious beliefs, and work experience.

What is known about LIS students? Based on this model, students engaged in LIS education encompass limited diversity – they are all adults with at least one university degree. The Association for Library and Information Science Education (ALISE) compiles demographic data for several attributes listed above. For example, according to 2004 ALISE statistics, 79.8% of LIS graduates (in American Library Association (ALA)-accredited master’s programs) are women and 10% self-identify as racial/ethnic minorities.¹ Therefore, based on this comprehensive profile, students engaged in LIS are disproportionately female and white as compared to the general US population.² Additionally, in terms of the entire LIS student

¹ This is based on a total population of 4,926 graduates with 3,930 women and 3,625 identifying as white, 494 as racial/ethnic minorities (21 American Indian; 118 Asian or Pacific Islander; 208 Black, non-Hispanic; 147 Hispanic) plus 171 International (non-classified) and 636 non-identified. Note: Data for male students in the ALISE chart has an incorrect sum (993 instead of 996), thus the total indicated in the source is off by three students.

² While there is not a single direct comparison using the same definitions and time to compare ALISE statistics with the population at large, data provided in the 2004 U.S. Census (<http://www.census.gov/population/www/pop-profile/profiledynamic.html>) provides a point of comparison. Here, the national population is described as 50.7% female and 80% white.

population, based on educational background, one could infer that their incomes are at average or higher than the total general population although this may be countered by gender. In addition, as adults, it's likely nearly all students have at least some (perhaps ample) work experience (in LIS and other contexts). In online education, in particular, where students are not place-bound, it's likely that students represent a broader geographic spectrum than in comparable campus-based programs especially in terms of rural representation (because of the mostly urban distribution of schools). As LIS programs (or other discipline-based research) do not generally gather data based on several of the dimensions of diversity (sexual orientation, religious beliefs, physical abilities, parental status, marital status, etc. – those areas not included in Department of Labor data), little is known about the overall distribution of these aspects. However, these themes (as others described above) are represented by major organizational entities in LIS -- the ALA Gay, Lesbian, Bisexual, and Transgendered (GLBT) Round Table, the American Theological Library Association (ATLA), and the Association of Specialized and Cooperative Library Agencies (ASCLA). Parental status is also considered in conjunction with the Public Library Association (PLA) as part of its library service sections including Library Services to Preschool (and Elementary School Age and Teenage) Children and their Caregivers. Within LIS education, parental and marital themes are also considered in the context of gender related to juggling multiple roles and responsibilities including domestic, economic, professional, community-based, reproductive, educational, etc. (Kazmer & Haythornthwaite, 2001).

While it appears static, Loden & Rosener's dimensions of diversity model cannot be used as a rigid or absolute framework. In essence, this is because the dimensions presented, like our perceptions, are all based on social constructs of reality (Searle, 1995). Constructs develop and are formed to reflect understanding and expectations based on a particular reality and from a particular socio-political perspective.³ While they are designed to describe (more easily categorized) aspects of something, their use may also perpetuate separation and inhibit connections across other common (less easily categorized) elements. As noted in the discussion of complex systems above, dimensions of diversity constantly overlap, change, and affect each other. Thus, employing the model as an interpretive framework simply provides a starting point for discussion of the individuals and their relationships being considered within this study.

Heim & Moen's (1989) report provides another point of reference specific to LIS education. In it, they consider occupational entry based on an extensive survey (with 3484 student responses from across all US ALA-accredited LIS schools) incorporating principles of vocational psychology and occupational sociology and offer comprehensive insights into LIS student experiences prior to the availability of online education. Results of this research reveal the typical LIS student was "part-time, geographically place-bound, white, female, and in her mid-thirties with an undergraduate degree in English or education" (p. 185). In addition, it was determined that "individualized contact far surpasses any other mechanism for attracting new entrants to the profession." As a result of these two realizations (limited diversity plus personalized recruitment), when the report was released it also included a

³ As is disproportionate representation of certain groups within a system or structure. See, for example, Olson, 1998 and 2001.

charge to LIS professionals to be active recruiters of diverse potential students (colleagues-to-be). As well, in the decade following this report, ALA engaged in several initiatives to increase the attractiveness of the LIS profession and diversify the population of incoming students, including the establishment of the Office for Diversity and the Spectrum Scholarship program (intended to support the development of a representative workforce). At the same time, the emergence of new educational options online expanded potential access for place-bound students. That said, fifteen years later, within some (online) contexts, the typical student profile still encompasses similarities to the one that emerged in 1989. Similarities and differences encountered as part of this case are further discussed in subsequent chapters as part of the data analysis.

Literature concerning LIS students reveals that while LIS is a discipline concerned with issues affecting diverse populations, not all people are equally represented as students (or subsequently professionals) within formal disciplinary ranks. This is a significant point, but perhaps more significant (as part of a learner-based inquiry) is that an awareness of this disparity exists. With and from this, potential for further consideration and advancement of related issues and possibilities exist.⁴

2.3 Models of Learners and Learning in LIS

In a study aimed at understanding learners and learning within a specific context, it's useful to incorporate discussion of research based on some significant characteristic field-based attributes. As noted above, all LIS students are adults pursuing graduate professional

⁴ While I hesitate to predict exactly how this will evolve, I am optimistic that within the context of LIS, critical awareness will perpetuate progressive thought.

education. What does this mean? How do age and the level of study influence experience? Are these diversity-limiting factors? To consider these questions, research and theories relating to facets and attributes of this study--graduate, adult, transformational, and holistic learning--are discussed in the following sections.

2.3.1 Graduate Learning

LIS education is graduate education. According to some studies, age and level are particularly important factors of learning. Gullahorn (2003) describes graduate education as unique from other levels of study, specifically in terms of not being a “simple extension of coursework beyond the bachelor’s degree.” In this context,

Students’ active involvement in the learning and discovery process is promoted by faculty mentoring and frequent interaction between faculty and students as well as among students in structured and informal settings. Together, the faculty and students form a graduate community of scholars that enhances learning and discovery as well as personal growth and professional socialization (p. 204).

Graduate students, then, experience affective and social growth in addition to cognitive.⁵ A key difference presented within this definition seems to be students’ goals and changes related to entering the professional realm.

Dewey’s emphasis on change is a recurring theme in graduate education literature. For example, Van Maanen & Schein (1979) describe graduate education in terms of acquiring a new socially-based identity – a socialization process involving divestiture, in the sense of

⁵ One might hope that this takes place in other learning contexts too.

shedding one's prevalent self-conception and constructing facets of a new identity that reflect one's role and membership within a professional group.

Graduate education may involve growth based on individual and collective experiences, e.g. practice, reflection, and dialogue. As part of a national survey of graduate students, Anderson & Swazey (1998) describe the first step programs should consider when there is an interest in how graduate education experience can be improved for students, not in terms of curricular change, but rather with everyday interactions – improving mentoring based on preparation for future careers. Students' needs and interests must be considered as part of a learner-centered approach. As with other warnings noted above, teaching and mentoring at the graduate level (like other levels) need to move beyond one-way flows of knowledge. As McKeachie et al. (1986) describe,

the best answer to the question 'What is the most effective method of teaching?' is that it depends on the goal, the student, the content, and the teacher. But the next best answer is 'Students teaching other students.' There is a wealth of evidence that peer teaching is extremely effective for a wide range of goals, content, and students of different levels and personalities (p. 63).

The notion of peer-teaching is also included within Vygotsky's "zone of proximal development." This model is defined as "the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under...[instructor] guidance or in collaboration with more capable peers." While Vygotskian theory emerged as part of study with children, it emphasizes innate human potential across ages. The model also employs an appropriate

metaphor for (constructivist) student-centered development -- based on considering learners as “buds” rather than “fruits” (1978, p. 86).

2.3.2 Adult Learning

Literature on adult learning provides additional context for this study. According to the theory of andragogy, proposed by Knowles, adult learners, in general, are interested in developing in both personal and social dimensions. This is illustrated in the four basic assumptions Knowles (1980) makes about adults as learners: Adults are self-directed as a result of their maturity; Personal histories defining adult identities serve as a foundation of experiential learning upon which new learning can be applied; Motivation in adults is associated with socially relevant learning; and Adult learners have interest in problem-solving and direct applications for learning. Knowles’ theory encompasses both individual and collective elements.

Andragogy has also aroused much controversy and debate (Merriam & Caffarella, 1991).

One particularly salient point of controversy relates to the inference that andragogy, with all its implications for adult instruction, is fundamentally different than pedagogy (education of children). While it is logical that, for example, experience is accumulated with age and therefore adults have more relevant experience to build on, this single factor cannot account for all variation in richness or diversity of experience. Since proposing the original schema, Knowles has subsequently clarified his position and now claims that andragogy-pedagogy represents a continuum rather than a dichotomy. This is in line with Dewey’s (1948) notion that social dependencies and interdependencies are important for all types of learners.

Another theorist of adult education, Boggs (1981), indicates that adult learning experiences (in particular) emerge from educational engagement promoting the importance of enhancing personal growth. Boggs' model considers adult education as life enhancing when it encompasses the following criteria:

- Skill-development, self-concept, and creativity are promoted;
- Biased thinking is challenged;
- Personal goals are incorporated;
- Virtues (e.g. tolerance and generosity) are developed;
- Access to new opportunities is provided;
- Positive cultural ideals and traditions grow.

Boggs' model encompasses holistic transformation as the goal of learning experience. These types of change are also emphasized within the broader contexts of transformational and holistic learning theories.

2.3.3 Transformational Learning

As noted in Chapter 1, LIS education, at least in the context of GSLIS, aims to transform learners into leaders. The study of transformational learning (also known as transformative learning) emerged with the work of Mezirow (1981). Transformational learning is defined as learning that induces more far-reaching change in the learner than other kinds of learning, especially learning experiences which shape the learner and produce a significant impact, or paradigm shift (Clark, 1993). It is based primarily on a perspective of learners as individuals.

Mezirow (1995, p. 50) identifies 10 potential aspects of transformation. The process of transformation may incorporate some or all of the following (not necessarily sequentially):

- disorienting dilemma
- self-examination
- critical assessment of assumptions
- recognition of shared experience
- exploration of options for new roles, relationships and actions
- planning a course of action
- acquisition of new knowledge and skills related to one's new goals
- provisionally trying out new roles
- building of competence and self-confidence
- reintegration into one's life on the basis of conditions related to one's new perspective(s)

As the levels of disorientation, engagement, interaction, etc. increase, so too does the potential for transformational learning increase. Ehrmann (1999, Access Proposals That Can Improve Quality Too Section, ¶ 3) laments and reminds us that this sort of (deep) change is difficult to conceive of when the Instruction Paradigm is pervasive. Here "some students enter an institution believing that their job is to listen and repeat, working alone. Changing that paradigm [to one that is essentially learner-centered and transformational] is as difficult as challenging their ideas about philosophy or physics." From a more natural, transformational perspective formal education is seen to form part of a lifelong journey of

learning whereby a "continuous process of repurposing" enables students to engage in "learning and unlearning" through "a fundamental re-evaluation of some or all of one's roles, priorities, visions, and goals resulting in new understandings of self and new commitments to future life possibilities" (McLean & Hudson, 2004, p. 461).

Transformation is essentially dynamic. As Dewey links our educational development to individual and collective contexts, Merleau-Ponty (1981) describes our biology and our ontology as inextricably linked. Our existence and our growth are both shaped and bound by context. Moving to a new place or life situation, for example, renders our everyday world as different – just as a new online education program and forging a professional allegiance change students' perceptions of roles and goals. Old habits drop off and new ones form. New educational environments bring with them a novel sense of time and space. And while, in essence, we don't stop thinking in one way in order to start thinking in another, as Ehrmann (1995, Strategies Matter Most section, ¶ 2) describes in formal situations (as others), "Education can affect the lives of its graduates...[based on] coherent patterns of learning...[that] accumulate over a series of courses and extracurricular experience." More ideas and experience provide more grounds for emergent transformation.

2.3.4 Holistic Learning

Heron's model of holistic learning (1996) offers an additional perspective on development. In it, emphasis is placed on the importance of feelings as fundamental as opposed to the cognitive developmental model prevalent in many other theories of education. According to Heron, learners must establish intimate relationships before they are able to draw upon other

modes of learning – imaginal, thinking, and practical. The idea of the priority of intimate connectedness is also discussed by Belenky et al. (1986) in terms of women’s approaches to engagement in learning communities as part of a large study involving 135 interviews with women about their experiences in formal educational settings across nine institutions. Here, “although most women students don’t expect colleges to honor their concerns...they preferred to start [the learning process] from personal experience” (pp. 198-202). As one student explained, “I think women care about things that relate to their lives personally. I think the more involvement they have in something that affects them personally, the more they’re going to explore it and the more they’re going to be able to give and to get out of it” (p. 202). According to the authors, this requires educators to “accord respect to and allow time for the knowledge that emerges from firsthand experience...and encourage students to evolve their own patterns of work based on the problems they are pursuing” (p. 229).

Considering the prevalence of women in LIS studies, gender-based issues and approaches are particularly relevant to this discussion. Literature on caring from the field of nursing (another female-rich profession) also emphasizes the importance of a presence or perception of feelings – as caring (Noddings, 1984). This research indicates that in order for one to be willing to subject herself to engagement, a basic level of trust and commitment is needed. This is reinforced by Holmberg (2003), in his *Theory of Distance Education Based on Empathy* (developed based on learners who opt for this format because they are place-bound), where “central to learning and teaching...are personal relations between the parties concerned, study pleasure, and empathy between students and those representing the supporting institution” (p. 81).

As Perreault (2005) describes, trust facilitates engagement within a framework of distributed actions. As sufficient comfort emerges, engagement broadens until participants are ultimately prepared to assume multiple roles:

The relationship of leaders and followers is not one of general-troop, parent-child, or manager-subordinate, but of friend-to-friend engaged in genuine dialogue. Leaders and followers together comprise the leadership relationship. Significantly, the leader-follower role can change depending upon the needs of the situation, with leaders becoming followers and followers becoming leaders.

As this happens, students are transformed individually and collectively. This interactive, multiple role emphasis echoes distributed-action theory. Sawyer & O'Fallon (2000) describe this synergetic phenomenon in the context of online education noting "When students are empowered to become agents of their own learning, they cannot help but be transformed as people...leadership can emerge from several members simultaneously."

Themes of construction and collaboration are further discussed below in the section exploring study in LIS and online education.

2.4 What do LIS students study?

In a case study aimed at exploring student experience in online LIS education, it's essential to consider, in general terms, the scope of LIS education in which learners are involved -- based on the American model.⁶

⁶ A master's degree in LIS is the current standard for professional entry. Programs typically require students to pursue ~40 graduate credits over 1-2 years. The International Federation of Library Associations and Institutions (IFLA; www.ifla.org) maintains information on LIS educational standards and practice in other contexts.

Formal LIS education in the United States has been evolving for over a century.⁷ Currently, according to ALA (2006), there are 49 schools offering accredited LIS programs in the United States.⁸ However, schools are not evenly distributed across the nation. While 30 states have one or more schools (20 states have one; 10 states have multiple), 20 do not have any (permanent) accredited school of LIS.⁹ Thus, when a potential LIS student considers options for pursuing educational opportunities, those from many locations around the country are faced with a decision of moving, not pursuing the professional degree (or opting for another, perhaps non-accredited or related discipline, option) or pursuing studies at a distance.

It's not surprising then, that according to the Kellogg-ALISE Information Professions and Education Reform Project (KALIPER; Durrance, 2000), "LIS schools are offering instruction in different formats to provide students with more flexibility."¹⁰ Flexibility includes "more choice than ever regarding course length, day and time of course offerings,

⁷ Before formal LIS schools emerged, preparation for library work consisted primarily of apprenticeships available through larger libraries and limited course offerings available for school librarians through colleges and state departments of education (White, 1976, p.177).

⁸ The emphasis of this study involves trends emerging during the past decade related to online education. While a comprehensive review of the 100 preceding years of LIS educational history is beyond the scope of this project, the long-term commitment to outreach education should be acknowledged. Earlier and broader distance education options in LIS are explored in a recent anthology edited by Barron (2003).

⁹ Some schools of LIS, such as those at Emporia State and University of North Texas, offer off-site program options in states that do not have their own schools.

¹⁰ KALIPER, a major multi-year, multi-institutional, multi-methodological project, "sought to determine the nature and extent of major curricular change in LIS education across North America." The study was conducted between 1998-2000 and included a survey of deans and directors, case studies of curricular change at 26 schools, and faculty interviews.

and on or off campus meetings.” This format flexibility is evident in the 2003 ALISE Statistical Report, where 88% of LIS schools indicate they now offer some aspect of their program(s) at a distance (Barron & Harris, 2003). Based on the inequitable geographical distribution of LIS schools noted above, distance education has long served an important role in providing access. During the 1990s, as new Internet-based technology options began expanding, they may have been perceived as more viable than earlier off-campus models which were seen to have been “largely delivered by adjunct faculty at remote sites or as site visits by faculty from the center campus” (Logan & Hsieh-Yee, p. 448). Even before the first online programs were launched,¹¹ in the early 1990s, some LIS educators, particularly those recognizing systemic challenges facing the discipline, were optimistic new technologies would bridge gaps and enable new access to and increased quality of LIS professional education for prospective students (Stieg, 1992, p. 122).

Across modes of delivery, current LIS students grapple with a variety of professional issues. As KALIPER describes, educating students for future roles in libraries is the main purpose of many LIS programs. Traditional library courses, such as cataloging, reference, and collection development are widely available. However, KALIPER also reveals, “many schools are focusing on broad-based information environments that go beyond traditional library settings.” Courses identified in this category include information entrepreneurship, web databases, and information security. Extending beyond the boundaries of traditional libraries seems to be a natural fit with the emerging access options provided by digital information infrastructures. KALIPER identifies the overall domain of LIS schools as, “cognitive and social aspects of how information and information systems are created,

¹¹ The first online LIS program was initiated at Syracuse University in 1993.

organized, managed, filtered, disseminated, routed, retrieved, accessed, used, and evaluated.”

Similar domain traits are presented in ALA’s (1992) *Standards for Accreditation*. Here, LIS education is said to be essentially concerned with

recordable **information** and knowledge, and the services and technologies to facilitate their **management** and **use**, encompassing **information** and knowledge **creation**, communication, identification, selection, acquisition, **organization** and **description**, storage and **retrieval**, preservation, analysis, interpretation, **evaluation**, synthesis, **dissemination**, and **management**. [Bold added to identify base words also used in KALIPER.]

Specific aspects of curricular emphasis are reflected in names of schools. As Estabrook & Montague (2003) discuss, current titles reflect considerable innovation. They include,

School of Library and Information Science; School of Library and Information Studies; School of Library and Information Management; School of Information Science and Policy; School of Library, Archival, and Information Studies; School of Communication, Information and Library Studies; School of Information Science and Technology; the Information School; and the School of Information (p. 1648).

Names reflect both what is actually done in schools as well as future goals. They also reflect local cultural and institutional values. Additionally, multidisciplinary, perhaps an effect of the broad reach of information-based study, contributes to the variety of approaches and contexts of LIS theory and practice encompassed by LIS schools and the discipline. This

spectrum as well as the learner-centered paradigm are, at least in theory, represented within the ALA (1992) accreditation standards. Here, LIS schools are charged to “construct coherent programs of study that allow individual needs, goals, and aspirations to be met within the context of program requirements established by the school.” Programs are to consider learners’ “capacities, interests and habits” and programs “must be controlled at every point by reference to these same considerations.”

As LIS education revolves around students, the essence of LIS study revolves around use and users of information. As described in KALIPER, “‘user-centeredness’ has infused or pervaded most of our research and teaching in LIS, and that even ‘non-user’ courses, so to speak, such as cataloguing and data management now tend to be based on the user paradigm.” Collecting, describing, organizing, and preserving information so that users can access it is what concerns those of us in LIS. As de la Peña McCook (1999, *Is a new profession emerging?* section, ¶ 2) describes in discussing the Ockham’s razor of our practice, “maintaining the record and making available the record is the point of it all.”¹² She also notes that new technologies don’t actually change the core mission, rather they should be considered in terms of their utility in facilitating it.

In the final sections, these themes of emerging technologies (for LIS education) and emerging educational practice in LIS are considered.

¹² While the core mission of LIS is defined pragmatically as user-centeredness, it is also, at a more fundamental level, concerned with commitment to intellectual freedom. (See ALA, 1948).

2.5 Formats of Learning in Online Education

There are many variations of online education involving different learning management systems, asynchronous and (less frequently) synchronous modes of engagement, etc. (Bruce, 2004). According to Allen & Seaman (2005, p.4), in their report sponsored by Sloan-C, online education involves courses where "the vast bulk [>80%] of the content is delivered online" through synchronous and asynchronous interaction. Although, by definition, pure online learning would involve no face-to-face meetings, all programs with more than 80% of the delivery taking place online are termed *online*. Mixed programs with 30-79% online delivery are referred to as *blended or hybrid* models. LEEP then, although it is a hybrid involving brief residential components (10 days at the beginning and one day per course (once a semester) thereafter plus synchronous and asynchronous activities) would be formally classified as *online* in this widely used framework.¹³

In reflecting the issue of defining online education generally, a couple of specific issues emerge. First, it's difficult to define and categorize as described in the previous paragraph. Second (and perhaps more important in this discussion within the context of LIS education) the vast bulk of online offerings involve most programs using a single mode of delivery – asynchronous.¹⁴ Potential reasons for this one-dimensional (asynchronous-only) state are

¹³ As described above in the discussion of dimensions of diversity, classification is never simple. In describing a complex educational program structure involving online learning, I prefer using the term *multimodal*. Not only is it more accurate, it also emphasizes student engagement over other aspects (e.g., curriculum or technology). LEEP is further described in Chapter 3.

¹⁴ No other online LIS programs were identified as systematically offering both synchronous and asynchronous components although a few schools have recently adopted synchronous tools that may be used at the discretion of the faculty.

numerous.¹⁵ These types of program limitations are rooted in and reflect a spectrum of barriers. They also reflect the relative youthfulness of approaches to online education. Regardless of the individual cause(s) or case, limiting opportunities for varied engagement would seem to logically lead to limited opportunities for learning. While these issues are further discussed in subsequent chapters as part of the data analysis of this case, there is also a need to consider these issues in other investigations.

As in other contexts, learner-centered education online, regardless of the precise format and components, offers educational potential. Online learning environments afford new options and opportunities for placing learners in the center of educational endeavors (Smith et al., 2001). As Saba (2003) explains, “The centrality of the learner is one of the distinguishing features of distance education, and understanding this fact is essential for discerning why it is essentially different from other forms of education” (p. 4). In describing a holistic learner-centered approach afforded in online environments, Rovai (2004) expands on this by noting that, “in not treating students as passive learners, more respect is shown to students as learners and human beings” (p. 81). As noted above, certain types of learners (adults, women, probably others too) articulate (when provided a forum) the importance of having their experience acknowledged and considered as part of the learning process. This may be particularly essential for all types of non-traditional learners as they face steeper paths of

¹⁵ They may include (prior) lack of commercial and/or open source software targeting synchronous communication online and/or that which would work effectively with (prior) typical bandwidth; complexity of organizing initial multimode curricula; reluctance to adapt initially established single-mode (asynchronous) models; reduction of flexibility afforded to students in terms of anytime learning options; resource limitations; potential increase in workload for students and/or faculty; limitations imposed by all-institutional models of online learning; being stuck in a comparative framework (either online or campus-based) mindset; and/or lack of critical consideration/understanding of the richness afforded by offering various forums of engagement.

adaptation in addition to possible contradictions of roles. For example, as Garland (1994) describes, adults may feel a compelling need to be in control because in most situations they need to be. However, in an educational context, they must release this condition in order to engage and develop as a student. As Mezirow described, role adjustment is an important feature in transformational education. Educational norms and structures should facilitate this sort of development. In order to move beyond what we already know, in order for participants (as individuals and collective) to develop, opportunities for dialogue, based on trust and respect, must be afforded.

As part of a learner-centered environment, technologies used to support collaborative online learning promote constructivist principles. As Rovai (2004) describes, “Threaded discussion boards used in e-learning systems support the construction of knowledge as learners formulate their ideas into words and build on these ideas through responses from others” (p. 84). Collaboration is essential for learning to engage and engaging to learn. Huang (2002) explains the characteristics that enable this online when students work together, “Online discussion groups are characterized as being discussion-oriented, authentic, project-based, inquiry focused, and collaborative” (p. 35).

Collaborative teams (committees, working groups, review boards, etc.) form the basis of many organizations. Working together is what LIS professionals will need to do beyond graduation. In a robust learner-centered environment, students are afforded opportunities to move along this path within an online educational program.

2.6 LIS Education Online and Emergent Synergies

As discussed above, while many people may aspire to pursue graduate studies in library and information science (LIS), with only 49 accredited schools in the United States, potential students often have no access to local site-based programs. Online education programs offer alternative points of access, new flexibilities, and diverse opportunities for engagement and development.

While de la Peña McCook reminds us that technology is not the essence of LIS study, it is certainly deeply and broadly interwoven in essential aspects of current practice. As revealed in the literature, LIS education is perceived as particularly well suited to online environments because of the synergies that exist between technologies and information use. Long before the advent of online education, librarians recognized the value of technological tools (e.g., card catalog, microfilm, and information retrieval systems) and professional networks (e.g., consortia) to increase access and improve quality in meeting a wide range of information needs. Today's LIS professionals are charged to facilitate online access to information via the Internet. As Jones (1996) explains,

The integration of the Internet into our daily lives affects no single profession as completely as that of the librarian. For centuries, information has been archived and accessed through a single location, the library. Instantaneous access to online information, direct dissemination of information as it is created, and interaction and creation of information online, all from the home or office-- these are revolutionary and anarchical concepts. Very few among us still deny the pervasiveness of online

information access, yet how do we see ourselves leading, and not just reacting, to this revolution?

Understanding and experiencing more may enable us to better prepare as leaders in this realm. Main (1998) proposes that, “immersing students in the milieu of the very technology in which they will work and communicate seems to hold the best hope for building the intellectual framework and practical skills needed by the information specialist to function completely in the work place of the 21st century” (p. 335). Tyler (2001) further describes the value of forging connections between emerging professional realities and Internet-based educational options stating, “LIS is a suitable subject for Internet education: learning is reinforced because the medium for delivery is the same as the subject, utilising the very IT systems that will be used by the student in the LIS workplace and in businesses” (p.47). This connection is directly evident in areas such as virtual reference (currently represented by a committee of the Machine-Assisted Reference Section (MARS) in the Reference and User Services Association (RUSA) of ALA).

Learning online serves as a model for LIS professionals. Online learning communities provide opportunities for developing skills and knowledge that may later be directly applied to providing services during graduates' careers. In addition to *learning about*, there are natural synergies online that promote LIS students learning *to be* (Bruner, 1960).

LIS professionals know that information use and users are inextricably linked to technology. Therefore, we must *be* too. As de la Peña McCook reminds us of our essential quest, Cloonan & Dove (2005) consider core values in light of new technologies. In their recent

article, the emerging emphasis on technologies related to digital libraries is considered in terms of the ideology of librarianship developed by Ranganathan in his classic work *The Five Laws of Library Science* (1963). At first glance, the laws (*Books are for use; Every reader, his book; Every book, its reader; Save the time of the reader; A library is a growing organism*) may seem limited by antiquity – both in terms of language (e.g., male emphasis) and scope (e.g., books and library). However, the authors' discussion leads us to realize the core issues transcend time and format. For example, in browsing online, some search engines may not incorporate certain portions of the web (as discussed in Sherman & Price, 2001) and unfriendly interface designs may cause users to overlook information resources. These issues present similar challenges to librarians and the users they seek to serve, as distant (i.e., closed or far-away) stacks did 50 years ago when Ranganathan proposed the concept *Every book, its reader* – charging librarians to seek ways to make information as accessible as possible to potential users.

Because Ranganathan's essential concepts are relatively independent of format and thus transferable, Cloonan & Dove are able to rewrite the *Laws* to reflect current LIS realities:

- Make sure online resources are available where and when they're needed. (*Books are for use.*)
- Eliminate the obstacles that prevent users from making effective use of electronic resources. (*Every reader, his book.*)
- Integrate electronic resources into virtual learning environments and other web pages of the institution. (*Every book, its reader.*)

- Provide metasearching capabilities so that users can search entire sets of electronic resources and link resolvers so that readers get access to the best source. (*Save the time of the reader.*)
- Offer 24/7 anytime, anywhere, access to libraries; the Information Commons; the Invisible Web. (*A library is a growing organism.*)

LIS leaders are charged to think core values and act with currently available technology.

This is the aim of LIS education – there is no better way to serve users. Learning opportunities afforded in online environments have the potential to promote easier and/or better understanding of current technology (like that described above) because of the immersion factor described by Main. Wilde & Epperson (2006) partially dispute this notion by indicating that some online students may have a false sense of technological security based on comparisons with those learning in site-based programs, who must also learn about technology as part of their programs of study. It seems this analysis doesn't appreciate subtle differences between working with and working in. Of course, regardless of the actual educational delivery mode, actions will be most effective when rooted in core values reflected in the user paradigm.

This seems to be in line with the model used for program accreditation. Currently, the Committee on Accreditation of the American Library Association (COA) uses the same rubric to evaluate all LIS program offerings (regardless of delivery mode). As Turner (2002) explains, the COA needs to apply "existing Standards for Accreditation of Master's Programs in LIS (1992)" to all forms of delivery "in light of emerging distributed learning technologies." Although not stated explicitly, measuring the success of LIS programs is

based on a model of continuous quality improvement (ongoing consideration, planning and evaluation). Accreditation is based on a review of each school's mission, goals, and objectives; curriculum; faculty; students; administration and financial support; and physical resources and facilities. From a student perspective, accreditation seeks to ensure "the policies reflect the needs and values of the constituencies served by [the] program" where "students are provided with opportunities to form student organizations and to participate in the formulation, modification, and implementation of policies affecting academic and student affairs." Accreditation standards also require schools to have "policies to recruit and retain a multicultural, multiethnic, and multilingual student body."

How do schools of LIS achieve these standards within their programs across formats? It would seem schools themselves need to be continually adapting within the context of their own institutions and constituents. Recent, rapid proliferation of network technology has strained this process and also led to a broad range of emergent educational realities and practices. How is this affecting and being affected by student experience? While the emphasis of this study is to gain a deeper understanding within the context of one program, it's important to recognize and acknowledge that there are many others (Julien et al., 2001; Carey & Gregory, 2002; Barron, 2003; Frey et al., 2004; Mellon & Kester, 2004, etc.). Understanding based on issues and trends across diverse program types, as reported by Montague & Pluzhenskaia (in press), constitutes fertile ground for further research.

Across modalities, understanding and building successful (effective, transformational, etc.) learning communities is an ongoing task. As the ALA Committee on Accreditation (ALA

COA; 1995, p.1) explains, "Although the ultimate outcome -- educational preparation for the profession -- is specific and defined, the profession itself is undergoing profound changes making the articulation of specific knowledge and skills to be acquired elusive." There is a real need for thoughtful consideration of the current outcomes in conjunction with approaches for achieving them and criteria for evaluating them. Just as users and user communities in the context of LIS practice (Chatman, 1996, Bishop et. al., 2000, Wilson, 2000, etc.) are central to our understanding and methodologies, students, as those centrally-situated and actively engaged in the process of LIS education, have much to teach us.

CHAPTER 3: METHODOLOGY

The previous chapter provided a discussion of theories and research that have influenced this inquiry focusing on students involved in LIS education online. This chapter describes the research setting of the study, attributes of the participants, methods of data collection, and introduces the framework for analysis presented in subsequent chapters.

3.1 Research Setting

This research explores both individual and collective experiences within the context of a full program of study (i.e. – not an individual course) -- LEEP, the GSLIS online scheduling option.¹ As noted in Chapter 1, LEEP offers fertile opportunities for building understanding because of its growing, robust nature. This particular environment provides novel opportunities for exploring how LIS students with diverse backgrounds and interests perceive various aspects of an online program. Additionally, it affords opportunities for considering questions and issues of the learning community. In this study, those questions of particular interest center on students' individual and collective growth. The following sections describe LEEP and discuss student attributes related to this study.

3.2 Library Education Experimental Program (LEEP)

As the original spell-out indicates, LEEP was an acronym for “Library Education

¹ According to a recent report, when entire programs are offered online, levels of success are higher. (See Carnevale, 2005.)

Experimental Program.”² After approximately five years of offering courses, the spell-out was removed from materials used for program description. This change came from the realization that LEEP was no longer an essentially ‘experimental’ endeavor; rather it was a well-established program with stable infrastructure, a full suite of course offerings, and a growing number of graduates.³ Although the original spell-out was discontinued, the notion of testing and incorporating new “experimental” pedagogical and technological tools and strategies still pervades LEEP.⁴

The term “LEEP” has come to be used to refer to several ideas. First, it is the name of the online scheduling option for the Master of Science (MS) degree and subsequently (post-Master’s) Certificate of Advanced Study (CAS) programs offered at GSLIS since 1996 and 2002 respectively. Second, it is a homegrown learning management system developed by

² LEEP is a shorter version of the original acronym (LEEP3) used for this program. This was the third LEEP. LEEP2 was an earlier (1990s) experiment led by GSLIS professors Bryce Allen and Pauline Cochrane, which provided a self-selected group of students an integrated LIS curriculum. The original LEEP was ‘Library Education Experimental Project’ directed by Pauline Cochrane at Syracuse University in 1967-68. This project was designed to develop a computer lab for instruction in library education using machine-readable catalog (MARC) pilot tapes (Garfield, 1981). Cochrane is the LEEP link – involved in all three models. Additionally, in recognition of the GSLIS Dean who enabled LEEP and her vast contributions to this program, LEEP has also been referred to as “Leigh Estabrook’s Excellent Program.”

³ Considering the pressure that existed during this time to prove the worth of online education, administration may have been influenced to drop “experimental” because it could potentially deter people from trusting the value of the program and/or place doubt on the likelihood that it would endure over time.

⁴ For example, in 2005, GSLIS initiated *LEEP: The Next Generation*, a working group of faculty, staff, and students charged to review and experiment with new options for teaching and learning, including combined on-campus/online (hybrid) synchronous delivery; desktop sharing; use of other learning management tools (e.g., Moodle and Sakai); use of wikis, blogs, podcasts, etc.

faculty and staff at GSLIS to enable studies via the Internet. Third, it is a community of scholars and practitioners who come together based on shared interest and experience to consider LIS issues (Haythornthwaite et al., 2000; Hearne & Nielsen, 2004).⁵ While the emphasis of this study is based on the third meaning, understanding the other aspects and uses of the term “LEEP” helps situate the discussion. That is, to understand “LEEP” as a learning community, it’s helpful to consider the “LEEP” scheduling option and the “LEEP” learning management system. These three uses of “LEEP” are described below emphasizing the student perspective.

3.2.1 LEEP as a Scheduling Option

As noted above, LEEP is a scheduling option for the MS and CAS programs that began as an experimental initiative. In starting LEEP, faculty were interested in exploring opportunities to incorporate emerging network technologies to extend the scope of the on-campus program established over a century earlier. The scheduling option was implemented to extend established LIS learning opportunities (courses) to students at a distance via the Internet. GSLIS espouses a dually reinforced dedication to outreach. In general, LIS professionals are committed to promoting access to information and often seek to reach out to underserved populations. In addition, GSLIS is part of a land grant institution. As Estabrook (2003, p. 63) explains, “outreach and extension have, from their early days, been essential to the mission of the Graduate School of Library and Information Science...” When LEEP was developed, it was not new for faculty and staff to consider and develop

⁵ Bielaczyc & Collins (1999) describe learning communities, in general, as cultures that support diverse members with shared educational objectives emphasizing continuing learning and sharing.

options for reaching out to students. Indeed, many off-site initiatives had taken place during earlier decades (Board of Trustees of the University of Illinois, 1992). Rather, new technologies offered new options for providing access to LIS education.

As discussed in Chapter 2, there are a variety of approaches to conceptualizing online education. In this case, the design of the LEEP program promotes engagement across four modes:

- Face-to-face activities: Students have residential requirements for ten days at the beginning of their studies⁶ and return campus visits each semester for 1-5 days (one day per course) thereafter. These face-to-face sessions emphasize activities which may be difficult to replicate online, such as demonstrations, booktalks, storytelling, hands-on technology workshops, and tours. In addition, residencies enable students to access student services (advising and mentoring) and library collections, and engage in extracurricular events, such as community meals, student chapter meetings of professional organizations and campus workshops.⁷
- Synchronous online activities: Students attend two-hour online synchronous sessions typically scheduled once per week per class. Activities include large and small group discussions via chat, and visual and oral presentations (by faculty, students, and

⁶ Earlier groups of students had two-week (14 day) initial stays. The first group of LEEP students (Cohort1; 1996) nicknamed the initial session ‘boot camp’ to reflect its intensive nature.

⁷ Upon completion of a major building expansion, in 2001, all GSLIS students --LEEP and on-campus-- began participating in most of their onsite activities in GSLIS-housed classrooms. Prior to this, GSLIS’ space included only offices and a few small meeting spaces. Classes and other events were held in a variety of buildings around campus. For early (1996-2000) LEEP students, the need to navigate the UIUC campus in order to get to classes often proved a significant challenge.

guests). Participants may join in online from any location with a 56K modem or faster. Student groups also use chat rooms as meeting space for project work.

- Asynchronous online activities incorporate two levels of bulletin boards: 1) Class-based electronic bulletin boards are used to share ideas and information among all class members or sub-sets of the group (project teams, instructor-student, etc.). 2) Community-based electronic bulletin boards offer opportunities for students to discuss issues beyond the classroom. Some topics are informational (e.g., school announcements about textbooks and registration deadlines); others are based on interest (e.g., youth services, music collections or international librarianship). While individual professors set up class bulletin boards based on activities and objectives for a course, community bulletin boards reflect ongoing needs and interests of all or some members of the community (e.g., students, alumni, staff, and faculty). As the use of bulletin boards in LEEP is complex and extensive, additional consideration is included as part of the analysis in Chapter 5. E-mail is also used for classes and other communication needs (e.g., consulting with advisors). As well, students may review synchronous session archives (of audio, visual, and textual components) online on their own time.
- Independent activities: Students are involved in independent activities as part of classes (reading, writing, design, research, visits to local resources – to conduct interviews, work with library collections, etc.). As well, there are course options students may pursue (i.e., practicum, independent study, and thesis) which emphasize individualized learning.

Since LEEP is a scheduling option, students are expected to complete their studies by following policies and guidelines (number of credit hours, required courses, etc.) and engage in similar learning experiences (with GSLIS faculty, accessing UIUC resources, etc.) as on-campus students. For students in the MS (those forming the majority of LEEP students at the time of this study) this means completing a 40 credit-hour program including two required courses (totaling 6-8 credit hours) during their first semesters. At GSLIS, elective credit makes-up 34 hours (85%) of the program. In LIS, this is an unusually large proportion of electives.⁸ This curricular structure is based on faculty dedication towards students' individualization of their programs of study, and recognizes the interdisciplinary nature of LIS.⁹ Within this curricular model a recognition also exists that prior student experiences translate into students needing and wanting to access many combinations of courses.

During the period of this study, students had access to approximately 20 courses during the fall and spring semesters and 10 courses in the summer session. Through the summer of 2005, students in the LEEP option had access to a total of 50 online courses in LIS. (See Appendix A for the complete list.) While this number does not represent the full range of courses offered through GSLIS, the number has been steadily growing to reflect the number and scope of interests of students.¹⁰ At the time of this study, the number of LEEP courses

⁸ A review of curricular models at other LIS schools reveals that, on average, approximately 50% of courses are required. In some cases, this includes a component of controlled choice (choosing from within a predetermined set of courses).

⁹ Perhaps other schools of LIS follow more rigid curricular structures based on different institutional goals, norms, and/or constraints.

¹⁰ As with community bulletin board emergence, this responsive pattern reflects and accommodates the (natural) dynamic growth of learners and learning.

offered is proportionately equal to the number of on-campus courses (based on numbers of students).¹¹ While regular tenure-track (core) faculty oversee curriculum planning and development, supplemental faculty including practitioners (e.g., librarians from UIUC and elsewhere, emeritus faculty, LIS consultants, etc.) make significant contributions to the program as instructors and guest lecturers.

3.2.2 LEEP as a Learning Management System

The LEEP learning management system was designed and developed at GSLIS to meet the needs of faculty, staff, and students. According to Gengler (2004), staff charged with technology support for LEEP students, those involved with the Instructional Technology Office (ITO), have a strong commitment to service based on the user-centered philosophy of LIS. This includes supporting students across various operating system platforms (Microsoft Windows, Apple Macintosh, Linux), modem speeds, browsers, and word-processing programs. The customized LEEP interface and tools are not necessarily cutting-edge. Rather, they are designed and adapted to provide a stable, yet effective learning experience to all types of users (e.g., students). All incoming participants are required to complete technology training before they begin classes. Additional training and support are available to students (and faculty) as needed and on a regularly scheduled basis.

During the period of this study, each LEEP course used the same entry interface including links to access the syllabus, class archives, bulletin boards, and live session interface. This is illustrated in Figure 3.1.

¹¹ As online (and hybrid) education continues to evolve, it is likely that this proportion will change. This may be considered through future research.

Figure 3.1: Screenshot of LEEP Course Interface Elements (2004; from archive)

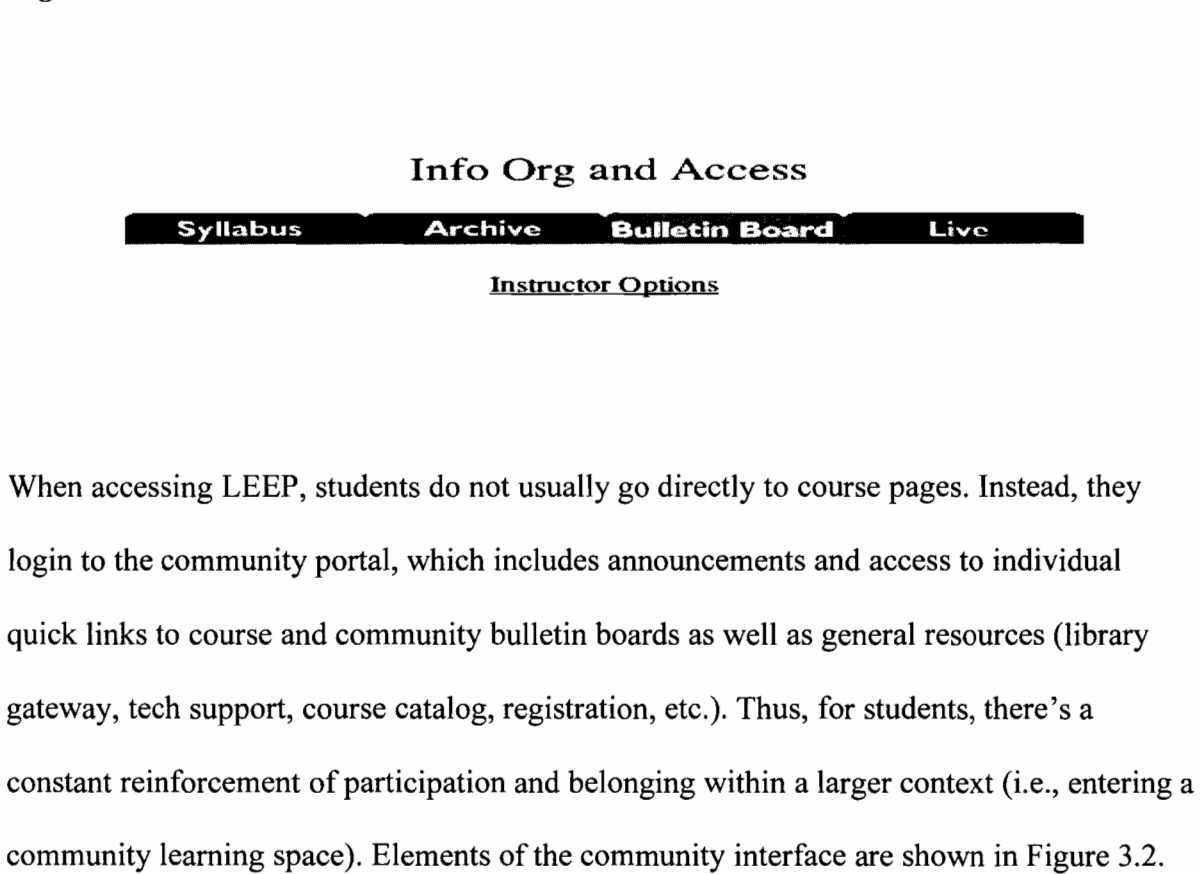
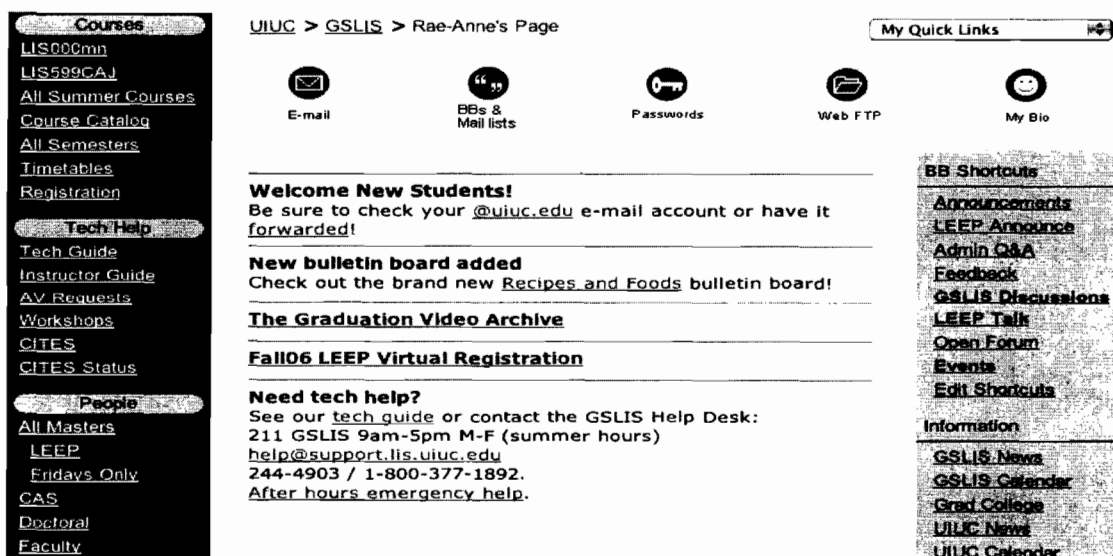


Figure 3.2: Screenshot of LEEP Login Interface Elements (2006; live image)



3.2.3 LEEP as a Community of Learners

LEEP was originally designed to provide distance education opportunities to students living outside the physical campus community.¹² However, after approximately five years, the program had matured sufficiently both in terms of scope and expertise to begin opening up to other types of constituents. At the same time, other constituents were becoming aware of LEEP as a possibility to meet their educational goals. The broadening emerged gradually to include on-campus students interested in certain course topics offered in LEEP format in given semesters; discovering the format better met their evolving personal needs; and in terms of providing new options for those moving away (due to personal or professional commitments) before completing studies, etc., alumni (including emergent LEEP alumni returning to pursue continuing education as well as alumni from the campus program discovering new options to engage), and non-degree students seeking to take individual courses for credit (e.g., school librarians seeking continuing education credit).¹³ LEEP officially expanded as a scheduling option for the Certificate of Advanced Study (CAS; post-master's program) in 2002. Community credit (non-degree) courses were opened in 2003. Thus, stability and growth, one building on the other, are both pervasive in LEEP.¹⁴

¹² Additionally, it was designed to offer options to students the state of Illinois designated as geographically untouchable. (See Estabrook, 2003, for further discussion).

¹³ One specific example of this initial boundary-crossing (or bleed) is evident in August, 2002. This is when community bulletin boards, originally designated for on-campus and LEEP as separate constituencies (based on (perceptions of) issues related to need/interest), were merged. In addition to being more reflective of the emerging educational model, this merger, while resulting in some initial confusion, eventually also proved helpful in reducing tensions (similar to sibling rivalry) that had begun appearing among LEEP and on-campus student populations.

¹⁴ At GSLIS, the growth of online options also contributed to a decrease in demand for commuter options. This was manifest when the 'Fridays Only' option, available since 1991,

At the time of this study, LEEP may be considered a community of learners who come together infrequently face-to-face, periodically synchronously online and frequently asynchronously online to consider interdisciplinary issues that emerge as part of the curriculum and from broader professional arenas. During the time this study was conducted (2002-2005), LEEP was still principally attracting students who had no previous formal experience participating in online education. That said, the LEEP program was no longer considered experimental. It had an established structure and was growing into a proven/respectable option within the LIS education community (based on student retention and completion, graduate success in finding employment, research, internal and external evaluation, etc.). Therefore, 2002-2005 represents a period where newcomers lacking knowledge of participating in an online learning community (although they certainly have experiences (>17 years) with other kinds of learning communities including, as indicated in the data analysis, many emerging within the digital realm) were being integrated into an established culture. I draw attention to this to emphasize that as computer-mediated communication, in particular in the context of online education, becomes more pervasive in society (Bourne & Moore, 2004), the opportunity to explore the experiences of learners new to this realm in real time will diminish. This study, then, is both limited and enriched by incorporating early adopters.

was discontinued in 2004. It was replaced by a new option called 'Flex Time', which intended to offer more robust options to students within driving distance of campus. Commuter students (at GSLIS and in other contexts) demonstrate remarkable dedication (e.g., enduring hours of driving each week in all types of weather). Further consideration of their experiences, while beyond the scope of this study, is warranted.

3.3 Data Collection and Analysis

The following section provides details of the methods of data collection used in the study: a discussion of the case approach and methods (pre-post surveys, focus groups, and inclusion of other sources) used to collect data; details of data collection; and concepts of data analysis are presented.

3.3.1 Case Study

Case studies are investigations of specific contexts that allow researchers to examine the complexities inherent in authentic situations. They enable research aimed to explore and explain situations based on interpretive and critical analysis of data sources using a constructivist perspective.¹⁵ As a qualitative method, cases not only give voice to the participants, they also accommodate difference and ambiguity thus affording richer, more comprehensive emergence/generation of ideas useful for understanding complex social issues and overcoming the positivist paradigm derived from the natural sciences (Sutton, 1993).

This inquiry involves documentation and analysis of LEEP student experiences across the scope of the program (i.e., student lifecycle based on engagement across courses as part of a forty credit hour program). As described in Chapter 2 (Dewey, Hatch & Gardner, etc.), the educational process is inherently complex and the case study methodology offers unique possibilities to consider developments from both individual and collective perspectives.

¹⁵ As opposed to objective or subjective approaches (Schwandt, 2001).

As case studies enable researchers to explore highly contextual issues, they are not intended to provide results that can necessarily be generalized across other programs or situations although some aspects of the findings may serve these wider purposes. For example, in this case, findings could serve to inform future online education program design or enhance curricular or student support initiatives. While there is limited potential for generalizability, this is not the aim of this sort of study. Rather, as noted above, it seeks to augment understanding and “bring out the details from the viewpoint of the participants by using multiple sources of data” (Tellis, 1997). Generalizability is a spectrum. In extreme contexts, increased understanding may only be applicable to a small number of situations.¹⁶ However, as in seeking treatments for rare diseases, this does not mean research shouldn’t be conducted.

Case studies afford opportunities for researchers to incorporate multiple data sources including those based on observation as well as collected (and subsequently coded) data. As this is an important aspect of this inquiry (described in more detail below), this is a particularly salient feature of the methodology (Stake, 1995).

The essence of case study research is based on interpretation. This sort of inquiry requires the researcher to make observations, consider patterns, and describe potential theories to aid in the development of understanding of complex ideas. As Stake describes, this type of qualitative interpretation enables researchers to gain new insights grounded in “experiential”

¹⁶ Applicability (as a facet of generalizability) is also limited by our knowledge of sources of information. For example, see Swanson (1986).

(p. 40) and “naturalistic” (p. 42) understanding of questions and issues being considered within their specific context.

3.3.2 Researcher Involvement

Within this inquiry, before considering issues of others, it is useful to describe my own role. I became involved with LEEP in 1999, first as a master's student pursuing the MS degree online while working as a teacher and school media specialist in Mexico. I was enrolled in the program full time over four semesters graduating in August 2000. Subsequently, I was accepted into the doctoral program and began participating onsite as "LEEP Coordinator" -- a half-time residential graduate assistantship at UIUC GSLIS. In this position, I worked with various facets of the program including orientation and on-campus planning, public relations, admissions, general advising and faculty support. As part of my activities, I also had the opportunity to organize, write about, and present various conference sessions related to LEEP and online education.

Many years of involvement with education as a teacher and school media specialist and specific involvement in the LEEP program in various roles have allowed me, as a researcher, to consider a variety of issues related to online education for LIS and different constituents' (students, graduates, faculty, administrators, support staff, researchers, evaluators, etc.) concerns with issues of quality.

In general, I am an advocate of online learning because it affords new access to education and encompasses inherent potential to promote dialogue as inquiry. That said, I believe that

the quality of education is not tied directly to the mode of delivery. In formal situations, it's based on the appropriateness of the approaches used and the changes that emerge through interaction in the educational environment, specifically those promoting learning and other kinds of student development. As noted earlier, much research using a compare/contrast approach has been done (Russell, 1999). Thus, to limit and potentially enhance the scope of the study, little emphasis is placed on comparing online and traditional students (or courses, programs, etc.) in this investigation. Instead one learning environment is considered from the student perspective in greater depth than would be possible if a comparative analysis were employed.

The specific area of exploration in this study focuses on the LEEP student experience and is based on the assumption that students are the *raison d'être* of education. While, to some, this sentiment may seem obvious, based on the literature, this is not clear. For example, as noted in Chapter 1, Gibson (2003) describes that learners and learning are surprisingly absent in much of the distance education literature based on reviews of many major journals. Additionally, several well-known online education models have been developed with emphasis on standards, curriculum, and/or faculty issues (e.g., Sloan-C Pillars of Quality, Institute for Higher Education Policy (IHEP) Benchmarks, American Federation of Teachers (AFT) Guidelines, etc.). While models like these are useful in some contexts they often specify only minimum requirements and do not discuss issues related to students' roles in perpetuating quality education. Another issue of concern with these types of models is a focus on single mode models (e.g., purely asynchronous). This exclusive focus ignores the possibilities afforded in more complex educational environments.

Having worked with LEEP and specifically having been a LEEP student myself makes the researcher an ‘insider.’ This status has been significant in shaping the inquiry. First-hand understanding and personal involvement in the program influence the interpretations. This privileged status also provides in-depth understanding of the nature of the experiences explored in the study. This placement serves to gain access and to “provide special insight into matters otherwise obscure to others based on knowledge...intuitive sensitivity and empathy and understanding of the culture” (Kikumura, 1998, p. 141). While some might argue that this status is problematic because of the bias that the involvement represents, this is not necessarily true. On the contrary, personal knowledge and involvement provides for a deeper, more thoughtful understanding of the student experience – one grounded in the peer-perspective. The intention is to use this status for the benefit of the work, building on many kinds of knowledge and insights to inform a thoughtful and rigorous analysis. In the context of this study, I view my extensive experience with LEEP learning and learners as advantageous. That said, this role is not as simple as it may first appear. For example, my earlier experiences in Canada and Mexico (including advanced study in education and ten years working in formal educational environments) also contribute to my potential for constructing critical analysis and interpretation.

Having discussed the case study approach and my role as researcher, I move into the following sections where questions used in the research are described. Within the discussion, they are situated with the data collection methods.

3.3.3 Data Collection

Having been a LEEP participant and researcher prior to initiating this study, I found myself with a unique opportunity to consider issues in this learning environment. For example, I did not need to begin seeking a basic understanding of individuals or structures in the community. This may be beneficial not only in terms of being able to consider issues more thoroughly, but also because of practical considerations of limited time. Preexisting knowledge of the (learning) environment facilitates deeper and broader points of access to initiate a formal study. Thus, to some degree, while the specific methods of data collection described below may seem somewhat atypical for this type of inquiry,¹⁷ they (as those of others drawing on insider status) are grounded in several years of non-interventional participant-observation.¹⁸

In order to begin to understand student experiences, it's important to consider how they (both individually and collectively) view the program. This is reflected in the data collection by including both longitudinal and cross-sectional design (Mertens, 1998). Longitudinal design enables consideration prospectively and retrospectively. Cross-sectional affords interspective consideration.

¹⁷ For example, in many cases an online survey may represent and be used as a distant method for quantitative data collection. However, in a case involving online learners, it is both practical and reflective of typical, collegial communication practice.

¹⁸ At the time of completing writing for this research, I had been involved (in various roles) with LEEP for 7 years. This may already be apparent given the thickness (Geertz, 1973) of the description in preceding discussions of learners and learning in this environment. In addition to this inquiry, I have had a number of opportunities to investigate various other facets of education for LIS (e.g., history, policy, curriculum, evaluation, faculty roles, continuing professional development, interinstitutional collaboration, etc.) not emphasized in this study.

Two primary methods of data collection were used for this inquiry – surveys and focus groups. While surveys (incorporating pre-post matching) were initiated first, the addition of a second data collection technique was particularly beneficial to support the dual areas of interest considered in the research. As the study emphasizes both individual and collective dimensions of program experience, using an individualistic method (surveys) along with a collective method (focus groups) proved a natural fit.¹⁹

The duration of the study (based on formal data collection) is July 2002-June 2005.²⁰ While ideally, a lengthier period may be desirable, three years is a reasonable scope in that it allows for the consideration of student experience across the core student lifecycle (starting coursework-finishing coursework). A limited range of dates also encourages more focused interpretation based on experiences of specific generations of LEEP students.

Since GSLIS students have up to five years to complete degree requirements for the MS degree, and many LEEP students are working full-time and studying part-time, those from the earliest (2002) cohort were more likely to have completed the program and consequently been invited to participate in the (post-program) exit survey. In order to tap into experiences of those not likely to participate in the exit survey (the 2004 cohort) and to facilitate greater

¹⁹ These components also reflect the multimodal (face-to-face + online) nature of the program.

²⁰ Interpretation is not necessarily bounded by these dates.

understanding of mid-program, particularly collective experiences, data from focus groups serves to supplement the original method of data collection -- surveys.

Both of the specific approaches to data collection incorporated as part of this study are discussed in the following sections based on their relative time of use from the student perspective – pre-, mid-, and post-program. Following this, complementary sources are described.

3.3.3.1 Surveys

In this case, both entrance and exit surveys are valuable in providing two points of access for inquiry. They enable consideration of issues at the beginning and end of the program cycle. As the instruments include several matched (pre-post) questions, they also afford options for considering developments emerging over the duration of the program.

3.3.3.1.1 Entrance Surveys

Pre-post surveys were administered to students in LEEP over a three-year period (July 2002 – June 2005). As the admissions cycle for LEEP included only summer start-ups during the duration of this study, three sets of LEEP cohorts completed entrance surveys: 7.1 and 7.2 (July 2002); 8.1 and 8.2 (July 2003); and 9.1. and 9.2 (July 2004).²¹ As noted above, LEEP is considered a well-established program. Since pre-post surveys were employed, this is of

²¹ 7,8, and 9 refer to the program cycle year; 1 and 2 refer to each of two quasi-cohort groups starting during each cycle. Quasi-cohort refers to students starting together (on-campus in ‘boot camp’ and subsequently in their first required online course) and then splitting-up to pursue courses of interest as part of an individualized program of study for the duration of the degree. As part of the analysis, cohort groups based on years (7, 8, 9) are discussed.

particular importance in terms of retention and completion. LEEP completion is >95%.²²

This meant that nearly all of the students participating at the beginning of the study (through completion of entrance surveys) could also potentially be involved in mid-program focus groups or exit surveys.

The entrance survey is designed to seek initial information about what attracted the students to an online LIS program; their expectations; and the existing knowledge and skills students already possess which may be further developed and/or shared during graduate studies.²³

These surveys were administered in paper form during orientation. (See Appendix B.)

Working with this captive audience resulted in 100% participation for this portion of data collection.²⁴ A total of 264 incoming LEEP students completed entrance surveys (67 in 2002; 101 in 2003; and 96 in 2004). Having total participation and co-location was also beneficial in terms of attaining informed consent for the study, which was sought for both the pre and post components as part of the initial survey administration. (See Appendix C.)

²² This rate of completion is high compared to many other graduate study contexts including campus-based and online programs. Nelson & Lovitts (2001) suggest that attrition may be due to graduate programs being “wasteful of their students.” While a full analysis of this atypical aspect of LEEP is beyond the scope of this inquiry, it’s worth noting in terms of the augmented potential value of better understanding issues in this context. A basic example of this is just the possibility of conducting research requiring a base level of completion in order to incorporate both pre- and post- surveys.

²³ The entrance survey was adopted at the encouragement of GSLIS Professor (and former Dean) Leigh Estabrook. The instrument used in this study is an adaptation of an earlier version she created.

²⁴ Although all students completed the surveys, not all responded to every question.

Entrance surveys include both intake only (pre-program) questions and matched (pre-post) questions. In this section, intake questions are presented. As pre-post questions are included principally to consider changes across the program (based on completing the program), they are discussed in a later section.

3.3.3.1.1.1 Intake Questions

Intake-only survey questions (from the entrance survey) are coded as IQ. Incoming students were asked:

IQ1 What factors influenced your decision to begin pursuing your degree?

IQ2 Do you have any concerns about pursuing your MS? If yes, please explain.

Both IQ1 AND IQ2 seek to ascertain motivations for participating in the program as well as initial concerns of becoming an online student in LIS.

IQ3 What kinds of knowledge and experience do you bring to the program that you expect will be especially useful?

This question is intended to tap into specific potential competencies that may be shared with other students during the program. Responses to this question are potentially valuable in considering both the individual and collective experience aspects of this research.

3.3.3.2 Focus Groups

In October 2004, seven focus groups were conducted as a means of collecting data to complement that being collected via surveys and seek mid-program insights on student experiences (i.e., peer-peer interactions). According to Glitz (1997, pp. 386-387), focus groups encourage people to express their views in a way that other approaches cannot. Because of their ability to elicit people's genuine concerns and opinion, they can be used after a survey has been conducted to further investigate initial results. Drawing on Crowley's (1999) premise that tacit knowledge may be transformed into explicit discourse through dialogue, focus groups are used to promote understanding through interaction. As Gibbs (1997) explains although "attitudes, feelings and beliefs may be partially independent of a group or its social setting, [they] are more likely to be revealed via the social gathering and the interaction which being in a focus group entails."

Invitations to all current LEEP students were sent out via e-mail seeking participation in one of four focus groups to be conducted during the mid-semester LEEP on-campus session in October 2004. Since all students in LEEP classes are required to attend this brief residency, the on-campus session provided a convenient opportunity to conduct face-to-face focus groups. To encourage extensive participation, in addition to on-campus focus groups, the option to be part of an online focus group, conducted using Internet relay chat, was provided for LEEP students who were unable to attend one of the campus sessions. Finally, two additional sessions were conducted with on-campus students who had taken LEEP classes.²⁵

²⁵ While the number of participants in these emergent groups was small (2 students in each), data was analyzed using the same approach as in other sessions.

Incorporating these students into the research introduced a new population into the study. They were added intentionally because as the research was progressing, LEEP was becoming less-and-less a separate scheduling option, as it had been in the early years. During this time, many “non-LEEPers” were enrolled in LEEP classes, including on-campus students (making up the largest portion of this group), non-degree ‘community credit’ students, students from the Web-based Information Science Education (WISE) consortium, and GSLIS alumni (from across program types). Information on focus group participants is presented in Table 3.1.

Table 3.1: Focus Group Participants

Group	Number of Participants	Participant Type
1	5	5 students from 2003 cohorts (8s)
2	6	5 students from 2004 cohorts (9s) plus a LEEP transfer student ²⁶
3	7	2 students from 2002 cohorts (7s) and 5 students from 2003 cohorts (8s)
4	12	6 students from 2003 cohorts (8s) and 6 students from 2004 cohorts (9s)
5	5	1 student from 2002 cohorts (7s) and 4 students from 2004 cohorts (9s; conducted online)
6	2	2 on-campus students who had taken class(es) via LEEP
7	2	2 on-campus students who had taken class(es) via LEEP

²⁶ A LEEP transfer student is someone who began studies on-campus and later opted to complete the degree online. Students in this category typically do not attend the intensive format on-campus session (‘boot camp’) to complete the required course (LIS 502) or the other required course (LIS 501) initially online (with other novice LEEP students) because they have already taken them as part of the semester long on-campus sessions. Thus, they do not have a corresponding cohort group. Transfer students are sometimes known as *non-LEEPers in LEEP*.

A total of 39 students participated in seven sessions including 3 from year 7 cohorts, 16 from year 8, 15 from year 9, 4 on-campus students who were taking LEEP classes at the time of the study, and 1 student who had transferred from on-campus to LEEP. As focus groups were conducted in fall 2004, more participants from the later cohort groups tended to participate (i.e., many of the 2002 students had already graduated as revealed in the exit surveys).

In terms of process, as with surveys, participants were first asked to sign a letter of consent confirming their rights as designated by the Institutional Review Board before initiating the process. (See Appendices D and E.) Then, students were welcomed into the group and given an opportunity to introduce themselves (possibly noting name, cohort, geographic location, place of employment or any other information they wanted to provide). Following this, the 'groundrules' were reviewed. Emphasis was placed on the validity of everyone's ideas and the importance of everyone having an opportunity to discuss the issues. As the researcher expected students might feel more comfortable expressing ideas with a peer (instead of with the program coordinator), an on-campus master's student with knowledge of LEEP was recruited to conduct all of the focus groups. Having one person conduct all seven groups ensured consistency in data collection.

The groups met for 1-1.5 hours each. This time was deemed to be sufficient to allow for sharing ideas and information and not too long as to interfere with students' busy lives. All focus group discussions were audio recorded and subsequently transcribed. Although the rationale for offering seven opportunities to participate in focus groups was to enable

everyone who was interested in attending a session the possibility of doing so, some students were still unable to do this. As the researcher wanted to include as many voices as possible in the process, students who had expressed this dilemma were sent the focus group questions via e-mail. Six additional LEEP student responses to focus group questions were collected in this way, raising the total number of ‘participants’ to 45.²⁷ In addition, four focus group participants followed-up on the process by sending e-mails with additional comments based on the focus group discussions. All this supplemental data was topically integrated with transcript data from the original seven sessions.

Focus group questions are coded FQ. Specific questions are listed below:

FQ4 How does LEEP compare with your previous (other face-to-face) educational experiences?

This question has a dual-purpose. It was used as a warm-up. That is, it was expected that everyone should have been able to respond to this question and thus begin participating in the group discussion. Since at the time of the study, online education was a relatively new phenomenon, for nearly all of the participants, LEEP was their first online education experience. Thus, as in other situations, it’s relatively simple to compare and contrast across the two realms. In addition, the researcher thought this question might elicit candid responses about the kinds of interactions the students found particularly important in this learning environment before directly asking about this area. As noted above, this study is not

²⁷ Of the six additional respondents, four were from Cohort 9, one from Cohort 8, and one from Cohort 7.

principally concerned with issues of compare/contrast across modes. That said, this type of question is still valuable in terms of exploring how students perceive their current experiences.

FQ5 LIS students draw on a wide range of knowledge and experience. Describe the kinds of skills and experiences you find yourself drawing on during LEEP.

This question asks about the kinds of skills students import into LEEP.

FQ6 In LEEP, how do you contribute to your colleagues' learning? program success?

This question directly asks about the kinds of knowledge individuals share as part of the program.

FQ7 Describe a class activity (e.g., a group project or presentation) you found particularly rewarding in LEEP.

This question is probing for the kinds of activities students find most rewarding. In earlier research (as part of the LEEP Retreat), group work was cited as the most rewarding, albeit the most challenging kind of work students engaged in. This question was looking to explore and build on this earlier idea. Would students be most enthused about individual or collective undertakings?

FQ8 Have your LEEP classmates' contributions ever surprised you? What are some examples?

This question is a partner to FQ6, asking students to explain what others have shared with them.

FQ9 What sorts of tensions arise in LEEP? How are they overcome?

This question was included based on suggestions from the proposal defense that difficult situations often provide opportunities for new and important kinds of experience and learning.

FQ10 What aspects of LEEP do you find most interesting? Most challenging? Most valuable?

These last questions may be considered variations of FQ4. Although students are not asked to directly compare LEEP with earlier educational experiences, they are asked to discuss new and unique aspects of their experiences in the online program. Again, building on information that emerged from the LEEP Retreat, 'surprise' was cited as an integral part of the experience. Responses to this question may provide greater insights into the 'surprise' aspect in online learning contexts.

FQ11 *How has your experience in LEEP affected your career? Your perceptions of LIS? Other areas?*

This is a two-part question. First, the application – has LEEP made an impact on your life beyond LEEP (in the profession)? Second, as with the final scaled survey question (PQ21), this question delves into the affective domain. How have participants' attitudes about LIS changed by participating in this learning community?

3.3.3.2.1 Exit Surveys

The post-participation survey was administered online shortly after (during the month following) graduation periods beginning in fall 2003, when the first graduates who completed the entrance surveys (in 2002) were finishing their programs. The alternative format was necessary because LEEP students are not in residence (where paper instruments could be used) at the time of program completion.²⁸ Since GSLIS students may complete their studies full-time in one year or part-time, taking up to five years, the matching process is not one-to-one.²⁹ As most students take more than a year to complete the program, only a relatively small portion of the students who began (and completed the entrance survey) in summer 2002 are represented in the fall 2003 exit survey. Others would complete their studies and have the opportunity to complete the exit survey in a later semester (some after

²⁸ As noted in Chapter 6, responses from online instruments were more detailed. Of course, this may be related to students having more to say at the end of the program than at the beginning, but the opportunity to respond at a self-selected time (within the limited range) likely also facilitated more lengthy and substantive responses.

²⁹ In keeping with Heim & Moen's (1989) observation, within the context of LIS education (and the more general graduate education trend (Syverson, 1999)), that students pursue studies part-time, pre-post data collection in this realm is a lengthy endeavor.

the research represented by this study is complete). Study participants were invited to complete the exit survey in conjunction with the end of the semester in fall 2003, spring 2004, summer 2004, fall 2004, and spring 2005. Exit surveys, then, often include students from different cohorts. For example, beginning in summer 2004, both students from the 7 cohorts and 8 cohorts are represented in exit surveys. Exit surveys were available online for approximately one month after degree conferral dates.

Exit surveys were administered online using Inquisite© software. Surveys were distributed through the Library Research Center (LRC), an auxiliary unit of GSLIS. I provided the LRC with detailed information and instructions to administer the survey, including names and e-mails of invitees, text for the e-mail invitation, text for the survey, and text for the e-mail reminder (sent approximately one week after the initial invitations were sent).

Participants were asked to complete the exit survey within two weeks of the start. When students were sent the initial request for participation, a few asked for additional time. Since one objective of the research was to involve as many students as possible (to enable broader participation and facilitate higher response) during the ending time period, the timing was increased two weeks beyond the original official end date to provide additional access for those who couldn't complete it within the originally scheduled timeframe.³⁰

Information about the numbers of students completing pre-program surveys (including those matchable with subsequent post-survey data) during the study is presented in Table 3.2.

³⁰ Adjusting original plans to accommodate data collection (for surveys as time extension and focus groups as accepting supplemental input via e-mail) was important to accommodate LEEP students' (as typical adults) busy lives and provide access to participation in the research.

Subsequently, post-program survey responses, indicating an overall response rate of 83% are presented in Table 3.3.

Table 3.2: Pre-post Survey Matched Responses by Starting Year

Year (July)	Number of Pre-program Responses	Number of Post-program Matches
2002	67	40
2003	101	33
2004	96	4
Total	264	77

Table 3.3: Post-program Survey Responses by Response Semester

Semester	Number of students graduating who completed pre-program surveys	Number of students who completed post-program surveys	Percent
Fall 2003	15	15	100
Spring 2004	17	15	88
Summer 2004	12	8	67
Fall 2004	13	8	62
Spring 2005	36	31	86
Total	93	77	83

3.3.3.2.1.1 Pre-post Questions

As noted above as part of the entrance survey discussion, a number of matched questions are included. Pre-post responses provide two structured data sets that can be used to consider student experiences and development across the duration of the program. These include ten

scaled and open-ended questions (coded PQ) intended to generate both narrow and broad data sets.

PQ12 seeks to explore students' professional objective(s) for participating in LEEP (pursuing the MS). In the intake survey, PQ12 is phrased – *Given your current knowledge of opportunities in library and information science, do you have a specific career objective? If yes, what type of position do you hope to pursue?* In the exit survey (Appendix F), the matching question is - *What is your current job or what career do you plan to pursue?* Matching responses to this question before and after participating in the program will enable the researcher to determine if students change their career trajectories during the program and, if applicable, the nature of these changes.

Responses to questions that inform the narrowest aspect of the study ask students to rate their knowledge and skills on a variety of LIS-specific and general professional competencies. The ratings can then be compared to determine if students perceive changes in their knowledge and abilities in relation to having participated in the program. Questions are coded “PQ” referring to pre-post question and the number. Specific questions of this sort used in the surveys were presented with response options using a four-point scale – extensive; moderate; relatively little; none. This section included nine questions:

PQ13 – *Characterize your experience and comfort with working in groups.*

PQ14 – *Characterize your experience and comfort with public presentations.*

PQ15 – *Characterize your experience with and knowledge of carrying out a research project.*

PQ16 – *Characterize your knowledge of evaluating the impact and quality of service provided by an organization.*

PQ17 – *Characterize your current level of ability with computer and communication technologies.*

PQ18 – *Characterize your experience with searching for information.*

PQ19 – *Characterize your experience with and knowledge of analyzing information quality and content.*

PQ20 - *Characterize your knowledge of social and technological change that is impacting the creation, organization, retrieval, dissemination, and preservation of information.*

PQ21 – *Characterize your level of interest in and commitment to the field of library and information science at this time.*

The first four PQs (13-16) focus on general academic and professional competencies. These are examples of leadership-based knowledge and skills (ability to work in teams, give

presentations, carry out projects, evaluate services) that graduate students from across disciplines are likely expected to possess in order to engage in professional responsibilities. The fifth question (PQ17) is somewhat narrower. It refers to information technology literacy, which is, as discussed in Chapter 2, certainly part of the repertoire of LIS students, but is also becoming an essential competency area across other disciplines. Questions 18-21 emphasize competencies specifically related to the LIS profession. PQ18-PQ20 relate to skills and knowledge. PQ21 focuses on attitude.

As this research attempts to understand the students' experience, in addition to considering growth in terms of development across the program, exit surveys also include additional exit-only open-ended questions. (See Appendix F.) Open-ended questions facilitate sharing of ideas and topics not originally included by the researcher, which may be valuable for this study or serve as a springboard for future research.

3.3.3.2.1.2 Exit Questions

Exit survey questions are coded EQ. In the exit survey, students were asked:

EQ22 Please comment on your experience as an online student compared to previous experiences in "traditional" classroom settings.

Although this study is not principally concerned with issues of compare/contrast across modes, this question is valuable in terms of exploring how students perceive their online

learning experience and possibly provide specific insights into the types of activities and interactions that make it unique.

EQ23 Please provide additional comments (e.g., overall experience with the program, specific aspects you found particularly rewarding or challenging).

This is the final question designed to allow participants to openly share perceptions or information about any of their experiences in the program. It should be noted that while LEEP students are usually quite candid, their input as part of the exit survey could certainly include positive bias based on just having achieved a major goal – earning an MS in LIS.

3.3.3.3 Complementary Sources

A number of complementary sources exist which provide valuable insights in attempting to understand individual and collective student experiences in LEEP. They include: personal testimonials from students shared via e-mail; data on program components such as overview of (electronic) community bulletin boards and sections of syllabi describing the various ‘roles’ students are expected to play within the context of coursework; publications included in the LEEP bibliography particularly those in the ‘Student Perspective’ section, which includes articles written by LEEP students chronicling their experiences; and data collected during the 2002 LEEP Retreat. These materials are considered valuable within the context of this research both in terms of providing many ideas to ponder and inspiration to question and seek new understanding.

As noted in the introduction, this study, in particular, builds on insights revealed to the researcher during the process of co-leading the LEEP Retreat, where the overwhelming response to the question, “What makes LEEP successful?” was “It’s the people!” The inquiry attempts to expand on this concept by exploring the experiences of the most essential LEEP constituents – the students.

3.3.4 Data Analysis

In attempting to better understand graduate student experiences for those involved with LIS education online, concepts (as data) are considered across three perspectives. First (in chapter 4), issues emphasizing individual interest and experience upon entry to the program are discussed. Second (in chapter 5), a discussion of the role of collective experiences, emphasizing peer-peer interaction, is presented. Finally (in Chapter 6) individual transformation across the scope of the program is explored.

The following section presents details of formal data-analysis and coding procedures. This includes data analysis and coding of survey data and focus group data. With more students represented in the survey data, this could be considered the primary data source. However, the two sources complement each other and are considered of equal value in facilitating new understanding.

3.3.4.1 Qualitative and Quantitative Data

Analysis of open-ended qualitative data from surveys and focus groups was conducted primarily using the techniques and procedures of grounded theory outlined by Strauss and

Corbin (1990). This qualitative method is particularly salient for an investigation of student experiences as it is portrayed both as a form of inquiry and as “a problem solving endeavor concerned with understanding action from the perspective of the human agent” (Haig, 1995).

Grounded theory involves constant immersion with the data. Reviewing data as it emerges promotes a cycle of inquiry and allows the researcher to probe deeper into the concepts. In this case, for example, data from initial exit survey questions indicate that knowledge sharing via peer-peer interactions significantly influences the students’ experiences. Thus, mid-program focus group questions were developed to tap into this facet of the experience. Although data are originally gathered by type (survey or focus group) and by question, analysis may consider themes within and between the original categories as well as the emergent ones. This is particularly important in order to enable data from broad open-ended questions (such as ‘additional comments’) to be used in understanding the issues.

Grounded theory techniques involve three types of coding: open coding, axial coding, and selective coding. Open coding is used to identify concepts (e.g., activities, occurrences) that emerge from the data. Axial coding is used to relate categories and subcategories to each other. This process is used to link concepts across categories (as described above).

Throughout the first two stages of coding, many categories emerge. Thus, selective coding is used to consider and link these themes to central concepts -- in this case, the research questions.

Surveys also included qualitative and quantitative data for matching. Quantitative data incorporates nine questions with four point Likert-scale responses. These responses (discussed in Chapter 6) provide an indication of the students' perceptions of professional and LIS-specific knowledge, skills and attitudes upon entering the program. For those who completed the exit survey, they also provided points of comparison indicating growth across these areas upon completion of studies. Although this data is incorporated in the analysis of individual experiences, due to the relatively small sample size of the pre-post matches (77), they are not considered statistically significant. Therefore, this is not emphasized in the analysis. Rather, this data serves as indicators to inform the qualitative analysis as well as possible starting points for research that is beyond the scope of this study.

The final set of qualitative data, based on students' post-program reflections on participating in the program (in Chapter 6), is considered using Ganor's (1991) sentence mapping technique as described by Holmberg (1995).

3.3.4.2 Discussion

Chapters 4-6 encompass analysis based on the three perspectives (prospective, interspective, and retrospective) described above. Here, insights on concepts and questions related to LEEP students' experiences are revealed. In chapter 7, a discussion of emergent issues, as well as ideas gleaned from the literature, are reviewed and reconsidered together. This integrative approach follows Stake's (1995, p. 75) description of the aim of the case, concentrating "on the instance, trying to pull it apart and put it back together more meaningfully -- analysis and synthesis in direct interpretation." By seeking a collection of

instances (across data sets), the inquirer, "expects that, from the aggregate, issue-relevant meanings will emerge." Thus, by focusing on questions and concepts central to this research, new concepts, in addition to new questions, develop.

3.3.4.3 Limitations

In this section, limitations related to reliability, validity, gaps in the data, and aspects of generalizability of the research are discussed.

As this study is based in qualitative methodology, one needs to be concerned with providing a comprehensive description of the procedures and analysis so as to ensure reliability and validity. This issue is recognized by the researcher and has been incorporated in the work. Also, as discussed above, insider status provides opportunities for deep exploration of issues. That said, it may also influence results, if, for example, participants' responses are particularly positive or negative because of the researcher's position. To counter this, comprehensive and critical consideration of methods and analysis are provided.

The pre-post survey was designed to solicit input from students at two intervals in their program. Since the study is limited to three years, only some of those who had completed a survey upon entrance would have an opportunity to participate in the exit phase because many students would take longer than this to complete studies. As noted above, this is taken into consideration in terms of how this data is emphasized and analyzed and by providing those less likely to complete a post-program survey with the option to be involved in the other (mid-program) data collection procedure through participation in a focus group.

Neither the case study method nor specific data analysis techniques seek to limit or isolate findings. Rather, they are contextualized by the particular research situation (framework(s), question(s), setting(s), etc.). Ideas and information derived from LEEP participants provide insights into the experiences of participating in a graduate online education program which may be of interest to those involved in planning, designing, enhancing, and evaluating such programs in LIS and/or other disciplines. Indeed, facets of the work may be of interest to online students (or potential students) themselves. However, the notions described in this research focus specifically on mostly female adult learners involved with graduate education. The gender, age, and/or program level may limit the potential for generalization of specific findings.

This study is concerned with students seeking a degree in library and information science. While LIS is considered an interdisciplinary field, there is a core disciplinary emphasis on understanding policy and developing and enabling resources to make information accessible. While some findings related to students' experiences may be valuable in other disciplines, they cannot be considered universally generalizable in this context.

An additional factor influencing generalizability relates to the spectrum of diversity. For example, both the relative age of online education and the corresponding probable knowledge and experience of participants in this realm are somewhat unusual. As discussed above, this study is based on graduate student experiences. Although all of the students are experienced learners, the vast majority of those participating in the study did not have prior

exposure to online learning environments. As e-learning expands, this earlier and more varied experience with online education before graduate school could influence students' experiences.

Finally, as noted in Chapter 2, while LEEP is considered an 'online model of education' (since more than 80% of the activities take place online), it is not a completely online program. Rather, it is representative of the hybrid model, incorporating both brief residential and multimodal (synchronous and asynchronous) online components. Again, while those involved in 'purely' online or unimodal programs may potentially benefit from findings of this study, some aspects may not be relevant.

As discussed previously, all studies have limitations and these should be recognized and accommodated. Limitations, though, may also emerge, through some unique potential, into new understanding (and more questions) when tolerated and permitted to do so.

The next section of this chapter provides general information to introduce the students who participated in this research.

3.3.5 Study Participants

Before moving into chapters emphasizing data analysis, this section provides a summary of demographic data particular to students in this study. As analysis is based on data collected at three program phases (beginning-middle-end), aspects of each are considered below.

Throughout discussions, data related to personal information is summarized (or otherwise hidden) to protect the anonymity of participants.

As noted above, 264 students completed entrance surveys (over three years – 2002-2004). Respondents in this group are comprised of 209 (79 %) women and 55 (21%) men. Of these participants, 147 (56 %) resided in Illinois and 117 (44 %) were from other locations (including Alaska, Arizona, California, Colorado, Florida, Georgia, Idaho, Indiana, Maine, Maryland, Minnesota, Michigan, Missouri, New Jersey, New Mexico, New York, Ohio, Oregon, Pennsylvania, Utah, Vermont, Washington, Wisconsin, Wyoming, and Belgium, Canada, England, Hong Kong, Netherlands, and New Zealand). Students completing entrance surveys range in age from early twenties through mid-sixties. The mean age of participants is 36 years. Students' academic backgrounds spanned the disciplines.³¹

Focus group participants were principally drawn from the larger pool of students who completed entrance surveys. Data from this group was not transcribed or considered in terms of individual contributions. Rather, it is used to understand the collective experience. Thus, it is not appropriate to provide information about the specific attributes of the participants. That said, one aspect worth considering is that 40 (~90%) of the 45 focus group participants had also completed entrance surveys; all except the one LEEP transfer and four on-campus students taking LEEP classes. Although this (non-cohort) sample of five is small, it is interesting to probe for preliminary indicators (e.g., in terms of similarities and differences

³¹ Admissions to LEEP are competitive. Incoming students have strong academic records--approximately 30% have graduate degrees prior to beginning studies in LEEP. As many students have multiple degrees it's difficult to list specific academic backgrounds, but approximately 75% are arts and humanities and 25% math and science.

of experience) to compare to those participating in the full online program. This could lead to further research.

In addition to the inclusion of non-cohort respondents, the other feature of the focus group data compared with the entrance and exit survey relates to the relative time of students in the program. That is, all participants engaged in the focus group meetings at some time during the middle of their studies. As noted above, focus group responses include 19 students from the 2004 cohorts (9.1 and 9.2). Since these students likely would not have an opportunity to complete the exit survey within the timeframe of this study (because most students do not complete the program in one year), it was beneficial that they have this other mid-program forum to voice their views, in particular, those related to collective experiences.

Additionally, ten focus group participants subsequently completed an exit survey.

Participants completing exit surveys represent a sub-set of the entrance survey group. The demographic characteristics of these 77 (29 %) students are representative of the larger group. Here, average age of respondents is 35 years (compared to 36 overall). A slightly higher percentage of exit responses were from women: 64 (83% compared to 79% overall). Additionally, exit responses represent a higher portion of out-of-state students -- 55% (compared with 44% overall).³² While exit responses are relatively representative across these three variables, in attempting to reduce extraneous influence, data from the responses

³² While it's not possible to know exactly why the percentage of out-of-state responses is greater for exit surveys, it may have to do with these students having a greater sense of accomplishment based on breaking greater (more significant) space barriers to complete the program.

of the 187 students who did not complete exit surveys is not included as part of pre-post analysis in chapter 6 although all relevant ideas (discussed in earlier sections) are considered in relation to the final reflections section.³³

As appropriate, additional details on data sources and some demographics³⁴ are included as part of the analysis in subsequent chapters.

3.4 Conclusion of Data Collection and Methods

This chapter provided details about the research study including a detailed overview of the setting, data collection, data analysis, limitations, and study participants. In the following chapter (4), a discussion of the students' individual experiences as they embark on an online graduate degree program is presented.

³³ Because of the aims of the study and the relatively high exit response rate, the analysis does not emphasize understanding non-response. However, this issue may be considered in future studies.

³⁴ Due to relatively small numbers and/or availability of data, concepts based on some types of demographics (e.g., race/ethnicity, international status, etc.) are not considered explicitly as part of this study. Further research on experiences of subgroups of students is warranted. See, for example, Lagier, 2003.

CHAPTER 4: STREAMS OF EXPERIENCE

As described in the previous chapters, there are many options for considering issues of education (general institutional goals and practices; curricular models and outcomes; accreditation standards; faculty roles and responsibilities; etc.). However, in an exploration of the student experience, one must consider student perspectives. This emphasis is central to the analysis presented within this chapter and throughout the work.

In contemplating how to share aspects of the LEEP student story, I was intrigued by the ecological model. Within it, LEEP students may be considered principal actors, influencing and being influenced by others and the environment. While this is a powerful model, I also perceived something fundamentally absent in the way I was conceiving it – mobility. LEEP is such a dynamic environment, I wasn't sure that this evolutionary frame would keep up.

As discussed above, within the scope of a program of study, LEEP students engage across many situations. Therefore, to facilitate interpretation, a metaphor in keeping with this reality was chosen to supplement a basic model of ecology. Ironically, the metaphor draws on a reflection-based observation of graduate study experience from many decades ago.

Here, Geertz (1995, p. 101) describes how he encountered learning:

Finding one's way through the maze of grand possibilities, only loosely related and some in even fairly serious tensions with one another, was, however exciting (and it was enormously exciting) a perilous business. With so many ways to turn, so few tracks laid down, and so little experience of one's own to go by, even small

decisions...seemed enormously consequential – a reverseless commitment to something immense, portentous, splendid, and unclear.

For students, new educational experiences are adventures, journeys into uncharted domains. Adventurers come together like seafarers. The ship they will board isn't particularly unique although it isn't like some other vessels (e.g., those destined for cruising or pillaging). This is a journey of exploration where students come together to form the crew. As in other voyages, others (designers, officers, consultants, and other experts) are present, but the focus of this tale rests in navigating the educational process as understood and experienced by the crew. In discussing data on student experiences, I will maintain a light nautical metaphor to facilitate interpretation.

The focus of this chapter is understanding students as they begin their journeys. In acknowledging that students come to LEEP (or other graduate education) docks already partially developed (i.e., this is not the crew's first time setting sail and neither is it the ship's maiden voyage), I seek to learn about issues of importance to them as they plan to embark on this new adventure.

Herein, the discussion provides a comprehensive inventory and analysis of individual student experiences based on qualitative and quantitative data sources from the entrance surveys. Wherever possible, direct quotations are included to illuminate the discussion. This incorporation of the student voice enables a deeper understanding of issues being considered and also reflects the diversity of individuals represented in this study.

Ideas presented in this chapter are based on students' responses to several questions. The main sections principally correspond with responses provided to specific questions as noted below. However, when possible, data gathered from responses in other sections of the survey (e.g., additional comments) is incorporated to enrich the discussion. All sections are based on qualitative data and therefore incorporate significant textual components.

Qualitative analysis includes details based on major categories, sub-categories, and examples or instances that emerged through analysis of the survey data. As data emerged each year, it was originally considered separately. However, in recognizing similarities across the three cohorts, it was eventually coded together enabling a more comprehensive analysis of issues relevant to this period (i.e., the duration of the study). Thus, discussion emerges from student input across cohorts.

As appropriate, discussion includes analysis of variation across subgroups (cohorts, gender, etc.). Considering similarities and differences along these lines enables understanding in terms of specific trends as well as providing opportunities for data triangulation.

The analysis complements earlier studies on LEEP, especially those undertaken when it was a more autonomous system (pre-2002). For example, Kazmer (2002) in her dissertation described three prototypical LEEP students. These composites were based on students as all women and included factors of distance from campus, previous LIS work, with/without children, time to degree, level of engagement, and timing/type of job search. While these facets are all still relevant, this chapter seeks to expand the discussion and consider more variables and variations reflective of current student realities.

Discussion is presented in three main sections, taking into account responses across all years (2002-2004) for which entrance data was collected. The first section describes online education students' rationale for pursuing their MS in LIS. Following this, concerns about embarking on this new educational experience are explored. Third, competencies students bring with them into their new endeavor are considered. All discussions in this chapter emphasize students' individual perceptions and experiences upon entry into LEEP.

4.1 Motivation for Study

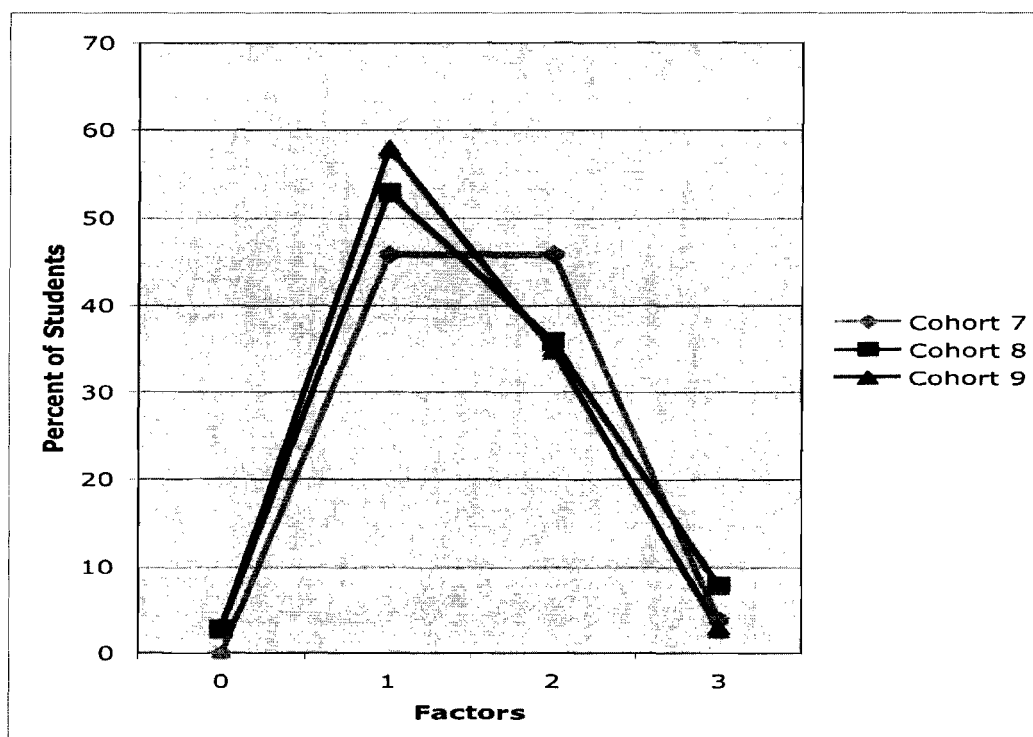
As part of the entrance survey (IQ1), 264 students were asked, *What factors influenced your decision to begin pursuing your degree?* A total of two hundred and fifty-eight students (98%) responded to this question. One hundred and forty-one students indicated one factor influencing their decision, 103 – two factors, and 14 – three factors. The breakdown of numbers of responses (including raw numbers and percentage of total students per cohort) for each cohort is presented in Table 4.1.

Table 4.1: Number of Factors Influencing Decision to Begin Pursuing Degree

	0 Factors	1 Factor	2 Factors	3 Factors
Cohort 7 N=67	0	31 (46%)	33 (49%)	3 (4%)
Cohort 8 N=101	3 (3%)	54 (53%)	36 (36%)	8 (8%)
Cohort 9 N=96	3 (3%)	56 (58%)	34 (35%)	3 (3%)
Total N=264	6 (2%)	141 (53%)	103 (39%)	14 (5%)

The mean number of factors influencing students' decision to pursue a degree is 1.6 for cohort 7, 1.5 for cohort 8, and 1.4 for cohort 9. Distribution of responses follows a similar bell curve pattern, shown in Figure 4.1, across years with cohort 9 exhibiting the most bell-like distribution.¹

Figure 4.1: Distribution of Factors of Influences by Cohort



Across the three cohorts, 264 students indicated a total of 389 factors influencing their decision to pursue a degree (online) in LIS via LEEP. Six categories of factors emerged.

¹ As discussed in the previous chapter, this study emphasizes qualitative analysis. Additionally, the relatively small number of participants is not aligned with statistical review. However, inclusion of basic data provides an indication that students are approximately equally responsive across years.

They are listed below together with the number and percentage of times they are revealed in the data:

1. Situational fit (122 – 31%)
2. Interest in new career (102 – 26%)
3. Influence of previous work in LIS setting (57 – 15%)
4. Necessary to achieve professional goals (46 – 12%)
5. Passion for LIS theory and practice (33 – 8%)
6. Academic engagement (29 – 8%)

The following sections provide an inventory and discussion of factors influencing students' decisions to pursue studies. Examples represent all variations within each category. Direct quotations from data provided by students, through their responses to open-ended questions, are at the core of the discussion. Student voice emerges from the combination of words, phrases, and sentences,² which represent the broad ranges of elements within categories used as part of the qualitative analysis. Fragments drawn from individual student responses are indicated with '-'.

4.1.1 Situational Fit

As students described factors influencing their decision to pursue their degrees, responses related to timing and situational factors were abundant. Responses in this category indicate that students had likely been considering pursuit of studies for some time, but were unable to actually move toward this goal because of situational limitation(s). Examples presented

² It's likely that the limitation of space on the paper-based (entrance) survey contributed to word-reduction within responses.

below illustrate ranges of responses within the five main types of responses forming this category (general, personal, financial, online, career):

4.1.1.1 General

- *No time like the present!*
- *Right time in the chain of events*
- *Long time interest in library and information services*
- *An MLS has been a very long-term goal of mine.*

4.1.1.2 Personal Influence

- *I'm not getting any younger, you know!*
- *It is a good time in my life to start.*
- *Time of life (just married, no kids)*
- *Wanting to expand knowledge and skills before I have children*
- *Move, marriage, time for a change!*
- *My children were entering school and I was looking at making plans for my future*
- *My wife finished grad school last year, so it's my turn now.*
- *Husband retiring; and kids about gone from home.*
- *Death in family*

4.1.1.2.1 Encouragement

Many students noted receiving encouragement (from family and others) to pursue studies that influenced their decision. For example:

- *Suggestion from spouse*
- *Much encouragement from friends*
- *My current employer encouraged*
- *Support from workplace -- encouragement from co-workers*
- *Met a woman currently in the program and she loves it*

4.1.1.3 Financial Influence

- *I am currently a resident so this is now more affordable.*
- *Financially stable*
- *Availability of funding and time*

4.1.1.4 Online Influence

- *The online advantage was the deciding factor.*
- *The ability to take classes on-line*

4.1.1.5 Career Influence³

- *Settled in my career*
- *Anticipating retirement*

Throughout their responses, students' comments indicated they were pursuing their degrees because of an alignment of factors in their life situation (across a wide range of

³ Responses included in this category provide a vivid example of the wide spectrum of realities within categories.

circumstances). Those interested in pursuing studies via LEEP are busy people. An online program based on a flexible curriculum model affords them new options.⁴

4.1.2 New Career

Twenty-six percent of students indicated one factor influencing their decision to begin studies related to interest in a new career. Results in this category indicate seeking change because of necessity and in order to achieve better career options and opportunities.

Examples presented below illustrate how students express their pursuit of a new career (i.e., moving away from (past) career; moving toward a (new) career; and those indicating they chose to engage in studies as a means to acquire flexibility in their career trajectories).

4.1.2.1 Needing Career Change

- *Dissatisfaction with current job*
- *Not happy with the direction my current career is going*
- *Desire to have a career rather than just jobs*
- *Burn-out at previous job/career*
- *I was laid off.*

4.1.2.2 Pursuing Career Change

- *I went through career counseling and testing and everything pointed towards librarianship.*

⁴ Online education does not seem to represent students' first choice for pursuing study, but considering the limited options available through 49 schools of LIS in conjunction with the business of student lives, it provides a practical possibility.

- *Interested in a mid-life career change*
- *Career change, yet still within proximity of my past experience*
- *I want a career in something more academic.*
- *I wanted a career in something more service-oriented.*
- *Desire to pursue something meaningful*
- *I would like to feel that I am doing something to help other people.*
- *Extra income and vacation time*
- *I will most likely make more money.*

4.1.2.3 Seeking Career Versatility

- *Increased career flexibility and synergy with existing knowledge base*
- *More options for employment*
- *Many interesting career options*
- *Expand future job opportunities*
- *I want to have a “portable” profession so that I’m not tied into one institution or one geographic location.*

Many students were influenced by the potential of the degree to change (improve) their previous/current professional circumstance. For those beginning studies, the profession represents a zone within the realm and within the reach of earlier experience. A number of incoming students also perceive it as an opportunity to engage in service-oriented work. While this may represent something undesirable for some – service as subordinate, there are other options for considering it. For example, military service doesn’t seem to have the same

connotation. Interestingly, the motto of the LIS honor society, Beta Phi Mu, is “in the service of others.” Here, leaders are conceptualized as being those dedicated to serve. Leaders and servers are one and the same.

4.1.3 Previous LIS Work

In describing factors influencing students’ decision to pursue their degree, 15% of students noted previous work in LIS. While some students included elaborate details of previous work, the following examples are intended to illustrate the extensive range of responses (not precise details of individual experiences). Examples are representative of the majority of responses in this category describing work experiences in libraries (as opposed to other information settings).

- *Positive experience volunteering at public library*
- *Worked in the library as an undergraduate*
- *Freelance work as information researcher*
- *I began working in a public library ten months ago.*
- *I currently am working in a school library and I’d like to continue in the field.*
- *I love my job in a public library.*
- *Working in an academic library past seven years.*
- *10 years experience in libraries has convinced me of the rightness of this career for me.*
- *Over 20 years experience in libraries.*
- *As director of a public library, an MLS would be very helpful.*

As in other categories, the range of responses related to students' previous work experience is broad (e.g., *ten months to 20 years*).

4.1.4 Necessary for Professional Goals

Those represented in this category indicate they are currently working in an LIS environment and specifically seeking the degree to achieve career advancement. As with those pursuing a new career in LIS (see section 4.1.2 above), responses are expressed both in terms of moving away from being limited as well as moving toward more/better options:

- *I wanted to be able to hold a professional library position rather than my current "unskilled" library position.*
- *Lack of career opportunities in libraries for paraprofessionals*
- *Seeing other library staff stuck in same position for decades*
- *In order to progress professionally, it was necessary.*
- *The MLS program is a strong requirement for any serious modern librarianship.*
- *The MLIS will give me the experience/credentials to advance in the field.*
- *Career advancement opportunities*
- *Career in librarianship – gotta have the MS!*
- *I want to make an influential career move.*

4.1.5 Passion

Several students provided responses grounded in affective connections with the field.

Examples below illustrate elements of this category:

- *Finally found a field I was interested in!*
- *Allow me to make a living doing what I love!*
- *Libraries have always been my love*
- *Love of reading and computers*
- *My conviction in the superiority of self-directed education for human happiness*
- *Wanted to pursue a career that was integrated with my values*
- *Explore childhood dream*

Interest, values, happiness, love and dreams all drew students toward LIS education.

4.1.6 Academic Engagement

Students' responses in this category reflect an interest in intellectual development as part of seeking their degree:

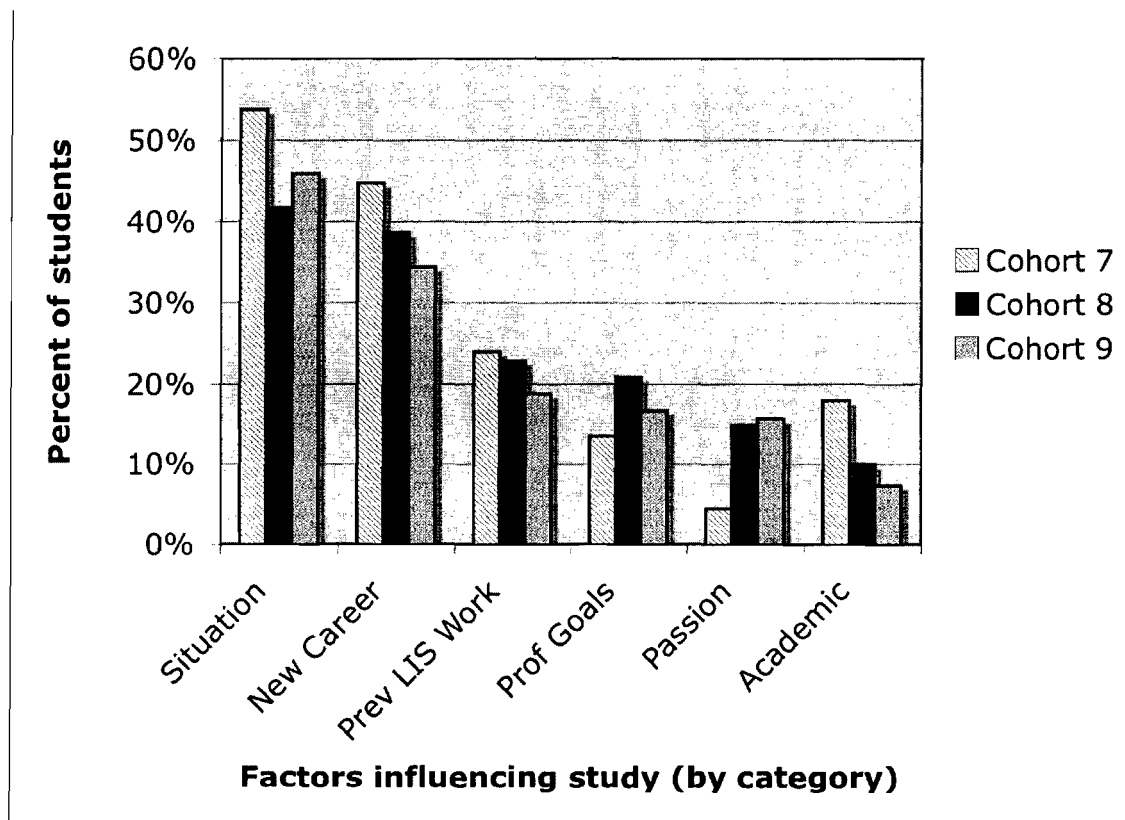
- *Intellectual curiosity*
- *I'm interested in understanding better the theories and context of librarianship.*
- *Explore broader library issues that interest me*
- *I'm looking to get back into an academic setting.*
- *I missed the challenge of being in school.*
- *Desire for more training in information technology.*
- *Improve computer skills*

As illustrated above, a wide range of intrinsic and extrinsic factors across several categories influenced students' decisions to pursue their degree. Influence of previous exposure to LIS

environments and situational variables led to stepping into LIS education in order to pursue career enhancement, academic engagement, and many individual goals and dreams.

Distribution of influential factors across cohorts reveals consistency in the relative existence of factors over the period of the study with cohort 7 exhibiting relatively less passion and more interest in academic engagement. This is presented in Figure 4.2.⁵

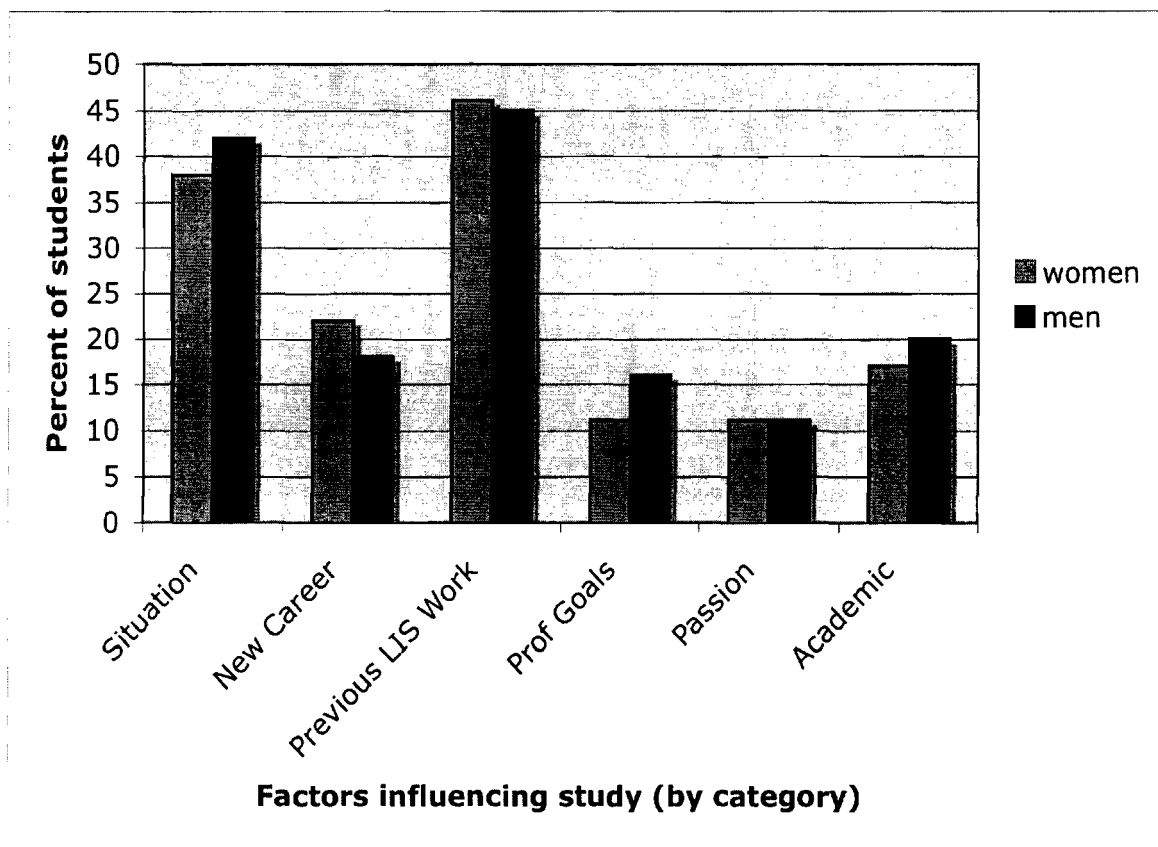
Figure 4.2: Percent of Students by Cohort Indicating Factors Influencing Study by Category



⁵ Since responses included >0 factors, percentage of student responses by category (in Figures 4.2, 4.3, 4.5, and 4.6) do not equal 100%. For example, if a student indicated motivation based on situation and passion both of these factors would be counted in calculating the percent of responses in each category and subsequently incorporated in the chart.

Distribution of factors across gender (female N=209; male N=55) reveals even greater consistency across categories (than by cohort). (See Figure 4.3 below.) Additionally, no other significant relationships (e.g., frequency of responses by pairs of categories, etc.) were revealed by the data.

Figure 4.3: Percent of Women and Men Indicating Factors Influencing Study by Category



Beginning LEEP students are motivated by a wide range of factors across situational, career-related, and individual forces. As discussed in Chapter 2, in relation to the Heim & Moen study, previous connection to LIS still seems to be the principal factor drawing students into

disciplinary studies. The crew’s prior experience with ships of this type is of substantial significance.

4.2 Student Concerns

In addition to sharing details about factors influencing decisions to pursue studies, students provided details of their concerns related to this decision. While nearly all students expressed factors influencing their decision to pursue studies, a significant portion did not indicate if they had concerns about pursuing the degree. Perhaps they had no concerns. Perhaps they were not willing to disclose them.

As part of the entrance survey (IQ2), 264 students were asked, *Do you have any concerns about pursuing your MS? If yes, please explain.* A total of one hundred and seventy-three students (66%) responded to this question. Ninety-six indicated one concern, 62 – two concerns, and 15 – three concerns. The breakdown of numbers of responses (including raw numbers and percentage of total students per cohort) for each cohort is presented in Table 4.2.

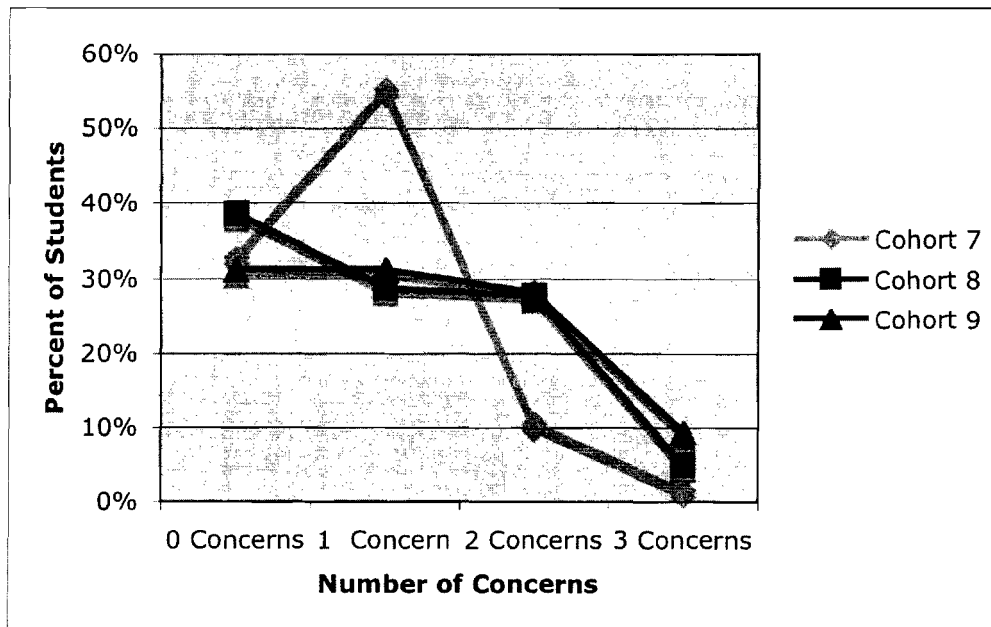
Table 4.2: Number of Concerns Related to Pursuing Degree

	0 Concerns	1 Concern	2 Concerns	3 Concerns
Cohort 7 N=67	22 (33%)	37 (55%)	7 (10%)	1 (1%)
Cohort 8 N=101	39 (39%)	29 (29%)	28 (28%)	5 (5%)
Cohort 9 N=96	30 (31%)	30 (31%)	27 (28%)	9 (9%)
Total N=264	91	96	62	15

The mean number of concerns is 0.8 for cohort 7, 0.9 for cohort 8, and 1.1 for cohort 9.

Distribution of responses follows a similar pattern across years. The distribution for cohort 7 shows the greatest variance. This is illustrated in Figure 4.4.

Figure 4.4: Distribution of Concerns by Cohort



Across the three cohorts, students indicated a total of 265 concerns about their decision to pursue a degree in LIS via LEEP. As with factors influencing student decisions to pursue studies, six categories of responses emerged. They are listed below together with the number and percentage of times they are revealed in the data:

1. Juggling Multiple Responsibilities (69 – 26%)
2. Online Learning (61 – 23%)
3. Academics (51 – 19%)

4. Technology (40 – 15%)

5. Money (27 – 10%)

6. Employment Upon Graduation (17 – 6%)

The following sections provide a comprehensive inventory and discussion of student concerns. Examples represent all variations within each category. As in the discussion of influential factors above, a significant portion of this section incorporates direct quotations from data provided by students from their responses to open-ended questions. This serves to give voice to students. The use of students' words as examples represents the broad ranges of elements within categories as part of the qualitative analysis. Again, data is drawn from all responses (across cohorts).

4.2.1 Juggling Multiple Responsibilities

Many students expressed concerns about being able to accommodate schoolwork into their already busy lives. Tensions related to limitations of time and maintaining a balance between academics and other parts of their lives in order to avoid neglect of self, family, friends, and work emerged. Some of these types of issues are also revealed in the literature. See, for example, Kazmer & Haythornthwaite (2001). Concerns in this category range from general to specific:

4.2.1.1 General

- *How many units per semester can I take and still remain sane?*

- *Hopefully it will not prove to be the proverbial straw that breaks this camel's back.*

- *Not sure how much time it will take*
- *Some concerns about time, which is often not my own*
- *Worried about finding enough time to study.*

4.2.1.2 Scheduling Around Other Specific Responsibilities

- *I hope that I will be able to balance home, work, and school successfully.*
- *I am concerned about having enough time for my home life!*
- *School work taking me away from my family and friends*
- *Working full time with [N] children [several examples up to 6]*
- *Balancing time working full time and as a single parent*
- *I travel frequently for my job and am uncertain that I will have enough time each week to complete the work.*

4.2.2 Online Learning

As with juggling life and studies, a significant portion of incoming students expressed concerns related to pursuing studies online. Examples of concerns across six emergent subcategories (early adaptation, holistic experience, curriculum, support services, independent learning, and perceived legitimacy) are presented below:

4.2.2.1 Early Adaptation

- *I'm curious about maintaining contact with my teachers and fellow students – part of the education process is the non-classroom communication.*
- *I'm curious how I will feel about this type of learning environment.*

- *I've never taken an online course and am anxious to see how it works.*
- *Not sure if I will adapt well to distance learning*

4.2.2.2 Holistic Experience

- *Will I have a comprehensive experience in the LEEP environment?*
- *Online, will there be sufficient opportunity to ask extensive questions, begin discussions, and meet researchers in the field?*
- *My previous experience shows that often a thread will have mostly "I agree with..." and I don't like being the 8th or 9th person to say the same thing.⁶*
- *I'm afraid that we will miss out on connections and professional contacts.*
- *I worry that it will be hard to get to know professor and vice versa.*
- *I also like to get to know my professors really well, and that might be harder in a more anonymous format.*
- *"Isolation" from other students*

4.2.2.3 Curricular Offerings

- *Will the classes I want be offered?*
- *Offering the full academic range will not be a priority for the department.*
- *Some of the classes seemed hard to do online.*

⁶ This response represents one of the few instances where incoming students' point of reference is comparison with other (negative experiences with) Internet Communication Technologies (ICTs), in contrast to learning based in a physical classroom.

4.2.2.4 Support Services

- *It could be easy to get “lost” in the system.*
- *I am concerned about being left behind or feeling lost because I am at home and not on campus.*
- *Access to non-e journals that I might need for reference*
- *I won't be able to get to academic libraries easily.*

4.2.2.5 Independent Learning

- *Distance learning requires you to be responsible for reaching out and asking for assistance when you need it. I hope that I will be firm with myself.*
- *Level of self-motivation and discipline required*
- *Missing out on some important information.*

4.2.2.6 Perceived Legitimacy

- *Are there prejudices against online degrees?*
- *A little concerned about perceived quality of an “online” degree.*
- *My main concern is that potential employers will see that I earned my degree online and not think very highly of my degree.*
- *I cannot help but worry about old-guard librarians feeling leery about hiring employees with an on-line degree.*
- *An online degree is still considered (however incorrectly) to be less legitimate than a “real” degree.*

As revealed in their comments, students' concerns about online learning span the trajectory of educational experience from adaptation through engagement and support to beyond graduation.

While, over the past ten years online education has theoretically moved beyond the initial "no significant difference" paradigm, which sought to demonstrate that outcomes of online education were comparable to face-to-face (classroom-based) instruction (Twigg, 2001), in practice embracing online education is still not a simple task. As with other new phenomena, online education has faced an intense burden of proof (Brown & Wack, 1999). Can it be trusted? From the potential student perspective, there may be concern as to whether online education offers convenience at the expense of quality. As indicated above, most students' comments reveal no prior experience with formal education online. However, one comment (emphasizing redundancy) also indicates that prior online experience does not necessarily provide reassurance that engaging in online study is a desirable option.

4.2.3 Academics

Student concerns about academics are considered across four categories (general rigor, reading and writing skills, challenges related to theory and practice, and influence of age/returning to school). Examples representing each category are presented below:

4.2.3.1 General Rigor

- *Will I be able to succeed at this academically?*
- *Handling the rigor of the program*

- *Flunking out!*

4.2.3.2 Reading and Writing

- *I feel my writing ability is lacking at the college/graduate level.*

- *My writing skills are lacking.*

- *Can I write sufficiently well to achieve “graduate school” expectations?*

- *I am neither a reader nor a writer so my journey on pursuing my MS may be a little tough and bumpier than my classmates.*

- *The amount of reading for class*

4.2.3.3 Theory and Practice

- *I may not be intellectual enough for academia.*

- *I am a very practical/non-theory person.*

- *I have no traditional library experience as I enter this program and I worry that may put me behind the eight ball.*

- *No prior experience as a librarian*

4.2.3.4 Age

- *I am concerned about “getting back into the groove” of reading, analyzing and writing for academic assignments.*

- *Just the probably normal fear of an older student returning to school many years after completing her B.A.!*

- *That my old brain continues to work*

- Do I really need another rite of passage?

- Most of my classmates will be older and more experienced

While concerns about academics emerge across the four subcategories, polar ranges within subcategories are represented in the data. For example, some students are concerned about being too theoretical and others too practical; some express apprehension about age in terms of being too old and others too young. Data in this section provides insights about concerns related to academics as well as perceived student norms (and ideals) and potentially detrimental variations.

Emergent issues in this category, with the exception of age/time out of school (as a more significant factor for students pursuing studies online), seem to represent typical concerns of students entering graduate studies (across modes).

4.2.4 Technology

As in the section above on online learning, incoming students express concerns about adaptation related to technology. They are also concerned with being deficient (based on program requirements, not other students) and disliking technology generally. Some (optimistic) students also see the program as an opportunity to improve skills in this area:

4.2.4.1 Early Adaptation

- I'm a little overwhelmed by all the "tech" components of the program.

- I expect the technology will take some time to adjust to.

4.2.4.2 Technological Deficiencies

- *My computer skills are not fantastic.*
- *I'm worried about my technical abilities (computer smarts).*
- *The technology knowledge required*
- *I am concerned I don't have enough computer experience.*
- *My computer sometimes has a mind of its own.*
- *Technology at home*
- *Technology problems*

4.2.4.3 Technophobia

- *I don't really like computers!*
- *I'm slightly technophobic – which is one of the reasons I'm taking LEEP courses, get the training and confidence in computers that I don't already have.*

In contrast to students' relative inexperience with online learning discussed above, responses in this category reflect significant (negative) experiences with technology in other realms.

4.2.5 Money

Money concerns are sprinkled throughout the data. While the analysis could consider this factor in terms of juggling resources and responsibilities, students describe it in terms of something extra, thus it has not been integrated within the other category. Likewise, it could be considered in terms of cost-benefit and included in the section below on finding employment upon graduation. However, since it isn't described this way as part of students'

concerns, it's presented here as its own category.⁷ The following examples represent students' concerns expressed about money:

- *I am concerned about cost of the program.*
- *Cost of tuition*
- *Financing it*
- *Paying out-of-state tuition*
- *How to pay for it*

4.2.6 Employment Upon Graduation/Career Issues

Incoming students describe concerns related to career issues in both individual and market terms. A few students also expressed concern related to job satisfaction in LIS.

4.2.6.1 Individual Perspective

- *I'm concerned I may not be enough to get a good job when I'm done with the program*
- *Will I find work?*
- *I hope I'll be able to get a job!*

4.2.6.2 Market Perspective

- *I hope the library job market does not dry up.*
- *Job opportunities during the current economic climate*

⁷ Similarly, all categories discussed as part of this chapter are based on emergent themes from data collected exclusively from students. It is assumed that other groups (e.g., faculty, staff, etc.) would have (some significantly) different experiences and thus need different types of categories and examples to describe them.

- Availability of job opportunities after finished

4.2.6.3 Job Satisfaction

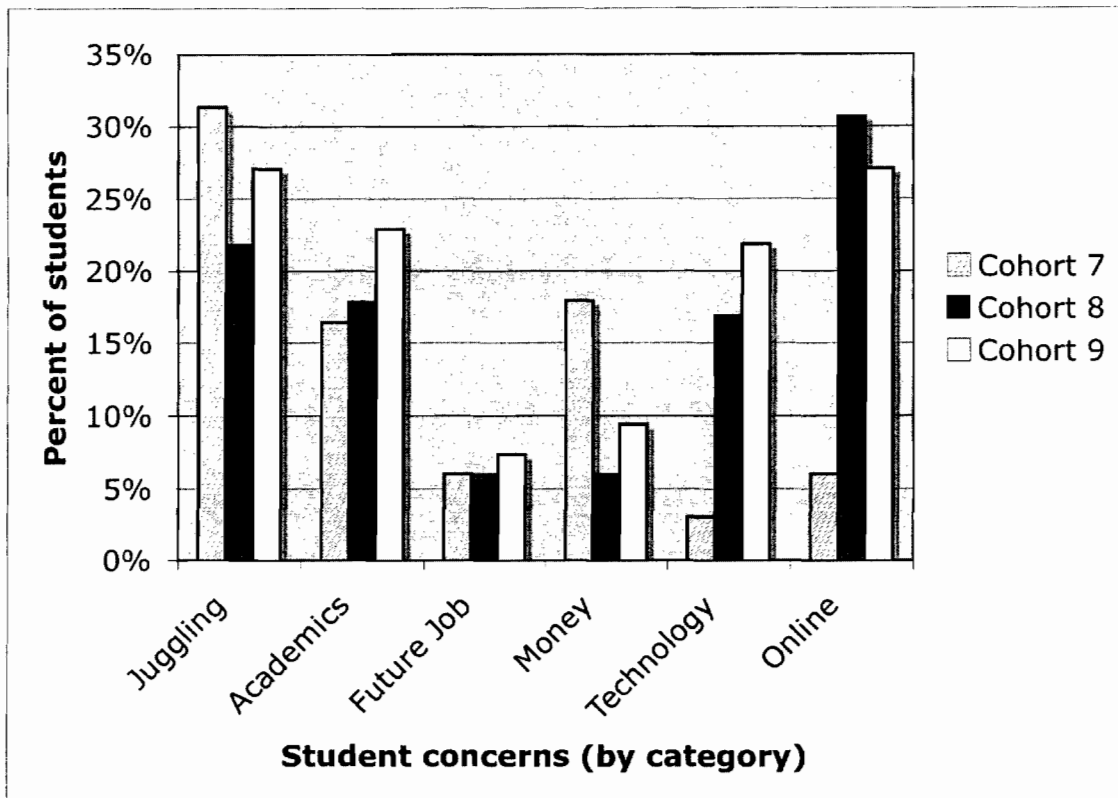
- I'm not sure if a career in libraries will continue to be fulfilling my whole life.

- Finding job satisfaction.

As juggling, academic, and money-related concerns above, concerns about securing employment upon completion of studies may be considered universal concerns of (graduate) students. In addition, within this realm, concerns about online education, and specifically technology emerge. LEEP students have many types of concerns as they begin studies. As motivation, above, concerns are related to both intrinsic (academic ability, knowledge of technology, etc.) and extrinsic (juggling responsibilities, program mode, etc.) issues.

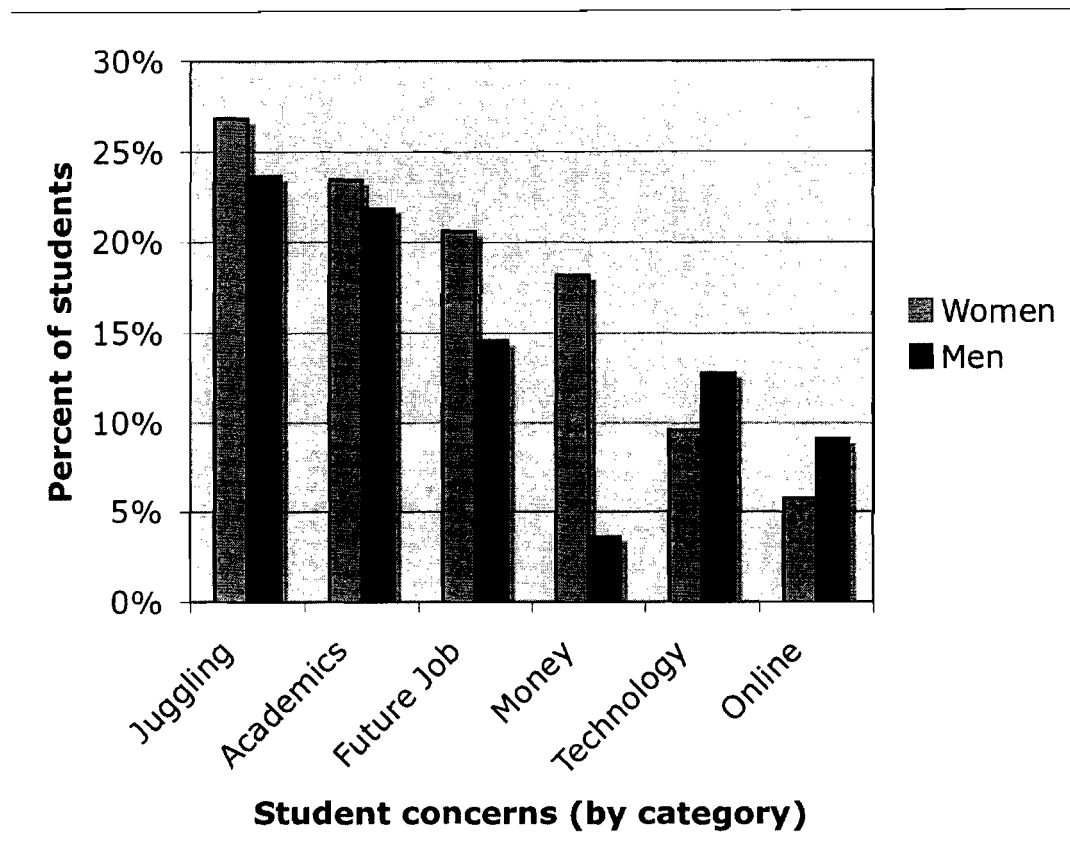
Distribution of concerns across subgroups reveals some variation. As noted above, mean concerns per student increased each year. Students in cohort 7 also indicated relatively more concerns about juggling and money -- and less about technology and online learning than those in cohorts 8 and 9. This emphasis on external factors may be an effect of the general economic climate and stress (in the wake of 9-11). The complete distribution of concerns across cohorts is presented in Figure 4.5.

Figure 4.5: Percent of Students by Cohort with Concerns by Category



Distribution of concerns across gender (female N=209; male N=55) also reveals some variation. Overall, men indicated fewer concerns than women. Relatively speaking, women expressed more concerns about finding employment and money (universal factors), while men were more preoccupied with technology and the online learning experience (mode-based factors). (See Figure 4.6 below.) Aside from direct relationships (e.g., older students expressing concerned with being old), no other types of relationships (e.g., frequency of responses by pairs of categories, etc.) were revealed by the data.

Figure 4.6: Percent of Students by Gender with Concerns by Category



Students' responses in these categories provide many insights into the range of concerns (and ranges within concerns) facing them as they embark. By gaining increased understanding of these realities, those involved within this specific environment (other crew members, officers, etc.) as well as those providing support in external contexts (families, distant colleagues⁸, etc.) can enable a reorientation of concerns toward a path of progress.

⁸ Distant refers to distant from this environment meaning (in this case) not necessarily geographically distant. As Kazmer (2005) describes, there is significant value in forging personal and professional connections among multiple social worlds.

After consideration of students' motivations and concerns related to setting sail, the discussion shifts to describing aspects of student realities that are typically understood in terms of value – competencies.

4.3 Student Competencies

As discussed in Chapter 2, students entering graduate school seem to represent inherent limited diversity (based on age and level of education). Within the context of LIS education generally, and at GSLIS, diversity is also constrained by imbalances of proportions related to gender and race/ethnicity.⁹ While these represent significant concerns, this particular research is not poised to address all of these issues. Additional future research examining disparities and their consequences is needed.

This section, in keeping with the broad constructivist framework, offers an alternative (albeit related) discussion of student attributes based on competencies. Here, students' perspectives on the assets they bring with them in light of their imminent departure into this new sea of learning are considered.¹⁰ Specifically, an analysis of knowledge and experience students identify as being potentially useful in the program (based on responses to IQ3) is presented.

As part of the entrance survey, 264 students from the three LEEP cohorts included in this study were asked, *What kinds of knowledge and experience do you bring to the program that*

⁹ This is also true in other disciplines (and contexts) although the proportions are likely different.

¹⁰ 'New' is used because it seemed inappropriate to imply that students' >17 years of previous involvement with formal education didn't constitute expeditions.

you expect will be especially useful? (IQ3). All students responded to this question. Three students provided answers that were not coded (*not sure, probably not much, couldn't say*) and thus analysis is based on 261 usable responses (a 99% response rate). In total, 453 competencies were cited across ten emergent categories. They are listed below together with the number and percentage of times they emerge across the entrance survey data:

1. Prior Experience in LIS and Allied Fields (151, 33%)
2. Technology Skills (54, 12%)
3. Academic (content) Knowledge (52, 11%)
4. Research (41, 9%)
5. Teaching and Working with Youth (38, 8%)
6. Administrative Experience (36, 8%)
7. Communication Skills (26, 6%)
8. Service Orientation (24, 5%)
9. Curiosity and Other Virtues (18, 4%)
10. International/Intercultural Knowledge (13, 3%)

As indicated above, this question was not framed in terms of application (i.e., competencies for achieving one's own goals versus contributing to the program/others, etc.). This openness encouraged responses across a broader range reflecting many types of competencies. This is beneficial in gaining a broad understanding of students' diversity as conceptualized by the students and in terms of considering potential applications across individual and collective experiences. The following sections provide a comprehensive

inventory and analysis of knowledge and experience students identified as being potentially useful in the LIS program online. Examples represent all variations within each category. Direct quotations from data provided by students, through their responses to open-ended questions, are at the core of the discussion. Student voice emerges from the combination of words, phrases, and sentences, and paragraphs, which represent the broad ranges of elements within categories (and subcategories) used as part of the qualitative analysis. Fragments drawn from individual student responses are indicated with ‘-’. Data represents responses (across cohorts). Additionally, as appropriate, groupings of competencies are compared and contrasted with issues revealed through other (IQ3-based) categories and survey questions.

4.3.1 Prior Experience in LIS and Allied Fields

Thirty-three percent of total responses (~60% of respondents) cited experience in LIS and allied fields as being potentially useful in the program. This is in keeping with the disciplinary trend (as identified by Heim & Moen) as well as motivation factors discussed above. Comments spanned a wide range of settings, roles, and durations as illustrated below:

4.3.1.1 LIS Experience

- *I have volunteered in school libraries for 8 years.*
- *Work-study student at the reference department*
- *Student worker at college library*
- *I've worked part time as the school library aide in a rural school district.*
- *Working experience in a law firm library*
- *I've worked in libraries and other information related jobs.*

- *Public library experience in various paraprofessional positions*
- *I have quite a list of experience in the reference and instruction as well as with circulation.*
- *Extensive interlibrary loan experience in an academic library*
- *I have 4.5 years experience in serials and acquisitions.*
- *I have worked as a school library aide for the past 10 years.*
- *I have worked in access services since 1984.*
- *Former coordinator of library services at a large hospital*
- *I have run a small public library district.*
- *Freelance work as information researcher*
- *Experience with government documents and online databases*

4.3.1.2 Allied Field Experience

- *Background in children's publishing*
- *Work experience in book publishing*
- *I have worked as the Archivist.*
- *Work for an antiquarian book dealer*
- *I have been working in museums for 10 years.*

As students embark on their voyage, the majority (151) expects to draw on knowledge and experiences based on a broad range of current and previous involvement in a variety of LIS and related settings. Not all students who indicated they bring knowledge and experience to the program based on LIS and related experience indicated this was a factor in their decision to pursue studies (as part of responses emerging within the categories of 'influence of

previous work in LIS setting' or 'necessary to achieve professional goals' discussed above). Perhaps they overlooked it (because it was too obvious or for other reasons). Perhaps those working outside libraries did not see it as a significant influence. This relationship may also be represented in part by individuals searching for a new a career, "yet still within proximity of...past experience."

4.3.2 Technology Skills

Respondents described an array of knowledge and experience related to technology including study of, design, administration, and programming. Sample statements provide details of the range of skills they anticipate will be useful in the program:

- *I have taken some computer classes.*
- *Computer science background*
- *Excellent technological skills*
- *Web design and network knowledge*
- *I've been involved in designing and evaluating technology.*
- *Database administration*
- *Programming experience*
- *Web and computer programming*
- *Work in educational technology*

It's interesting that while technology issues emerge as a concern for a number of students (as part of IQ2 above), others view prior knowledge and experience in this realm as potentially beneficial. Across groups represented in entrance surveys, a slightly higher number of LEEP

students indicate they bring competencies related to technology (54) compared to those with concerns about technology (N=40; from IQ2 above). This skew is also evident in the entrance scores for PQ17 (*current level of ability with computer and communication technologies*; discussed in Chapter 6) where the mean pre-program response is 70%.¹¹

4.3.3 Academic/Content Knowledge

Students describe a wide range of academic knowledge (across subject areas and levels). Examples of what they expected to be useful as part of the program from undergraduate, graduate, and recent studies are presented below:

4.3.3.1 Undergraduate Experience

- *IT Minor [18 credit-hour undergraduate information technology program offered through GSLIS]*
- *Bachelor's degree is in computer engineering*
- *A business degree*
- *I have a liberal arts degree that is geared to library science.*
- *Science background*

4.3.3.2 Graduate Experience

- *I had a couple grad classes.*
- *Extensive graduate work in English*

¹¹ While responses to predefined competency areas considered as part of the pre-post (PQ) questions are not emphasized in this chapter, relevant data (discussed further in chapter 6) is incorporated here, when appropriate, to enrich the discussion.

- *Graduate degree in social sciences*
- *MA in Medieval literature*

4.3.3.3 Recent Experience

A few students also expect that having relatively recent formal education experience will be beneficial:

- *Recent college grad with academic inclinations*
- *College is still fresh in my mind*

The number of students indicating they bring academic knowledge into the program (52) is nearly equal to the number of students expressing concerns about academics (51: from discussion of IQ2 above). In IQ2, concerns focus around general rigor; reading and writing; theory and practice; and age. These themes reappear in responses to this category and others (including research and communications skills) toward the other end of the spectrum.

4.3.4 Research

Students described varied knowledge and experience with research across a wide range of general and specific areas.

4.3.4.1 General Research Experience

- *Good research skills*
- *Penchant for analysis*
- *Background in critical thinking*

- *Data organization*
- *My job right now requires a lot of research.*
- *Research assistant as undergrad*
- *Familiar with scholarly periodicals*
- *A bit of experience in research tools*
- *Experience in research environment*

4.3.4.2 Specific Research Experience

- *Research in humanities and social science*
- *Knowledge of electronic research*
- *Archival and museum research*
- *20 years in scientific research*

Upon entry, forty-one students from across the cohorts identify competencies related to knowledge and experience with research. This number is less than those indicating extensive *experience with/knowledge of carrying out a research project* (for entrance surveys N= 79; PQ responses are further discussed in Chapter 6). Perhaps those not represented did not view the potential usefulness of this type of experience. Perhaps it seemed too obvious to include. In PQ15, the mean entrance score in this question was 70%. The distribution of responses skews slightly toward relative strength across the group in this area.

4.3.5 Teaching and Working with Youth

Approximately 15% of incoming students describe formal teaching and/or youth-related experiences as being potentially useful during studies.

4.3.5.1 Teaching

- *I am a teacher.*
- *Teaching experience*
- *Experience as a teaching assistant*
- *Former elementary school teacher*
- *I've taught language arts and reading classes for 20 years to middle school students.*
- *I have taught high school English.*
- *Community college teaching*
- *3 years college teaching*

4.3.5.2 Other Experience with Youth

- *Experience with children*
- *Experience working with youth*
- *Understanding teens*

Education/youth-based competencies may be considered useful in terms of subject-specific knowledge (e.g., for those interested in K-12 media certification), in terms of general and specific competencies associated with another professional context (e.g., transferable skills)

and/or in terms of potential for sharing with future colleagues and/or classmates via teaching-learning interactions.

4.3.6 Administrative Experience

Incoming students describe a range of administrative experiences as well as specific skills as being potentially useful in the program:

4.3.6.1 Administrative Experiences

- *Experience with small businesses*
- *Ten years background in business*
- *20+ years management experience*
- *Consulting*
- *CPA*

4.3.6.2 Specific Administrative Skills

- *Ability to do many things at one time*
- *Team leader*
- *Some budgeting/financial*
- *Leadership training*
- *Writing grants*
- *Customer service skills*
- *Managerial and clerical skills*
- *Volunteer coordination*

As with the teaching/youth-based competencies, administrative knowledge and experience may be considered potentially useful across several dimensions -- in terms of subject-specific knowledge (e.g., for those interested in LIS administration), in terms of general and specific competencies associated with another professional context (e.g., transferable skills) and/or in terms of potential for sharing with colleagues via group/team-based interactions. In one facet of this area, *experience and comfort working in groups* (PQ13), the mean entrance score was 74%. In another facet, *knowledge of evaluating the impact and quality of service* (PQ16), the mean entrance score was the lowest indicated – 54%. For the first (PQ13), the distribution of responses indicates relative strength across the group in this area. In the second (PQ16), distribution follows a bell-curve with 13 students indicating no previous experience in this area and 35 indicating extensive knowledge.

4.3.7 Communication Skills

Incoming students cited many types of potentially useful communication skills. Descriptions range from general to specific:

- *Good social skills*
- *Communications background*
- *Knowledge of e-learning*
- *Community relations*
- *A lot of real-world media experience*
- *Good written communication*
- *Extensive background in writing*
- *I can read really fast*

Knowledge and experience with communication span a wide range of general and specific competencies. In some cases, students indicate aptitude with reading and writing. Both of these were also identified as concerns related to academics (based on IQ2). In terms of competencies, no one mentions public speaking. As part of the pre-program questions discussed in Chapter 6, in PQ14 (*experience and comfort with public presentations*), the mean self-assessment score for the entering group was 64%. The bulk of responses to this question cluster around ‘moderate’ so perhaps not many people felt especially competent or perhaps they did not see this as particularly relevant in an online learning context (where much communication focuses on reading and writing).

4.3.8 Service Orientation

Nine percent of incoming students indicate that service orientation, or specific experience with service-based work, is potentially useful in terms of the program. Students’ examples of these experiences include:

- *Working in a service profession*
- *Public service*
- *Work as an advocate*
- *Literacy from the bottom up*
- *8 years in the outreach department*
- *Work with “challenged” populations*
- *Adult outreach experience*
- *Ample volunteer experience*

- *Clinical social worker*

- *Work in non-profit information-based organization*

As with the teaching/youth-based and administrative competencies, knowledge and experience based on service orientation may be considered potentially useful across several dimensions -- in terms of subject-specific knowledge (e.g., for those interested in outreach), in terms of general and specific competencies associated with another professional context (e.g., transferable skills) and/or in terms of potential for sharing with colleagues via providing support. The service theme also emerges in terms of pursuing career change (within the context of factors influencing decisions to pursue studies (from IQ1 above)) where students indicate 'wanting something more service-oriented,' and 'meaningful,' and 'doing something to help other people.'

4.3.9 Curiosity and Other Virtues

Incoming students cite enthusiasm for learning and other virtues as being potentially useful during the program.

4.3.9.1 Enthusiasm for Learning

- *Madly creative mind*

- *I am eager to learn.*

- *I am a dedicated learner.*

- *Life long learner*

- *I'm interested in almost everything.*

4.3.9.2 Loves and Other Virtues

- *Love of books*
- *Love of information*
- *I love academia.*
- *I love computers and their mysteries.*
- *Commitment to intellectual freedom*
- *I hope to be part of the solution.*
- *Enthusiasm*
- *High motivation level*
- *Good sense of humor*

Students expressing knowledge and experience related to love of learning and other aspects of LIS did not necessarily consider these themes as factors of influence in coming to the program. Of the 18 students indicating competency in this area, only 3 also include this as an influence factor above (in Passions from IQ1 above). Perhaps this is not something readily considered or expressed. Perhaps it seems too obvious to include.

4.3.10 International/Intercultural Knowledge

Approximately 5% of incoming students cite specialized international/intercultural knowledge as being potentially useful in terms of the program. Examples include:

- *Lots of international experience*
- *Foreign language skills*
- *Background in Spanish*

- Experience in Middle East culture and language

- Working experience in Asia

In addition to students indicating competencies related to this area in response to the question, nine other incoming students would complete studies while living abroad (including foreign nationals). Apparently, they did not consider this in terms of affording potential benefits.¹²

4.4 Conclusion of Data Analysis for Incoming Student Experience

This chapter provided a comprehensive inventory and analysis of individual student attributes based on qualitative and quantitative data sources including rationale and concerns related to pursuing studies and self-identified competencies as revealed while still in port. While many students expressed concerns (265), motivational factors (389) and competencies (453) were more prevalent in responses.

The incorporation of the student voice facilitated a deeper understanding of issues being considered and also reflected the diversity of individuals represented in this study. Students provided thoughtful descriptors – indications of their busy lives grounded in many prior (often LIS-related) experiences and their quest for new kinds of development (personal, professional, academic, etc.). Additionally, in the discussion of students' self-identified knowledge and experience of potential usefulness in the program, competencies spanning many aspects of professional and academic development were identified.

¹² This would seem to indicate that, at least initially, (geographic) distance is perceived more as a burden.

In juxtaposing concerns with competencies, data reveals that there is significant potential in the context of collaborative engagement for students to serve important roles within a framework of proximal development. Additionally, many competencies could be both directly and indirectly useful in compensating for issues that peers identify as causes for concern. Thus, as final preparations are made to prepare the main sail for hoisting, instruments indicate significant potential for an exhilarating journey.

In the following chapter, a discussion of the students' collective LEEP experiences is presented.

CHAPTER 5: MANIFESTATIONS OF COLLECTIVE ENGAGEMENT

In the previous chapter, concepts of individual student experience based on initiating engagement in this learning environment were considered in relation to several constructs (motivation, concern, competency). The discussion aimed to provide insights into the complex range of factors shaping each individual student's experiences in the program. This chapter seeks to complement the discussion by exploring themes of the collective student experience.

Discussions herein are based principally on mid-program (focus-group) data. The chapter includes six sections. The first provides context for considering the collective experience. In the second, student competencies are revisited within an applied collective framework. Following this, roles of giving and receiving are explored. Subsequently, manifestations of valuable learning are discussed. Then, collective learning challenges are reviewed. In the final section, emergent collective learning issues are considered.

5.1 Collective Context in LEEP

In order to consider LEEP student experiences in a collective context, it's important to understand how information is exchanged in this environment.¹ In Chapter 3, an overview of the four modalities of engagement in LEEP (face-to-face, synchronous, asynchronous, and independent learning) was provided. To supplement this, and focus on information exchange during the semester when collective experience was considered as part of this study via

¹ This is based on the idea that information exchange evokes knowledge creation (learning).

focus groups in fall 2004,² an incomplete summary of interactions is provided below. While a comprehensive social network analysis is beyond the scope of this research, it's hoped that this general overview will enlighten subsequent discussion. Let us consider what the crew is up to in fall 2004.

First, in terms of courses, during the semester focus groups were conducted, students involved in LEEP engaged in 18 courses with a mean of 23 students per course. All courses included one on-campus session day (residency), a mean of 12.6 synchronous (audio + chat + visuals) sessions (generally two-hours once during the week; 25.2 hours total).³ Six courses included individual (1:1 faculty-student; electronic) bulletin boards (~20 boards per course – representing one for each student). The mean number of posts on the individual boards during the semester was 321 (presumably around half authored by the instructor and half authored by the student). Additionally, all courses incorporated group bulletin boards (open to faculty plus two or more students). A range of 3-36 group bulletin boards was used with a mean of 21 per course.⁴ Total mean posts to group bulletin boards over the duration of the semester was 1291.

² Based on dates of instruction/evaluation, fall 2004 semester was August 25 – December 18.

³ All synchronous session components are archived to provide optional subsequent consultation.

⁴ Courses with individual bulletin boards have relatively few group bulletin boards. This shift of interaction hubs is also reflected in the number of postings ranging from 265-4782 within group bulletin boards. Typically, those in the 100s are using a more faculty-student model and those in the 1000s are based on student-student interactions. These differences do not seem to be reflected in students' levels of satisfaction. Perhaps variety is welcomed? Perhaps student satisfaction is a consequence of faculty autonomy? Additionally, since

Second, in terms of the broader program-level community, there are many additional opportunities for students to engage. While program-level interaction included only a few (~12) real-time sessions per semester (for program planning, updates on activities, lectures, virtual reunions, and (in spring) virtual graduation) at the time of this research, a pattern of growth incorporating non-course based synchronous sessions (and subsequently archives) was emerging.⁵ Additionally, as part of the on-campus residency period, a number of interest group and all-community events are included (2-3 per day times five days -- ~12). Also, a total of 33 community bulletin boards (with 121 mean posts per board) were available to LEEP students.⁶ As illustrated in the description of one community bulletin board – *Post your [topic] questions here and either a staff member or a fellow student will*

students have choices in developing programs of study including the option to review syllabi before classes begin, they have the opportunity to determine if a particular course model will likely meet their needs.

⁵ This may be representative of program maturity as well as increased comfort in adapting tools for new purposes. As with increased interest in courses by non-LEEPers, this represents expansion to include new audiences (on-campus students, alumni, and other types of guests). For example, virtual graduation, a live video broadcast, allows students at a distance as well as friends and family to participate in the ceremony. Those present virtually have their name included and are applauded as those on stage. Student groups also sponsor several meetings and lectures that are audio broadcast each semester.

⁶ It's likely students would engage in a higher portion of group bulletin boards within courses (except for those emphasizing individual boards) than community bulletin boards (based on a broader variety of interest areas). Community bulletin boards are open to all GSLIS affiliates (not just LEEP students). As with several other aspects of LEEP extending from previous activities at GSLIS, electronic bulletin boards were originated almost a decade prior to LEEP's launch (in 1987). Early electronic bulletin boards used command line queries as part of a Unix-based system. A complete listing of web-based community bulletin boards in use during fall 2004 is presented in Appendix G.

respond, interactions on the boards are not typically limited to expert-novice interaction across a designated set of roles.

While this review provides no data on e-mail, phone, mail, off-site face-to-face meetings or other types of internal or external⁷ course or program-based exchanges nor on specifics of who is involved, it offers a starting point for considering the vast, complex communication network those involved in LEEP were challenged to engage in and contribute to developing during the semester focus groups were conducted. The following sections explore how this is manifest from a student perspective.

5.2 Applied Competencies

After establishing that the LEEP crew is busily involved in information exchange, I move on to consider how students describe competencies they find themselves drawing on to engage in study (based on FQ5 – *Describe the kinds of skills and experience you find yourself drawing on during LEEP*).⁸

⁷ Internal refers to exchanges with other GSLIS/LEEP community members. External refers to exchanges with others formally outside of this particular learning community (family, co-workers, etc.)

⁸ Within the general context of collective experience, students' input (from focus group comments) includes some similarities and differences in relation to knowledge and experiences identified by the entire group as being potentially useful in pre-program survey responses (described in Chapter 4). One significant difference is the increased contextualization of responses. A broader forum (increased time and space compared to structures based on paper surveys) afforded students opportunities to provide more relational details and specific examples in responses. This was likely reinforced by dialogue fostered as part of the focus group format.

The following comments represent applied collective competencies that emerged early in the focus group discussions (without prompting related to collective issues).⁹ Specific variations of competency types that emerged as part of the pre-program (survey-based) inventory serve as headers:

LIS Experience + Service Orientation

*- I draw from my daily work - **working in a public library** in particularly in a **disadvantaged community**. So a lot of the things we talk about in class I feel like I have concrete examples of some of the things. I can contribute by telling some of the things that I've done. Maybe that might give some other people ideas.*

Academic Knowledge (Undergraduate)

*- One of my **undergrad degrees** is in psychology, and I'm finding that I draw from that often to apply to discussions about library issues.*

Administrative Experience (Experiences + Skills)

*- My **business experience** - my **competitive intelligence experience**. Working in an environment where there are management skills required with **projects and deadlines** and **working with teams**.*

⁹ Details of applied individual competencies are not included in this discussion.

Administrative Experience (Experiences + Skills)

- *I draw on many of my experiences because I was in business for 18 years. Only just a week ago I drew on my **business experience** in my group project because at work everything is in **teams** and so I used a little trick to get my group going. [administrative experience – administrative skills]*

Administrative Experience (Administrative Skills)

- *I think **organizational skills**. I think there is a lot of those organizational skills going to holding up your end of the team project or even your own organization skills on an individual project if you're writing a paper or something. Just the idea that you have to **manage that time**.*

Administrative Experience (Administrative Skills) + Virtue¹⁰

- ***Negotiation skills** and **patience** to participate in group assignments.*

Administrative Experience

- *Having a non-library job helps me to provide an opinion from a **corporate viewpoint**.*

Communication Skills

- *I am a **better writer** than speaker – so I feel like I can contribute better online.*

¹⁰ Patience was not included as a specific virtue in entrance survey data.

Service Orientation

*- I bring this “outsider” perspective to my classes and my library work. I am very invested in doing **outreach work**, because I know that we are not even on the radar for a huge section of the community and I know how much our resources can be of help to them.*

In the examples of skills and experience students indicate they draw upon related to the collective involvement, many aspects of the diverse range outlined by incoming students as part of the entrance surveys discussed in the previous chapter are represented.

Administrative experience is expressed most frequently. This emphasis is logical considering its importance in terms of relating to people (people skills). All other competency types in this section (service, communication, and psychology) have the same basis.¹¹ Comments indicate that mid-program students are considering their skills/experience in relation to collective goals including motivating others, giving ideas to others, and completing team projects. Additionally, as part of collective-applied competencies one new virtue – patience (again related to people skills) is introduced.¹²

In general, based on all data manifest in terms of individual and collective application, mid-program students in focus groups emphasize certain areas more (knowledge of administration and communication) and others less (previous academic knowledge) than in the pre-program data. Functional skills seem to take priority over content by mid-program.

¹¹ This emphasis was not evident in competencies applied to individual involvement. Specifics are not included in this analysis, but, in general, they included a broader range of application types.

¹² Additionally, one new type of experience related to individual-based competency is cited mid-program – drawing on local (place of residence) resources.

Perhaps this is based on students' fuller engagement in the LEEP context (format plus content). All competency areas except international/intercultural experience were represented among all responses within discussions based on FQ5. As the international area emerged based on responses from only 13 students of all (264) incoming students, it was likely it would not be represented strongly (or at all) as part of the experience of the subset of participants in the focus groups.

5.3 Giving and Receiving

After verifying that students' competencies were intact and being applied toward their collective educational experiences, students were invited to share insights related to peer-contributions, both in terms of giving and receiving.

5.3.1 Giving

The exchange dimension of the collective student experience was considered more directly and fully as part of the subsequent question (FQ6) when students were asked to share specifics about their contributions to others' learning. Students express their roles as givers in terms of offering encouragement, perspective, information, and questions based on experience (or lack thereof). Facets of diversity (particularly dimensions of geography, age, and parental status) also emerge as part of this discussion on self-defined competencies. Examples from students' comments illustrate these aspects both in classes across modalities and in other extracurricular contexts. As in the responses above, many connections are included. In the following examples, I use headers for each giving type. Specific competencies are highlighted and types are included in parentheses.

Encouragement (Virtues, Communication Skills)

- *I hope that online interaction mirrors my **general kindness and interest in most folks.***

- *It seems that for many of my friends in LEEP, parenting and job responsibilities pull at them and can get discouraging. When I know of this, **I give them encouragement.** I let them know that it's important not to overload themselves, that being able to spend time with their children is important, something they will never regret. So what if they can only manage one class at a time? They will get there, and they will be more brilliant because of the fact that they have had a rich life.*

Information + Encouragement (Academic/Content Knowledge, Administrative Experience)

- *I **answer questions** on the bulletin boards, I send personal e-mails, I use the whisper mode during lectures and I have even "talked someone through" assignments with online components over the phone. This extends outside the courses, too. I have **helped classmates prepare for job interviews or work presentations.** There is no greater compliment than to have a classmate ask for advice, an opinion or help.*

- *By **offering constructive comments and explanatory notes** to each other during chat times, and by **posting assignments and reading their assignments** in preparation for the class.*

Encouragement + Information + Perspective (Communication Skills, Academic/Content Knowledge)

- *I find myself **being able to mentor other people** in my group and help them out with certain things. Example is – we're doing this relational database project and I know quite a bit about that so I was able to **give my group some ideas** of what they needed to do and actually do some of the show them some examples of diagrams that I think helped them.*

Perspective (Geography) + Information (Content Knowledge, Administrative Experience)

- *It is such a delight to me when I can bring that stuff to class when I can say – yea I work with Native Americans and I love it and **let me tell you all about it**. I love is the diversity of people in the classes. There are so many people who come from business backgrounds or large urban libraries or huge academic libraries and I feel like I am able to contribute because I am working in really tiny libraries in really rural areas of the country and **I'm working in libraries in places where they have never been before**.*

Perspective (Age) + Information (Work Experience)¹³

- *My **mature experience and diversity** because I've worked in **a lot of different areas**.*

Perspective (Age) + Information (Content Knowledge, Administrative Experience)

- ***My perspective** as an editor and someone who has worked in some pretty diverse atmospheres from tiny little companies to very large corporations. I have some*

¹³ This comment does not indicate a particular type of prior work experience (LIS, administrative, teaching, etc.).

*understanding of publishing realities, business realities. Right now for one of the case studies we were working on, I was able to **bring some real world experience** to that. Also, just of **virtue of being old** and having been around a lot.*

Perspective (Parental Status) + Information (Content Knowledge, Administrative Experience)

*- My business **background** and my experiences as a parent hopefully **broaden experiences for other people.***¹⁴

Questions as Information (deficiency perspective) (Non-LIS Experience)¹⁵

*- Instead of the professor always answering, other people in the class are answering my questions because I don't have the library background and so then that **helps them with their learning as well**, because they always say that if you can teach it to someone then that means that you really know it.*

Questions as Information (deficiency perspective)

I don't know anything about cataloging for instance I was fortunate the work group I was assigned to was very supportive and we all worked together and I found out that I wasn't the only one who didn't know and that was very gratifying for me and I think for the other

¹⁴ This response is interesting to compare with an earlier comment (p. 137) about students providing encouragement for those with children.

¹⁵ This comment indicates that sharing Non-LIS Experience is another facet of sharing in the context of students as givers.

people that I worked with that maybe weren't as verbal as I was about not knowing or saying they didn't know and in that way I think I facilitated some learning.

Within each of the examples of students as givers, in addition to the specific collective competency types indicated in parentheses, there is also a base competency combination of Service Orientation plus Communication Skills.¹⁶ Additionally, in the applied context (based on examples), students begin to expand upon categories that emerged as part of the individual competency inventory. This seems to be linked to sharing broad diverse experience across giving types (encouragement, perspective, information, and questions as information). For example, within the extensive ranges of individual competencies identified across entrance surveys, the concept of sharing questions as information did not emerge, but within the smaller sample subset of mid-semester focus groups, it emerged multiple times. In combination, these four base categories (dependent on a Service Orientation + Communication Skills base) offer an enhanced framework for understanding knowledge sharing in the context of LEEP students as givers.

As part of the 'how do you contribute' (giving) discussion, students also emphasize the importance of both giving **and** receiving with peers (i.e., exchange as a natural part of the educational experience; without being prompted). Examples of this exchange focus are illustrated in the following three responses:

¹⁶ Perhaps this is the basis for the equation of leadership (in this context)?

Encouragement + Questions as Information + Information

*- I try to **be nice** in the chat rooms. **I ask questions** that arise for me. I try to **be responsive** to postings on the BBs.*

Information + Perspective + Encouragement

*- Through interaction with colleagues we contribute to each other's learning through an **exchange of ideas, criticisms, encouragement** - we are each other's sounding board.*

Perspective

*- I know what I get from my colleagues so I think that is probably a two way street. It's kinda a vicarious thing. And at the end of a class period those are the **things I remember are the stories and vignettes really that other people have shared** as part of the process. You kinda add that to your collective knowledge base... I know a little bit more about the whole field because of what people bring to the class.¹⁷*

5.3.2 Receiving

In discussing other students' contributions to the program, emphasis is placed on three of the same elements students see themselves contributing -- encouragement, perspective, and information. Again, appreciation for aspects of diversity emerges based on geography and knowledge of LIS services and particular user-groups (e.g., deaf, children) as part of

¹⁷ In this example, the student is bypassing sharing what s/he gives, and focusing on what s/he receives.

employment experience. Difficulties related to non-participants and lack of contributions are also identified.¹⁸ Examples are presented below:

Encouragement

- *There have been certain people in classes who **try to include you and make you feel welcome.***

Perspective, Encouragement, Information

- *I love the geographic diversity. I love the fact that people are coming from all over the country and the world. And I just feel like that **broadens my perspective so hugely.** And I also really feel strongly in the **network that LEEP has created.** Like I feel like as we go off into our futures, I could be in a library somewhere in the future and I could send [name of student in focus group] an email in 5 years and say hey we were in LEEP together I'm looking for a job in your part of the country – **what can you tell me.** And it would be no problem. And that has just been a gift.*

Information, Encouragement

- *What amazes me is to witness **how SMART my friends are.** These are not only **nice people, with lots of heart,** but they have keen intellect too! I am so proud of them, and they are an **inspiration to me** to work hard to understand this material we grapple with.*

¹⁸ At this stage of discussion based on sharing in terms of receiving, I do not (as in the previous section) include examples of individual competency types. While they are still the basis of understanding and abundantly present (e.g., Virtues, Communication Skills, Content Experience, etc.), the noise generated by including them here detracts from consideration of emergent constructs.

Information, Encouragement

- *I've had the privilege of being in a couple of groups with [a focus group member] and in particular I'm not a business oriented person, so some of the things in that management class was just kind of over my head. She was **good at explaining things** that I didn't get until finally "Oh, I understand that now." She showed me – she's an **embodiment of teamwork**. She was there to **boost me up a bit** because there were points where I was like "Ah – what do I do?" And I think her experience helped a lot with that because she was able to contribute – she always contributes a lot to whatever group I'm in.*

Several Examples of Perspective

- *You know I've been in libraries since I was out of high school practically, but it's really interesting to **see it through the eyes of people in other fields** because they look at it in a totally different way. And especially people in business. I really like to hear that impact because they see things in a very different way.*

- *I think it's really good for everyone to see **how other people do it** and it really adds to things.*

- *I find the chance to **meet and hear from students in different jobs and locations** very interesting.*

- *What I'm surprised about is the **passion that people have**. Especially when they **have an opposing view** than I do. And the reasons why that's so great is because in other areas of my*

life I kind of tend to run the show a little bit and here's this person that is just standing in my face saying I don't agree with you and here's why.

*- I think it's good that GSLIS doesn't require people to have a certain amount of library experience or library background because that has really enriched the learning we've had because of the **diversity of background** of students.*

*- I've been mostly surprised by the **WIDE variety of backgrounds** - much broader than I expected.*

Several Examples of Perspective + Information

*- I know nothing about children and would love to **know about what the users want and need** and you and your children are the users so it would most valuable to me to have you in my class.*

*- For me, the **people who contribute things specific to their library experience** is helpful especially in a reference class where people have been posting things. I always find them very interesting – **their stories**.*

*- I've had a gal in adult public services this summer that was in charge of a deaf program for patrons at a library and she's also part of a deaf organization. And that was really interesting to **see her work there** and I've had people who have been lawyers in other lives too that **brought lots of information** in the government documents class about copyright and*

that kind of thing. It's just so interesting it is to **see these backgrounds and to learn from them**. Because a lot of times they will bring their expertise in a very formal way like a class presentation or something which is really interesting.

- The thing that consistently surprises me the most is what people know – **the diversity of what people know and how much they know**. And I've found that to be true with people who have Ph.D. in other subjects as well as with people who just finished their undergraduate degrees and are just starting LEEP. Again it's just the **variety of knowledge and opinion** that people bring. People that I've been in classes with for several semesters can still surprise me. There's a woman in a class that I'm taking now who, the class is mostly about XML, and she turns out to be an absolute whiz at it without ever having worked with it before. She's not a native speaker of English, but she can still **explain things more clearly even than the professor** can sometimes. I read every word she posts.

- It's the wonder of the LEEP program. Every day there will be something where I'll go wow, I never knew that, I never thought of it that way. Wait a minute how can they...cause you know some people are maybe just trying to put a position to **stir the pot a little bit** to see what kind of dialogue comes, but it makes you think. It makes you engaged - the whole idea of checking in every day. I'm so engaged in the program and it's because of the, uh, it's like Christmas. You get a surprise every time you open up your email. You're just so engaged in the whole process and so much of that is because of what colleagues bring to the class to the discussion... People don't type – me too – **they add substance**. There isn't just click – oh that was a great comment. No **it's a great comment but here's why and here's why I'm expanding on it**. It's just tremendous stuff.

*- I really enjoy the diversity that LEEP offers. You can take classes with people from all over who have such a **wide range of experience and knowledge**.*

Several Examples of Information

*- I think the quality of the **participation on the BB** was sort of surprising maybe because I have been out of academia for so long and to see what **high caliber of participants** there are. It's fairly intimidating, but it's also very exciting to be participating.*

*- I think the thing that surprised me the most was how many people **know about so many books** that I don't know about, I thought I was well read. I thought I read a lot. Even in my young adult literature class they're pulling all these books out of the hat I was like maybe I was rather limited. It's nice to **have so many minds**, you can pick everyone's minds.*

*- The ones who are **very good at technology** surprise me. I like getting in teams with somebody who knows what they are doing. It's very helpful.*

Earlier, in considering sharing in terms of giving, the distribution among encouragement-perspective-information was quite balanced. In considering other students' contributions, more significant emphasis is placed on shared perspective. Perspective seems to embody aspects of other types of sharing. That is, encouragement and information are implied facets of exchange as manifest in receiving. Of course, this may be understood differently and there may be other issues. Perhaps students are reluctant to acknowledge they receive

encouragement or perhaps they value it less and therefore don't mention it so frequently? Perhaps this sort of recognition will emerge more readily after a period of reflection? These possibilities may be considered as part of subsequent inquiries.

As illustrated in the following examples, according to focus group participants considering others' contributions, the range of contributions also includes those who do not engage in sharing adequately.

*- I've been surprised at how **gung-ho** some people are about the program, and also how **relaxed** some people are. The people who are very enthusiastic about the program help motivate me to contribute more to class.*

*- I'm amazed by the **wealth and range of knowledge and skills**, and then sometimes I'm amazed by the **dearth of it in a few others**. The first encourages my learning; the second requires patience.*

*- I have, many times, been surprised by flashes of **total brilliance and apparent ignorance**. I do appreciate that LEEP draws an even more diverse array of students than does the on-campus option and these people **bring some highly interesting things** to the table.*

*- I have been surprised by **some classmates who did not contribute to group projects at all**. I was shocked and disappointed but, at the same time, I recognized that I was likely to encounter similar situations in a job setting.*

Initially, these examples may prompt one to ask questions like -- who are these slack crewmembers? and how might these situations be avoided? Deficiencies expressed span the range of areas within the collective competency exchange experience (lack of encouragement, perspective, information) and were manifest in specific contexts (group projects) as well as more generally. These comments, while based generally on problem areas, also exemplify students' abilities to benefit from others' deficiencies especially in terms of learning how to interact with diverse individuals.

5.4 Reflections on Valuable Collective Learning Experiences

Towards the end of the focus-group sessions, students were asked to comment on aspects of the LEEP experience they found most interesting and/or valuable. Emergent themes emphasized diverse people [people], diverse opportunities for exchange [communication], and learning [learning]. Reflections also incorporated comments based on several specific interactive modalities (synchronous, asynchronous, face-to-face) and other multimodal aspects (group work) of participants' programs of study as well as general sentiments of appreciation of broad exposure to people and learning. As in the other focus group discussions, students provide more comprehensive context and also emphasize the value of other students in their comments. Examples presented below are grouped by modality. Phrases exemplifying valuable aspects of students' collective learning experiences are highlighted.

5.4.1 Face-to-face ('boot camp')¹⁹

- *The group project we did during bootcamp was a wonderful surprise because that was when I first became aware that **my fellow students were intensely focused and hardworking**, and full of leadership ability.*

- *I have never experienced **so much loyalty and sharing (of information, knowledge, resources)** amongst a group of people in any other situation I have encountered. Our **different backgrounds provide so much insight to other cultures, countries, and careers, too**. The cohort provides an education above and beyond the instruction from the university.*

5.4.2 Asynchronous

- *I feel I'm learning from the other students in class. I feel like it's **total immersion** because it's to be on the boards actively, which is required and also important for me to learn, I have to do it daily and **I feel like I'm carrying on a conversation** even though it's asynchronous. The teachers are certainly great value, but also a **very diverse group**. Whereas the students seem to blossom more in class than the teachers do. And I really **learn a lot from them**.*

- *I feel like I'm doing **a lot more communicating**. We do a lot more discussion and it's more like – everyone discusses more. I guess there might be pros and cons, but personally I feel like I'm able to **add to the conversation** quite a bit. It helps me to be able to do things on the BB because I can think about what I'm going to say.*

¹⁹ Modalities are presented in an order reflecting the relative sequence in which LEEP students encounter them. While there is some initial electronic communication between the School and students prior to coming to campus, at the time of this study, it was not especially pervasive.

5.4.3 Synchronous

- *Everybody gets a chance to comment on something to contribute. Whereas in a traditional classroom you might be sitting there with your arm raised for 15-20 minutes and never be acknowledged. But you have a forum to say what's on your mind. And I think that's great. And you get to learn a lot from a lot of different people because everyone gets to have some input.*

- *The most valuable aspect is the live chat and lecture capabilities, and the knowledge that is shared across those lines that is less evident in a live classroom.*

5.4.4 Multimodal – Groupwork

- *When I look back at each of the groups' experiences they are rewarding in their own way for different things. I think even the first one is where [another focus group member] and I met – working on our first group experience together. And again it was a large group and you were under the time constraint to pull it together – we had a topic we thought we knew something about but were totally clueless. And then people who were technically oriented trying to have the patience to explain it to us non-techy people. But again you kinda learn – when you think back over the group experiences you say there are things about each one that really stand out as having made that groups experience work. Cause I haven't had a bad group experience, they've been different but they've all been valuable but for different reasons*

- I haven't had a single negative group experience and the thing that's amazed the most about all of them starting with the first class is that I've never been in one where somebody coasted or somebody didn't pull their weight and that's kind of been an amazing thing. And **every time each person in the group has brought something different to the table.** For one class we had a ridiculous topic that we had to spend hours trying to define before we could even understand it for ourselves much less do a presentation on it. I'll never forget it. But **everybody had a different perspective and a different level of understanding** of it cause it was pretty technical stuff and there were people with no tech knowledge and people with tremendous tech knowledge and **everybody kind of brought something to it.** That was a memorable one just because it was such a challenge.

- I was extraordinarily skeptical about group work with LEEP. As I started to get into my classes and find that every single class has some kind of element of group work I thought how was this going to work. I mean number 1 the sheer logistics **of getting people spread out in some cases all over the world to get together to work on a single project** was not going to be possible. To my amazement **it has worked better than face-to-face groups. I would rather work online with a group any day of the week. Because I think you have people who bring in all kinds of knowledge and you don't have people maybe dominate in the same way that you do in a face-to-face way.**

- My favorite group experience so far has been one where we had a teacher who was a little bit challenging in the sense of not being really good, but our **group was cohesive and**

diligent and we just industriously made our way through the exercises. And I learned so much from that group.

- Most of the **group projects have been rewarding. I've always been proud of them** after I've been done, but at the time they seem like oh my gosh what have I gotten myself into.

- I had one group experience where I was the webmaster and had to compile all of our group's work. One of my group members who lived all the way in [another country] and had a family called me at like 3 in the morning his time while I was still working on the project to see **if I needed anything and how things were going and offered to help however he could. I was very surprised and amazed** at this and had the utmost respect for this individual after that. It was just incredible that he would call me that late at night to check to see if I was doing ok.

5.4.5 General (Diverse People + Communication)

- I've found **people really friendly**. Everybody that I've had contact with at the school has been really nice and all of the classmates have been really nice. Yea there are a lot of **people with different personalities** and sometimes some people seem annoying or whatever. But by and large I've found most people interesting and **they have some interesting things to say**.

- The LEEP students are so **motivated, focused, responsible, invested in the learning process**. It is markedly different than undergrad experiences, in which 1/3 of the class was

focused elsewhere, and God help you if you had to do a group project with them. I see lots of leadership tendencies among LEEPERS.

*- For me the best aspect has been the **variety of things that I've learned and been exposed to**. Things I just wouldn't really have expected. To learn whole new areas that have opened up to me, like cataloging, which I have just fallen in love with. And the **interaction both with professors who are incredibly knowledgeable and generous with their time and also with the people – the students**.*

*- Everybody in the LEEP program is like **we're together, we're helping each other, we're working on this together**.*

Comments presented above represent the broad range of valuable experiences LEEP students perceive as part of their studies. In her work on early LEEP experiences, Haythornthwaite (2001) describes how face-to-face contact serves as a catalytic role, especially in terms of emotional and social (not work-oriented) support. Residential experience (especially early on as 'boot camp') seems particularly valuable (when students are still getting acquainted). Additionally, boot camp is linked to the first required online course – essentially an extension of the initial face-to-face experience based on a quasi cohort model.²⁰ It's interesting to consider how the effects of shared face-to-face time can be

²⁰ Two cohorts of students take their first required course intensively on-campus as part of boot camp. Students from these groups then register for one of two or three sections of the other required online class in the fall. There is significant overlap in registration (30-60%) of students from each initial cohort group in the online courses. Additionally, during their

separated from that of the cohort (in any modality). With emergent blending, it's also important to determine how this can be achieved with more students entering the program outside of boot camp. Additionally, within this learning environment, based on students' comments, it would seem each instance of interactive experience serves a catalytic role -- strengthening subsequent instances as well as the overall experience. To consider this in a different light -- now that increasing numbers of non-LEEPers are becoming involved in this community, forces of sustainability are shifted and stretched. In a dynamic environment, shifts cannot be avoided. What are the tipping points? How many of these types of shifts can the environment sustain and still maintain its cohesion (or its recognizable elements)? Perhaps cohesion and elements can be fortified through change.

This seems to be the case at least partially in terms of the non-LEEPer shift. Interestingly, during one of the focus groups, a student described the growing group of on-campus students taking LEEP courses as being 'adopted' stating, "*On-campus students who take LEEP courses are immediately 'adopted' into our online groups.*" Rapid adaptation to the LEEP culture without a comprehensive formal orientation and early practice and without the necessity of distance to pursue studies motivating participation can make the transition more challenging and potentially diminish the likelihood of full integration in the community (i.e., there is potential along a continuum from submersion to immersion).²¹ Being adopted by veteran students, as having significant potential to make the transition more effective,

initial fall semester, all students were in a 'similar boat' in terms of newness to LEEP online learning.

²¹ As discussed in Chapter 2, this may be particularly difficult for individuals with certain types of attributes or needs or if situations arise where there is no adoption support in proximity.

exemplifies the value of emergent collective experience in a dynamic environment. This phenomenon -- an illustration of migration (or reverse migration) reflects issues inherent in border crossing or boundary breaking. As the concept and its variations are apt to continue emerging and evolving as learning environments develop, they deserve further study.

5.5 Reflections on Challenges

While the vast majority of collective experiences described by students are positive, a discussion of LEEP (or any other crew's reality) would not be complete without consideration of counterforces -- challenges.²² When individuals emerge as collectives, tensions related to misunderstanding are bound to develop. When students were asked to comment on challenges they experienced (based on FQ10), discussion focused principally on issues of adaptation, time and space management, and seeming incompatibility based on countercultural forces.

5.5.1 Adaptation Challenges

While the adoption model discussed above provides one example of adaptation, the following dialogue (based on a discussion between two focus group participants) illustrates growing pains associated with adapting to the learning environment (in synchronous mode; as well as to a primary example of the type of encouragement extended to newcomers):

[Novice] *Not being able to see the context of what's written [during chat sessions] you don't know is that a joke is that...you know what did they mean by that comment, I'm not sure I*

²² While challenges related to online education are common in the literature (e.g., Hara & Kling, 1999, Song et al., 2004), issues discussed here are enhanced by persistent contextualization. This type of inquiry facilitates the emergence of nuanced understanding. Challenges here also reflect concerns based on multimodal (not online-only) experience.

understand. And then trying to read the text and keep up with what the professor is saying is hard to do too. It can be quite disorienting. I'm trusting that over time it will all get better and worked out, but for now?

[Veteran] *Is this your first course?*

[Novice] *Yes, other than the on-campus one.*

[Veteran] *It does get easier. I mean I feel like, I've done this probably 4 or 5 semesters now, and it gets much easier. You get into a rhythm and it does get easier.*

Concerns about adaptation had also been included prospectively as part of the individual pre-program survey responses (discussed in Chapter 4). While this aspect is not as likely to emerge in post-program reflections because the adaptation learning curve is steepest during the early phases of the program (rather than the latter), it still seems to represent a significant hurdle for novice students (regardless of migration status). This is in line with Mezirow's aspects of transformation, discussed in Chapter 2, and Gibson's (2000) claim that online education may, for some learners, represent the ultimate disorienting dilemma. Fortunately, there are others to provide support.

5.5.2 Time/Space Management

As part of the entrance surveys, students also expressed strong concerns about juggling multiple responsibilities. While the pre-program context related principally to external issues (balancing home, work and school) with time such a precious commodity, it's not surprising additional concerns related to managing both inter-group and intra-group tasks emerge as part of the collective mid-program experience. Examples are presented below:

- My undergraduate didn't require hardly any group work at all and I've had to do a lot of group work [at GSLIS] and it's even harder to coordinate than it would've been with undergraduate work when you're on campus with the students.

- Time – that causes a lot of tension. Not having it and trying to coordinate it especially on the group projects. Time differences – that was big issue to try and coordinate the groups.

- Learning to shuffle all of our personal responsibilities in order to work on group projects is the most difficult aspect of LEEP.

5.5.3 Countercultural Incompatibility

Students in LEEP (as other crews) are on the move. When others block spoken or unspoken trajectories, tensions arise. Certain situations (based on, for example, being new to some or highly interactive) encompass greater potential for competing forces to emerge. In LEEP, synchronous sessions and especially groupwork, lead to tensions and difficulties for some. Students identify these challenges in terms of having to deal with general incompatibility, cliques, poor netiquette, overt competitiveness, procrastination, grandstanding, and political maneuvering.²³ Examples are presented below:

²³ These forces may be considered counter-collaborative.

- *Some of the group work works out really well for me but a lot of it doesn't and I think it is because there are so many different people in the program and different personalities. Some are just easier to work with than others.*

- *Tensions for me are sometimes in the chat you know where there's just little clique conversations going on and you have to listen to it or read it or whatever. And you know you kinda feel like, some people know you and some people, you're just not part of it. That's just before class has even started, but sometimes it happens when a lecture is going on and that's annoying to me and they do have a whisper function.*

- *Some people have a tendency to just jump on and post something for the sake of getting their post up by being the first one to get their post out and they fill up the BB and then the rest of us are like...*

- *Group projects where one depends on classmates and when there is slacking off and/or procrastination, and then grandstanding and political maneuvering and claiming work was done by them but wasn't to cover a job not done. I'm not sure how to overcome this in real life, let alone with LEEP.*

5.5.4 Overcoming Challenges

Within the collective context, students related difficulties in LEEP groupwork in terms of their own personal inadequacy as well as that of others and general incompatibility.

Comments often include strategies²⁴ for avoiding potentially detrimental situations (such as planning and networking)²⁵ and describe having overcome difficult issues in terms of important learning events that will carry on into professional realms. In many cases, difficulties were compared with similar challenges in other aspects of their lives (especially work). The following examples illustrate these issues:

- There are some group tensions. In our relational database group there are sort of like 4 people and there are 2 who are really keen to get everything going. And then there's myself and someone else - I will admit this - who are definitely the stragglers on and we're like yeah we have to get this done, but it's not due for another 6 weeks. Maybe we're the procrastinators and they are - you know there's definitely some tension there, which there always is when you're doing group work. There are different people who have different priorities and they're very concerned about picking a spiffy name²⁶ and you're like 'group 2' is fine with me. I don't know why I even have to choose a name. It doesn't matter - whatever - call it whatever. And they're like what group name should we choose - I don't care. So but I think that's an inherent in group work.

- In one group project, I had a bad experience with someone who couldn't stop researching and stick with the decision we settled on. That was a real dilemma. After considerable

²⁴ Perhaps 'teachable moments' within the peer group context.

²⁵ These may be considered collaborative (cultural) forces manifest as response.

²⁶ Developing a ('spiffy') group name was one facet of group work in LEEP students' first (required) online course. Many students opted to develop something frog-related. During the early years, the 'LEEP frog' emerged as the program's unofficial mascot.

gnashing of teeth in private, I initiated a conversation with other group members. We decided to gently kind of 'herd' her into making a firm decision so that we could move on with the work. It all turned out well after we got her past that point. I would have to say that I learned more about group dynamics on that project than the academic problem we were assigned.

- I have encountered some personalities that have been overbearing and one who was quite hostile. I am proud to say that my cohort has supported me when I have wanted to avoid encounters with these few bad eggs. We also recommend reliable group partners, teachers and classes to each other.

- I've had a bad group experience, but it was a learning experience in and of itself as to how to manage a situation where a group doesn't participate and prodding it forward and it won't respond. So I've learned a lot from that in terms of how to surmount that sort of challenge.

- It's like the work environment. You'll find in libraries that it's very, very group oriented. You'll meet with lots of different people and I think that's kind of the preparation thing they're trying to do.

I found this last comment particularly interesting -- incorporating aspects of application, rationalization, and analysis and expressed as either an epiphany or a teachable moment (or both).

5.5.5 More Challenges of Integration – On-campus Students

On-campus students (N=4) providing mid-program input described relatively more as well as more severe challenges than those in the LEEP groups. This may be a result of migration issues discussed above and/or an example of focus group members feeding off each other's comments (biasing the collective perception/record of experience).²⁷ Throughout the comments (of this minority constituency), themes of contrast and competition (for the professor's attention; us versus them, etc.) are present. These did not emerge within the context of other focus groups. Categories cited above to describe challenges are reused with examples here:

5.5.5.1 Adaptation, Time/Space Management, and Incompatibility

Adaptation

- I can't simultaneously effectively listen to the professor and see/read my classmates' comments and contribute myself. And if I don't contribute then there's no way the professor knows that I'm there. So that's been a problem.

- Misunderstandings are easier in communication without body language.

Adaptation + Time/Space Management

- It's very difficult to coordinate a project that requires tight integration of various components without being able to sit down and look over things together. We email and talk on the phone, but I feel something is missing.

²⁷ The opposite bias is possible in situations where only positive comments emerge. This type of collective auto-perpetuation and tainting is also a factor of general cultural development (within groups, courses, programs, etc.).

Incompatibility

- I found it very a bit disconcerting that so many veteran leepers have such informal etiquette and manner about text chatting casually and opening up about their lives, things commonly that others don't care to hear about. This is a distraction to me.

These concerns partially parallel those experienced by novice LEEP students. As noted above, in addition to attending the ten-day orientation session (boot camp) on-campus together, incoming LEEP students also complete the first required online course together. This provides a second step in integration – an additional adaptation buffer based on being a member of an inclusively (in terms of students [not faculty]) inexperienced group.²⁸ This provides a prolonged sense of collective development based on being ‘all in this together’. However, even beyond this, many incoming LEEP students also take courses other than the required course in their first semester. Here, they too may experience a more intense sense of immersion. In both types of cases (LEEPers and non-LEEPers adjusting to non-introductory courses), there is the potential benefit of learning from veteran students who model norms and behaviors (and provide encouragement). In effect, across courses, the range and ratio of inexperienced to experienced online students in each course varies. So why do non-LEEPers struggle more? It seems this may be a factor of lack of identification between two (one majority, one minority) groups.

²⁸ The only requirement for (all types of) students coming into the LEEP environment to take a course off-cycle (not starting with the introductory courses) is completion of an introductory technology session. While this course entry requirement emphasizes the student perspective (based on user-centered philosophy and approach), it is significantly shorter than the full program orientation model.

As discussed above (in Chapter 3), integration and expansion of GSLIS scheduling options, as hybridization, was beginning to emerge at the time of this study. Consequentially, themes of migration and integration emerge as new issues to be considered and expanded upon within this context.

5.5.6 Finding a Better Fit

Not surprisingly (within this complex environment), other non-LEEP students describe experiencing an opposite sense of integration. These students describe finding a better fit in LEEP based on alignment of diverse personal attributes as well as preferences toward aspects of the multimodal format. The following examples illustrate these experiences of fitting-in:

- It seems like in LEEP classes the students are older and are going back to school after many years. I like that because in LEEP classes there are more people like me, whereas on campus the students are usually younger and right out of school. So with LEEP I feel like I'm with people like myself.

- I prefer LEEP classes to on-campus. I am quite an introvert and don't participate as much in person as I do on-line. I have learned just as much in the LEEP setting as I have on-campus.

One non-LEEP student's observation suggests that increased participation by non-LEEPers will improve students' experience by describing how being less of a minority is beneficial:

- My class this summer seemed to be mainly LEEP students, but my class this fall is probably more half and half – half LEEP, half on-campus. That's kind of nice because not everyone knows each other and so I don't feel like an outsider as much.

Ensuring all students have support²⁹ to overcome barriers of engagement is essential to achieve a thriving learning environment. In the context of collective learning, static states are only possible temporarily. Migration and other new developments based on individual needs and interests evoke change. As new students laden with different motivations, concerns, and competencies (individual forces) come into LEEP, the environment is affected. Structures of and approaches to accommodation need to continually evolve in order to promote integration of diverse realities of all constituents. As this happens, opportunities for individual and collective development are supported.

5.6 Conclusion of Data Analysis Based on Collective Student Experience

This chapter provided analysis of collective student experience as a complement to discussion from the previous chapter emphasizing individual experience. Several questions have been explored including: How do LEEP students interact? How do students apply individual competencies within collective arenas? How are exchange roles, in terms of giving and receiving, manifest? What constitutes valuable collective learning? What challenges are students in LEEP collectively facing? Newly emergent and unique aspects of

²⁹ Whether this is based on peer interaction or other forms (e.g., orientation, access to information and other resources, etc.).

these discussions provide ample opportunities for considering issues in this and other (online/hybrid) learning contexts in greater depth.

In order to extend the discussion, emphasis in the following chapter shifts back to individual experiences. As such, inquiry is focused on understanding consequences of engagement. As the crew nears the end of the voyage, what's new?

CHAPTER 6: MANIFESTATIONS OF INDIVIDUAL TRANSFORMATION

In Chapter 4, students' individual experiences were considered based on the time they were beginning to embark on their LEEP journey. In Chapter 5, collective experience based on real-time engagement was explored. This chapter seeks to complement these earlier discussions by revisiting individual experiences at the end of the expedition, as students are poised to graduate.

This chapter includes four sections. All are based principally on retrospective analysis. The first two sections focus on understanding individual student transformation in terms of career aspirations and professional competencies (and thus also includes data collected as pre-program survey data). The third considers students' reflections on studies including other frontiers of engagement.

The first two sections in this chapter involve analysis of pre-post matched data. As indicated in Chapter 3, post-program survey participation was based on 83% response rate. While this is not as complete as the 100% achieved for the pre-program sample, for purposes of this analysis it is considered representative. Based on the wide range of complex situations students' lives entail and significant forces of transition they may face upon completion of studies, 83% response is considered a reasonably good rate of response.

6.1 Professional Goals

Within this section, the topic of career aspirations in terms of professional goals is

discussed. Similar to the earlier analysis of individual experiences (in Chapter 4), it is based on self-defined constructs. However, as this discussion is meant to explore student experience across the duration of the program, it incorporates data collected in both entrance and exit surveys (as pre-post match).

Upon entry, all 264 students were asked if they had specific career objectives (PQ 12) and, if so, to name the type of position(s) they intended to pursue. A total of 392 responses (average of 1.5 per student) were provided. Numbers of responses are evenly distributed across cohorts with cohort 8 slightly less responsive and cohort 9 slightly more responsive (7 - 100 responses (1.5/student); 8 - 136 responses (1.3/student); 9 - 156 responses (1.6/student)).

There is also slight variation of percent responses between cohorts (e.g., more responses for *rare books* among cohort 7 and more responses for *administration* among cohort 9).

However, there are no identifiable significant variations across position types in the three years.

Of 264, sixty-one students (23%) indicated they did not have a specific career objective. 184 responses (47%) indicated preference by (one or more) type of organization. 197 responses (50%) indicated preference by (one or more) function. Those providing more than one response included both either-or (e.g., *either school or smaller public library*) and combination function-organization (e.g., *reference service in an academic library*) responses. In these cases, both responses were coded. Eleven students (3% of responses) indicated they hoped to explore several options without specifying any particular area.

6.1.1 Summary of Career Objectives by Incoming Students

The following lists provide a comprehensive inventory of initial (pre-program) career objectives. Both summaries (organization and function) include the number of students indicating interest within emergent subcategories.

6.1.1.1 Career Objectives by Institution

Academic library – 60

Public library – 44

School library – 40

Special library (including corporate, legal, and medical) – 26

Special collections/archives – 13

Government – 1

Total responses indicating interest by institution - 184

6.1.1.2 Career Objectives by Function

Children/youth services – 28

Reference - 28

Administration – 26

Research – 20

Instruction – 12

Rare books – 11

Collection development – 10

Knowledge management - 10

Systems – 10
Digital librarian – 9
Information technology – 9
Outreach - 7
Cataloging – 5
Tech services – 5
Information policy – 3
Preservation/conservation – 3
Indexing – 1
Total responses indicating interest by function - 197

Upon completion of the program, students were again asked about their career plans. Of the 77 students who completed an exit survey, 74 (96%) responded to this question. Of these, 17 (23%) were unmatchable because they had not responded to the question on the entrance survey. This, in itself, may be considered as a change – in terms of being willing and/or able to define professional goals. Of this group, 10 (59%) had not indicated prior experience in libraries (in terms of motivation for study or competencies) beyond use. Thus, it's not overly surprising that their career goals were not well defined.

Of the 57 matches, 40 (70%) did not indicate a change in career plans. For those (N=17; 30%) noting changes, these included new institutional and functional preferences. The complete list of changes is presented below in Table 6.1.

Table 6.1: Pre-Post Program Career Objective Changes

Entrance Survey Response	Exit Survey Response
Academic library	Cataloging
Academic library, Archives	Cataloging, Reference
Academic library, Children, Medical library	Digital librarian, Reference
Administration, Cataloging	Instruction, Research
Academic library, Archives	Public library
Academic, Collection development, Public library	Reference
Exploring options	Academic library, Special library
Law (special) library	Public library, Reference
Preservation	Reference
Public library, Reference	Cataloging
Academic library, Public library, Reference	Medical (special) library
Outreach, Research	Cataloging
School library	Indexing
Special collections	Reference
Special collections, Youth services	Tech services
Special library	Academic library
Systems	Reference

Many of these responses indicate a significant change of focus, whereas in other cases new interests/areas are being considered along with those (or some of those) indicated in the entrance survey.

As with incoming career goal, change of career focus is defined more frequently as new objectives by function (rather than institution) suggesting that while in the program students discover new areas of LIS. Reference and cataloging are indicated as new trajectories for 10 out of the 17 responses. The increase in cataloging interest may be considered the most significant as it was only indicated by 5 students in all entrance surveys (N=264) and it is included in 4 out of 17 changes. It would seem that a relatively high proportion of LIS students discover the joy of cataloging (Berman, 1981) during their studies.

Additionally, interestingly, there are no function-to-institution changes represented in the data. Perhaps this type of change is not common? Since these are changes indicated by individuals with some knowledge of the discipline, it would seem that definition by function represents a higher level of understanding of LIS.

Of those who indicated a career goal initially and then changed focus at the end of studies only 5 of the 17 (29%) also noted experience in libraries (as an aspect of motivation or competency). As with those who changed from undefined to defined (described above), it's not surprising that those without (much identified significant) experience would develop knowledge of and interest in new career trajectories during studies.

6.2 Professional Competencies

As described in the previous section, there are many different career trajectories within LIS. In addition to considering developments in terms of students' specific career interests, data was collected and analyzed to investigate students' perceptions of experience across a

number of (pre-defined) professional competencies based on specific elements of knowledge, skills, and attitudes.¹ How have the crewmember's skills developed during the voyage?

This segment of the data collection is based on using a 1-4 point scale (extensive; moderate; relatively little; none). Students rated themselves across nine general academic and professional competency and LIS-specific competency areas.² Since the scale (1-4) resulted in small (<4) mean scores, they have been converted to percentages (using the formula $(4 - N) * 33.33$) with 100% representing *extensive* competency, 67% *moderate*, etc. for the discussion. For example, the mean score for question PQ13 was 1.7904. As a percentage, this is 74%. Table 6.2 provides summary data for students' characterizations in the nine scaled questions.

All entrance survey responses demonstrate stable patterns across subgroups (gender, cohorts, etc.) for all questions. Entrance professional competency response trends are illustrated below in Figure 6.1.

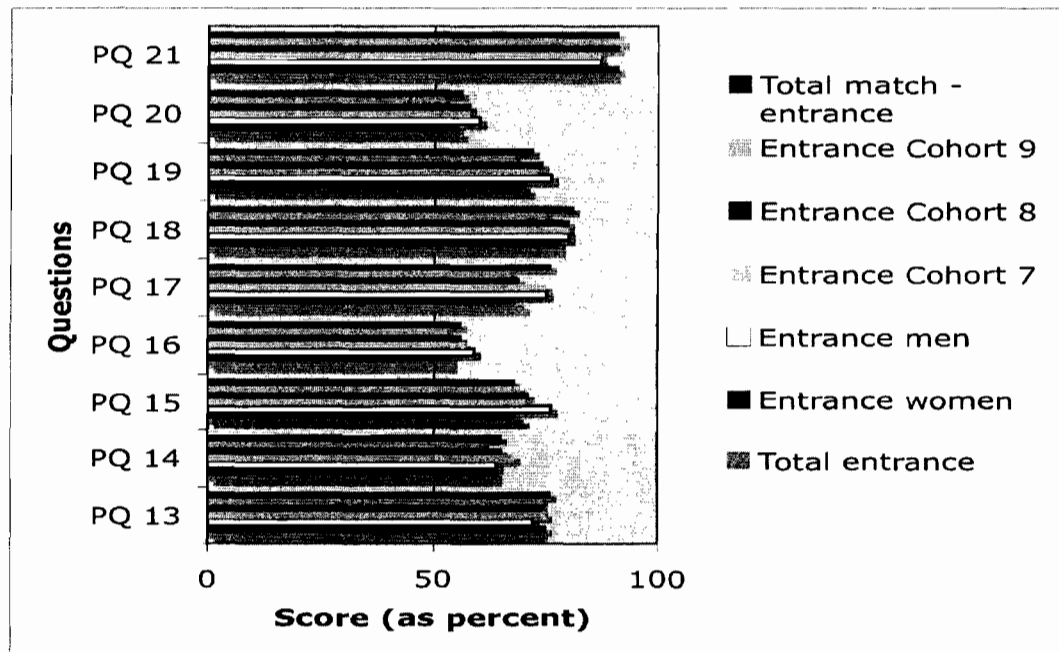
¹ Knowledge, Skills, Attitudes, and Others (KSAO) is a common approach to defining professional competencies based on human resource literature. See, for example Arvey et al. (1996).

² Questions are included within this section below and in Appendix B. Also see Chapter 3 for additional discussion of PQ 13-21 competency areas.

Table 6.2: Mean Percentage Scores from Professional Competency Self-assessment

	PQ 13	PQ 14	PQ 15	PQ 16	PQ 17	PQ 18	PQ 19	PQ 20	PQ 21	PQ 13-21	PQ 13-16	PQ 17-21
Total entrance (N=264)	74	64	70	54	70	78	71	56	90	70	66	73
Entrance women (N=209)	75	64	68	54	67	78	70	55	91	70	65	73
Entrance men (N=55)	72	64	76	59	75	80	76	60	87	72	68	76
Entrance Cohort 7 (N=67)	75	68	70	57	75	80	73	58	87	69	68	75
Entrance Cohort 8 (N=101)	74	65	71	56	69	80	74	58	91	71	67	74
Entrance Cohort 9 (N=96)	74	61	69	53	67	75	68	52	92	68	64	71
Total match - entrance (N=77)	76	65	68	56	76	81	72	56	91	71	66	75
Total match exit (N=77)	87	75	85	78	87	93	91	85	96	86	81	90
Percent increase (77 matches)	11	10	17	22	11	12	19	29	5	15	15	15

Figure 6.1: Mean Professional Competency Ratings from Entrance Survey by Subgroups



The pre-post survey data reveals some interesting trends. Comparing matched entrance and exit responses, the mean increase in students' self-assessments of professional competencies is 15%. The range of change is 24% (5-29%). The largest increases (29, 22, and 19%) are seen in relation to PQ20, PQ16, and PQ19. The least change (5%) is that of PQ21. However, as the mean entrance score for PQ21 was 91%, there was little opportunity to see a larger increase for this question in the exit responses. Percent change in mean scores across competency areas reflects changes in perception in terms of both general professional competencies (PQ13-PQ16) and LIS-specific competencies (PQ17-PQ21). They are intermixed across the entrance and exit spectrums.

Stable mean entrance scores across subgroups seem to indicate that competencies with low scores are considered to represent the most advanced (LIS-specific and general professional) areas (i.e., PQ16, PQ20, PQ14, and PQ15 are areas where incoming graduate students (in LIS) are likely to have the least expertise). If this is true, it seems logical that the response from this part of the spectrum based on a LIS-specific competency – *knowledge of social/technological change impacting information cycle* (PQ20) has the largest increase (29%) upon completion of the MS in LIS. It's also not overly surprising that upon completion of an online program (with relatively few face-to-face meeting opportunities), *experience and comfort with public presentations* (PQ14) has not increased substantially (10%).

As noted above, entrance scores that are high have less potential to increase as exit scores. That said, it's significant that here too a LIS-specific competency – *experience searching for*

information (PQ18) in the upper range of the spectrum (including PQ13, PQ17, PQ18, and PQ21) shows the greatest increase. Again, it seems reasonable that this score should indicate the most relative growth (upon completion of the MS in LIS).

The following table lists all mean competency scores by rank based on entrance survey responses and includes the corresponding exit survey score for comparison.

Table 6.3: Entrance and Exit Self-assessment Professional Competency Scores

Professional competency	Entrance Score	Exit Score
PQ16 <i>Knowledge of evaluating the impact and quality of service</i>	56	78
PQ20 <i>Knowledge of social/technological change impacting the information cycle</i>	56	85
PQ14 <i>Experience and comfort with public presentations</i>	65	75
PQ15 <i>Experience with/knowledge of carrying out a research project</i>	68	85
PQ19 <i>Experience with/knowledge of analyzing information quality and content</i>	72	91
PQ13 <i>Experience and comfort working in groups</i>	76	87
PQ17 <i>Current level of ability with computer and communication technologies</i>	76	87
PQ18 <i>Experience searching for information</i>	81	93
PQ21 <i>Level of interest and commitment to the field of LIS</i>	91	96

At this point, it's prudent to recall that scores represent self-assessments. As part of this study, it's not possible to know if students score themselves more harshly or leniently than other people/schema would. That said, having the same evaluator pre- and post- provides a

form of consistency in the evaluation. Additionally, it is plausible that students may score themselves more harshly post-program if they developed higher expectations (for themselves) related to the competencies.

6.3 Individual Reflections on Experience

In the previous sections, analysis of pre-post data revealed that students experience and perceive many types of academic and professional development during their involvement with the program. This section also includes a comparison of students' pre- and post-program perceptions though they are not coupled as tightly as in the previous discussions. Here, students' experiences as revealed in their general post program reflections are presented and, as possible, these are juxtaposed with initial pre-program issues.

As noted above, a total of 77 students completed both entrance and exit surveys. Those able to finish their program during the course of this dissertation research (and thus have an opportunity to complete the exit survey) were those who started earliest as part of cohort 7. As noted in Chapter 3, the exit sample represents 83% of all graduating students who had completed intake surveys during the period of study. Of post-program respondents, 75 (97%) include comments about their individual experiences as part of post program reflections included in the exit survey (EQ22 & EQ23). A total of 163 comments about the individual student experience were presented – a mean of 2.1 individual student reflections based on individual experiences per student. What do crewmembers say about their time at sea?

6.3.1 I liked LEEP because...

Because of the density of discourse that emerged in the reflective context, concepts herewith are considered using the technique of sentence mapping (based on Holmberg's [1995, p. 196] description of Ganor's [1991] model).³ Using this approach, discussion is based on each of the two main categories (I liked LEEP because... and I didn't like LEEP because...) and incorporates presentation of secondary and tertiary, etc. themes where applicable.

One-hundred and forty-five (89%) of the comments included in post-survey reflections were based on the construct of *I liked LEEP because...* Within the purview of liking, five secondary themes emerged:

- ...it was better than previous (onsite/face-to-face) experiences...
- ...it met my [individual] needs...
- ...it was interactive...
- ...I have expanded technology competencies...
- ...now I'm better prepared...

Tertiary elements emerged most frequently in relation to the second, third, and fourth themes. Discussion of each theme and elemental facets is presented below.

6.3.1.1 ...it was better than previous experiences...

As discussed in Chapter 3, this study does not focus on compare-contrast analysis, but considering students' previous educational experiences were almost entirely grounded in

³ This approach is only used to facilitate analysis. Categories within the dynamic context are not rigid and themes and elements shouldn't be considered mutually exclusive.

onsite learning, it's not surprising that this theme emerged as part of post-program reflections. Examples of students' comments in this area are presented below:

- *I prefer the online environment to the traditional classroom.*
- *I think the LEEP classes compare favorably with in person classes.*
- *I found the LEEP experience to be, for the most part, a refreshing alternative to "traditional" classroom settings.*
- *I had a significantly better overall experience in the LEEP program than in any of my prior classroom settings.*

Several comments based on the compare-contrast paradigm also indicate students consider LEEP to be comparable (not superior to) onsite experience.

- *My online experiences were at least as positive if not more positive than my experiences in traditional settings.*
- *The online experience had equal value, for the most part, as compared to traditional classroom settings.*
- *The level of discourse in the classes was comparable to anything I've had in person.*

Other comments implied students weren't quite sure or weren't quite sure it was okay to reveal that the comparison seemed equal:

- *I don't think I missed out on any experiences compared to a traditional classroom.*
- *I didn't feel that I was missing anything by being a LEEP student.*

Finally, comments included within the compare-contrast group also incorporate the theme of meeting a need (based on overcoming the constraint of access to onsite learning, being alert, and able to focus).

- The experience was better than I was expecting. Although I would have preferred to learn in a classroom setting, the online experience offered by LEEP was really quite effective.

- I found that I was more alert than I probably would have been in a traditional environment.

- I think the online classroom also enabled me to focus a bit more on the topic rather than worrying about taking notes.

- I think I learned much more in the LEEP program than I would have in a traditional setting. LEEP forced me to focus much more on my studies.

In this case, because compare-contrast comments are relatively general in nature, they provide only superficial insights of difference. Specifics such as what is different and how is it different need to be considered through other structures.

6.3.1.2 I liked LEEP because it met my [individual] needs...

Within this construct, students provided details of how LEEP was meeting a variety of individual needs. These are explored below in conjunction with several examples. Those presented first are very general:

- The LEEP program was very valuable to me.

- It was wholly worthwhile.

- The LEEP experience is an excellent one.

- I loved the program.

Additional comments include benefits based specifically on aspects of learning based on general and specific areas:

- I consider LEEP the best educational experience I've ever had, and one of the best life experiences too.

- It was an excellent learning experience.

- Incredibly educational

- I felt like I learned a ton.

- I did learn a lot about a field that was virtually new to me.

- It enabled more creativity.

- The online classroom enables and, often, demands all students to participate in discussions and delve into deeper threads.

- My writing and communication skills have greatly improved.

- I feel that LEEP has provided me with a solid foundation in the principles of library and information science.

- Perfect mix of practical and theoretical. I can write an entire collection development policy and then have to consider and explain the effect of collection development policies on censorship requests, community growth, and technological change.

Recalling 31% of the entrance surveys indicated issues of situational-challenge impeding pursuit of studies and 26% noted concern related to juggling aspects of already busy lives with study, it's not surprising that exit survey respondents indicate appreciation for

flexibility afforded by this online program as part of their post-program reflections.

Comments indicated an appreciation for the flexibility in terms of general participation and overcoming a wide variety of time/space barriers.⁴

- I may not have gotten the degree without it.

- The experience as an on-line student made this degree possible for me.

- I enjoyed the relative freedom and flexibility of taking LEEP classes.

- Online experience offered more flexibility.

- The flexibility of being able to do classes from any location is wonderful.

- LEEP offered me access to a quality program without having to disrupt my family by physically moving to a new location.

- As an older student, settled into a life and not interested or able to move to Urbana, LEEP offered a wonderful solution.

- As an older returning student, I felt very accepted.

- I can't say enough about how wonderful it has been to participate in class from the comfort of home, rather than having to drive to a college or university somewhere, especially after having worked at my job all day!

- Being able to go to class while at work proved very valuable.

- I could tailor my course requirements to fit my personal and professional life, even as my employment obligations changed over the time I was in the program.

- I had more flexibility when it came to planning for my classes.

⁴ Internal aspects of flexibility (i.e., to engage) are discussed above as part of the reflections of the robust model.

- *There were several days where I was sick and could not have attended a traditional classroom, but was still able to participate online.*
- *I was able to complete this degree while living abroad.*
- *I sat in an expensive ergonomic office chair at home, while in most classrooms the furniture is terrible.*

6.3.1.3 I liked LEEP because it was interactive...⁵

Secondary themes in this section are considered using an adaptation of Moore's (1989) framework of interaction.

6.3.1.3.1 Interactions Based on Student-Other

As discussed in the previous chapter, when a learning environment is based on the scale of a program, many actors (i.e., not just a teacher and classmates) are involved contributing to others' experiences. In LEEP, these include classmates, cohort members, other students who organize activities and events whether onsite or online of benefit to online students, as well as instructors, guest lecturers, librarians, technology and other support staff, alumni, etc. While many of these actors and their functional presence⁶ are based on wider distribution and may consequently seem invisible, their considerable contributions to the student

⁵ Interaction may be considered an extension of the previous section based on meeting students' needs as individual learners. However, because students did not express it in these terms and because it is a large and complex variation, analysis is presented separately.

⁶ This seems to suggest that additional presence, beyond the three types described by Garrison et al. (2000) in the Community of Inquiry model exists, at least in the context of a full program of study.

experience cannot be denied or ignored although they are not the emphasis of this work. These actors and their actions may be considered as part of future research.

6.3.1.3.1.1 Student-Student(s)

Examples of student-student interactions of perceived significance to LEEP students are presented below:

- *Seeing everyone's work made mine better, not just from a competitive standpoint, but also because it mattered to a broader audience. Sharing as we did gave us a broader experience and understanding than quietly producing 10-page papers would ever yield.*
- *Valuable intellectual insight that all of my fellow students brought into each course.*
- *Different from other environments is the commitment to collaboration and interacting with peers.*
- *The peer interaction is valuable since the students bring such a diverse and rich background to the classroom.*
- *I also appreciated the opportunity to share a classroom with students from geographically diverse areas.*
- *Variety of backgrounds of classmates brought wealth of knowledge to each class.*
- *Working side-by-side with students already working in the field offered a much more enlightened perspective of the field.*
- *In LEEP, the community of learners provides motivation and erodes the isolation of distance learning.*
- *Because there was a real sense of community within LEEP, I got to "know" my classmates in a way that I wouldn't have in another classroom setting.*

- I learned so much from my classmates.

6.3.1.3.1.2 Student-Faculty

While interaction with faculty is not the main focus of this inquiry, its emergence in student reflections is significant. This is illustrated in the following comments:

- The faculty's commitment to ensuring communication between students and to making themselves available is outstanding.

- I felt I have observed how good teaching can get.

- [One instructor] inspired me to do my best, to keep asking questions and to keep seeking answers (and to not be afraid to say "I don't know").

- I loved my professors!

6.3.1.3.1.3 Student-Other(s) (many or undefined)

Additional comments described connections with many:

- I was impressed by the level of community that was fostered in the online environment.

- I especially appreciate all the friends made during the program.

- Tight sense of community, much more communication between students, and between students and faculty.

- LEEP allowed for greater interaction between teacher and student as well as between students.

- Some very helpful and supportive faculty and staff.

- The support I received as a student through the Instructional Technology Office, the Academic Outreach Library, and the LIS Library was great.

- I was really happy that [the librarian] kept the LIS Library open as much as she did for us LEEPers.

- The academic outreach library staff was very helpful about sending me books I needed.

Student-other reflections encompass both affective and cognitive benefits. They provide a clear indication that “closeness is not determined by geography, but rather by the relationship between the participants, the dialog they conduct, and the feelings they have toward each other and the educational system in which they participate” (Bouhnik & Marcus, 2006, p. 304).

6.3.1.3.2 Interactions Based on Student-Content

Interaction based on student-content was described broadly as well as within courses:

Program-level

- Overall, I found the program to be very worthwhile and challenging. The diverse array of courses offered catered to my breadth of interest in...well...everything.

- I appreciated the rigor of the online curriculum. Course content was challenging enough to provoke investigation and thoughtful consideration while presenting LIS theory and applications.

Course-level

- The level of information covered in the classes was surprisingly thorough.

- Many innovative and rigorous assignments

- It's demanding. I found the LEEP classes to be of high caliber and high expectations.

- I love the topics we discussed so that made it easy to stay on track with the readings and assignments.

6.3.1.3.3 Interaction Across Modalities

Appreciation for interaction based on all modalities included in LEEP was expressed:

6.3.1.3.3.1 Face-to-face

- I really enjoyed boot camp and would not trade that experience for anything.*
- I loved the campus visits.*
- I will miss the campus visits.*
- Every on-campus week felt like a reunion.*
- Some of my classes made good use of the on-campus time to build community of learners.*

6.3.1.3.3.2 Asynchronous

- I was **given the time** to really mull over the topics.⁷*
- I've enjoyed the 24/7 **access**. I could ask questions of my instructor or classmates at anytime via email or the bulletin boards, whereas in a "traditional" class, I would most likely have to wait until class time in order to ask questions.*
- The bulletin boards were a great way to get to share ideas.*
- The audio archives of both lecture and chat are invaluable. I often listened to certain lectures 3 and 4 times over. Returning to the archive for **clarification** on assignments was highly beneficial.*

⁷ Considering how precious time is to many of these students, this is a significant factor of appreciation.

- *The bulletin board option allows even the **whole class to respond** to every topic/question/statement posted as opposed to the "one at a time" situation of a "traditional" class. Plus responses were **not limited to class time**, but occurred outside scheduled class time.*
- *Using email, bulletin boards, or live class chat provided a buffer that allowed me to **express myself comfortably**.*
- *In the bulletin board postings and written chat exercises, I felt more **accountable**.*
- *I felt more **responsible** and tied to the work for each class because the **bbs increase personal accountability**. Moreover, the archival nature of LEEP made the work and discussions more **meaningful** - less ephemeral than the communication that occurs in a traditional setting.*

6.3.1.3.3 Synchronous

- *Having the lecture with chat screen was an impactful way to learn.*
- *With the chat and the audio, it was truly almost **like being there**.*
- *An online instructor is basically a radio broadcaster, so there is **no room for dead air**.*
- *I really loved being able to **do things while a lecture was going on**, most particularly being able to look up information, illustrations, and websites.*
- *I enjoyed multitasking - this environment provided a lot of **sensory experience**, beyond a physical lecture.*
- *I felt that it was easier to ask questions and be **"heard" and understood** by everyone in the class, since the question appeared, written, before everyone's eyes. I feel that this alleviated some stress or hesitation when asking questions.*

- *All questions from students could be logged and could receive a reply at any time during a lecture, which **permits even the shyest students to participate.***

Comments also emphasized the benefits of engaging across modalities:

- *There are many levels of interaction, which make the experience more valuable for all attendees.*

- *I was pleasantly surprised by the degree of social interaction that was possible.*

- *The only thing LEEP is missing is a professor pacing back and forth in front of the class, and I can do without that.*

As education continues to expand across modes, there should be new opportunities to meet students' needs. As Martyn (2003), describes, hybrid models may employ, "the best characteristics of online education and the interactivity that typically characterizes face-to-face classroom instruction" (p. 18). Here, "various personalities and learning styles" can be easily accommodated. (p. 23) While face-to-face classrooms don't always exemplify robust interaction, it's assumed Martyn's comments are based on those that do.

6.3.1.3.4 Interaction across Content-Format

Initially, format may get in the way of content learning:

- *The learning curve was impacted by the online experience. Once I adapted (probably after my second online class) I felt secure and was able to progress rapidly.*

This student's comment seems to reflect LEEP students' typical steep early learning curve.

Other research suggests similar experience related to both format and content. For example,

Arbaugh (2004) notes, “students need to take at least two online courses before drawing conclusions about this delivery medium” (p. 169). Bates (1999) suggests that incoming students “complete the mental transformation of thinking like information specialists within a few months” of beginning studies (Subject Expertise section, ¶ 3).

6.3.1.4 I liked LEEP because I have expanded technology competencies...

As part of the entrance surveys, students expressed concern about technology. Reluctance to embrace this aspect of online learning is echoed in post-program reflections, but here, this is somewhat neutralized with the sense of accomplishment and vigor shared by those who overcame this barrier.

- LEEP curriculum forced me to become more "technology-oriented" which is probably not something I would've embraced otherwise.

- Because we are forced to work with technology, it naturally helped me to become more technological literate.

- The necessity to use and learn more about using computers, added valuable skills to my education.

- My technological skills were increased tremendously – a very high value for me.

- The technological component served as an enhancement to the knowledge and understandings that ultimately I gained.

- I gained a better insight and appreciation about technology.

- The skills I've picked up by jumping in and engaging with technology seem to get a very good reaction from prospective employers.

- After the first month I became comfortable with the technology. Then I was addicted.

6.3.1.5 I liked LEEP because now I'm better prepared...

Several students linked LEEP experiences directly to preparation for their future career:

- *The practicum experience was very rewarding for me.*
- *I will benefit from this learning in my career.*
- *I am well qualified for a wide range of jobs in library and information science.*
- *I think it prepared me very well for my work.*

6.3.2 Concerns

As part of students' post-program reflections, concerns were also expressed. These may also be understood in terms of responses based on three constructs. – individual issues (frustration related to concerns discussed pre-program; e.g., time, lack of experience, etc.); program issues (based on mode of delivery and institution/curriculum specific issues); and external factors. Examples of each type of concern are presented below:

6.3.2.1 Individual Issues

- *LEEPers need to be **checking those boards daily**, which was often hard to do.*
- *As a middle aged student coming from outside the field of library science, I sometimes felt at a disadvantage because of **my lack of experience** in searching technology and information system design.*
- *The only thing I found to be a problem during class sessions was the **ability to communicate my confusion** when thinking through a concept being presented. It might be interesting to add some icons representing level of understanding that students could select*

for compilation to the prof -- a barometer of sorts to help the prof judge if the topic could be addressed with more speed or more repetition.

*- I liked everything but the **dreaded group projects**. Those are just too hard for distance education students.*

6.3.2.2 Program Issues

*- What I missed most about the traditional classroom experience was the opportunity to spontaneously **get together with other students after/before class to socialize or study**. The LEEP weekends were excellent, but I did miss the day-to-day socialization.*

*- I regretted not **having physical access to the UIUC library** but academic outreach were very helpful about sending me books I needed.*

*- I'm not sure this is a format I'd recommend to a young person who hadn't had an **on-site university experience**, but it works for motivated, graduate students.*

*- My one complaint is that a **more diverse range of LEEP classes** should be offered.*

*- I would like to see **a class devoted to the school library setting**, which includes the educational aspects of teaching in the school library.*

*- I would have enjoyed working on an **extended project**. Publishing should be encouraged.*

*- I was bummed that all the **numbers for classes changed** since that happened in the middle of my LEEP experience.*

*- I would have loved to have had **more contact with an advisor** but I understand that is hard for full-time faculty to do. I was glad to have other staff filling in on this aspect of the program.*

*- I would have liked **more UIUC based instructors**. Quality of adjunct instruction varied.*

UIUC staff provided, in general, higher quality classes and student interaction.

6.3.2.3 External Forces

*- My **jerky employer** did not help emotionally or monetarily so I needed to continually charge up and pay down my credit card to be able to afford LEEP. I hope that the new scholarship fund will help other people with that.*

*- The **stigma associated** with being a student with an "Online Degree." I've had a number of librarians turn their noses up at me when I say I got my degree online. They didn't think an online education would possibly teach me what I needed to know about being a librarian. Their loss.*

*- Now that I'm looking for a job, I'm having a hard time knowing where to turn. The instructors, while very willing to provide support and references, are unable to help me **tap into the job market** in my region.*

Each of these types of issues may be considered a counterforce to the individual student's experience in LEEP. Thus, each deserves intervention. While a comprehensive discussion of how this takes place at GSLIS is beyond the scope of this paper, information on the general approach is appropriate. In terms of individual student concerns, these are addressed by advisors and student services and technology support staff. Issues based on program-level concerns and external forces are reviewed and responded to on a regular basis by GSLIS faculty and administrative staff as part of a multifaceted process of continuous quality

review.⁸ Over a decade after online education emerged in LIS, understanding of different issues and models of distance, online, hybrid, etc. education is still very incomplete. Based on many post-graduation conversations, most LEEP students note they are well-received by potential employers based on being innovative and technology-savvy in addition to exhibiting other basic professional competencies. However, as recent discussions reveal (Glover, 2005), this is not a universal experience.

6.3.3 LEEP Beyond School

To conclude a discussion of individual student experiences in LEEP, I would be remiss to not mention that the essential reason (as described in Chapter 3) for beginning the program is to complete and leave with new knowledge (again, broadly defined) to effectively function in other places (whether by boat or other means (contexts) and with other tools).⁹ Here, I briefly revisit this theme by offering a few examples of how students describe transferring knowledge gleaned in LEEP to apply/share in professional settings.¹⁰

Statements illustrating a wide range of *beyond school* applications are presented below:

- It's making me look at the work that I do differently.

⁸ Challenges discussed as part of the collective experience (in Chapter 5) are also being considered as part of this approach. For example, those related to non-LEEP participation in LEEP, hybridization, etc., are issues members of LEEP-TNG (introduced in Chapter 3) grapple to understand and improve.

⁹ As part of the study, I did not include a specific question on this aspect of the student experience (i.e., students offered these insights without formal direction as part of the focus group discussions.)

¹⁰ While, it's beyond the scope of this study, these external connections may also be considered in terms of collective contribution types (encouragement, information, perspective) as discussed in Chapter 5.

- I have been able to translate the experiences that LEEP has given me to the work that I am doing with an on-line reference service.

- What LEEP has done at my work is that it has opened up opportunities for me to talk to other people. People that I know by face or people that I know by email interactions. I'm in collection development now and it gives me a total in to go and speak to the selectors.

- I find a lot of people I work with like to see the articles that I'm reading.

- It's kinda like going to conferences, the more you learn the more you get to go back and do.

- I think that as students we need to keep that enthusiasm and carry it back and kinda rub a little bit of it off on the others. Light a fire.

CHAPTER 7: UNDERCURRENTS

Based on an interest in better understanding a complex constituency in a complex environment, learners and learning in LEEP, this inquiry has been guided by Deweyan philosophy and a student-centered approach. In recognizing that it is challenging to build understanding because of the complexity of facets involved,¹ several strategies were used to access and consider students' experience.

In this chapter, undercurrents—deep, basic patterns and relationships—are explored. First, I present a brief summary of issues that emerged in the preceding chapters particularly related to each segment of data (entry, engagement, and completion) based on students' experience. Following this, I move to a general discussion, an opportunity to consider major themes drawn from across concepts. Finally, I consider several options for future research.

7.1 Review of Issues Across the Program

As noted in Chapter 1, LIS education is concerned with leadership development. This study was constructed to explore this topic within a particular learning context through a student perspective. In Chapter 2, a literature review provided a theoretical framework for the study. Research on learners and learning related to the study were discussed and LIS as an interdisciplinary area with core features was described. Chapter 3 presented details of methods in this particular case. In Chapters 4-6, students' individual and collective

¹ As Schmidt (1997), notes, “none of the standard or traditional assessments come close to measuring the deep, personal knowledge learners have” (p. 133).

experiences across the program of study were explored. A light nautical metaphor was used to enhance the discussion. Each chapter considered progressive facets of the journey. These are reviewed briefly in the following sections.

7.1.1 Entry

Discussion in Chapter 4 considered issues of importance and potential utility to incoming students (motivation, concerns, and pre-program competencies). Upon entry, students indicate a motivation to join the program based on a combination of factors. Major influences involve past, present, and future orientations including previous experience(s) in LIS, a variety of current conditions affording pursuit of a degree, and specific interests in pursuing professional, personal, and academic development. Incoming students also express a variety of concerns. These include external factors, including juggling multiple roles and responsibilities and paying for studies; internal factors related to having a positive learning experience – being ‘online’ and coping with academics and technology. Finding employment upon graduation spans both external and internal concerns. In some cases it’s perceived in terms of market forces and in others in terms of individual competency. Students also share details of the wide spectrum of competencies they bring into LEEP. This is particularly valuable in terms of understanding in situ constructivism in subsequent chapters. LEEP students are talented and curious individuals with experiences in LIS, technology, academics and research, teaching and youth work, administration, communication, service, and international/intercultural contexts. They also indicate being interested in engaging based on attributes representing the affective domain (e.g., passion).

Incoming LEEP students' positive attitudes and diverse experience learning and leading offer much potential capacity for new engagement.

7.1.2 Engagement

Throughout their studies, LEEP students are involved in complex engagement spanning modalities at both the program and course levels. This is supported by and facilitated through existing and emerging community structures (e.g., pedagogical and curricular models, technologies and technology support, access to ample library resources, etc.).

Within this environment, a sense of community is promoted and continually reinforced (e.g., beginning as a cohort in bootcamp and staying partially together during the first required online course, entry into virtual space via the LEEP portal, ongoing experience in groups, returning each semester for on-campus sessions, etc.).

Within this context of ongoing support and interaction, students reveal they draw upon much of their pre-existing knowledge base as part of LEEP activities. In terms of collective engagement, as givers and receivers, students emphasize sharing encouragement, perspectives, information, and questions. In LEEP, students “find their voice” and apply it to “coconstruct knowledge and to share classroom authority” (Smith, 2005, pp. 192-193). Students' comments reveal the presence of an underlying competency based on service orientation plus communication. It seems that this may be the basis of leadership development in LEEP, which is manifest in supporting others' adaptation and adoption.

Simultaneously, students are building academic, professional, and technical knowledge. At first there is a shift into unfamiliar circumstances (as described by Mezirow; in Chapter 2). Then, an authentic, multifaceted experience similar to an apprenticeship emerges where there are opportunities “for interaction with practicing professionals, and the acquisition of the attitudes, norms, and ‘expert thinking’ that define true professional practice” (Anderson, 2001, Dimensions of the Hidden Curriculum section, ¶ 16).

As part of their experiences in LEEP, students encounter challenges, which may be considered counterforces. These include individually and collectively based issues. Some students struggle to manage intra-program responsibilities--in particular those related to time and group projects--in combination with other roles. Others are dismayed by peers’ ‘inappropriate’ behaviors. In the context of the LEEP environment, which is filled with largely positive forces, these types of struggles may also be considered as opportunities to develop new competencies and build understanding.

7.1.3 Completion

Towards the end of their programs, students manifest significant transformation, both in terms of goals (related to career interests) as well as perceived levels of competency related to a variety of professional and LIS-specific areas.

LEEP students have generally very positive reflections on their experiences. Most students *like* their LEEP experience. Students like LEEP because it’s better than previous formal education experiences, because it met their pre- and co-existing needs including being

interactive with multiple opportunities to engage, because knowledge of technology was augmented,² and because it positively contributes to exploring post-program frontiers.

The intensity of *liking* described (as in some of their own words) often reveals varying levels of fondness – many quite strong. While this is surely influenced by just having achieved a significant goal (completing the program), this new perspective is quite removed from the types of pragmatic descriptors most students use to describe motivations for joining the program. However, as indicated by the pre-post question about level of commitment to the field, there does seem to be an underlying passion for the discipline. Did the passion surface? Did the interaction promote this type of transformation of perception; of being? In LEEP, this passion fuels student engagement and at the same time is allowed to grow more intense and sophisticated within the context of nurturing collective relationships.

When didn't this happen? Students offer a number of issues based on individual, program, and external dimensions. As above, these apparent counterforces can be redirected toward positive outcomes if they are channeled correctly. This is the responsibility of program leaders (i.e., all involved).

As part of the emergent dialogue, students also share experiences related to LEEP effects in other situations. These include individual (e.g., deeper thought) as well as collective enhancements (e.g., improved practice and new collaborations). This positive 'beyond LEEP' transfer reminds us to keep thinking in terms of buds.

² As discussed in the previous chapter, this may be considered in terms of increased information literacy – understanding underlying structures and methods to access resources.

7.2 More Discussion

After reviewing key concepts revealed in the data analysis discourse, I continue with consideration of some overarching themes and relationships. This is a key aim of the case study method. These models and generalizations represent deeper probing based on the principal (both predefined or emergent) research questions. As part of this general discussion, concepts introduced previously are revisited and three emergent concepts (forces, change, and magic) are discussed.

Analysis within previous chapters reveals relationships between students within processes of development both as learners and leaders. Within the multimodal learning environment, individual and collective needs are integrally accommodated and nurtured. Here, participants with varied interests and at different levels of competencies across knowledge and skill sets have ample opportunities to share ideas and build and refine knowledge. While incoming students in LEEP may often already be considered leaders in other contexts, participation in this learning environment enables them to develop new professional competencies—leadership—within and across LIS spectrums.

7.2.1 Forces

In an environment concerned with developing leadership, there are many forces at work. Leaders may need many kinds of learning as well as abilities to function across many levels of complexity. For example, Gardner (1993, p. x) emphasizes learning to develop intelligence as “the ability to solve problems, or to create products, that are valued within one or more cultural settings.” What kind of learning environment promotes this? In order to

promote action in this type of environment, interactive processes are needed – a context and environment embedded with ample exchange. According to Brown (2000), this may be facilitated in web-based learning communities where multiple intelligences are honored and development toward professional enculturation is promoted. In the multimodal LEEP environment, this seems to be further perpetuated. Here, many factors integrally contribute to the development of a positive learning environment, in particular, as described in this study, the constituents. Participant-based action has the potential to meet existing needs while also adapting to emerging needs. Unified forces lead to synergetic advancement. How is this manifest in LEEP?

7.2.2 Change

Within LEEP, those involved in overseeing the program (faculty, staff, and students themselves as they integrate into the community, etc.) are involved in understanding and adapting to professional and educational change. This is manifest as a multifaceted cycle of inquiry. Questions emerge from individuals, and within a variety of collective contexts: project teams, classes, interest groups, committees, etc. These questions are afforded opportunity for consideration and potentially application within a variety of contexts in LEEP and beyond.

West (1993, p. 105) offers a useful metaphor for considering these sorts of individual and collective transformations in the context of leadership development.

The interplay of individuality and unity is not one of uniformity and unanimity imposed from above but rather of conflict among diverse groups that reach a

dynamic consensus subject to questioning and criticism. As with a soloist in a jazz quartet, quintet, or band, individuality is promoted in order to sustain and increase the creative tension within the group – a tension that yields higher levels of performance to achieve the aim of the collective project.

As in this example based on music, when transformations occur, individual sensitivities shift toward collective sensibilities. Difference and sameness merge. Capacities are extended and opportunities emerge for providing “profoundly important service” (Kotter, 1996, p. 186).

Within a learning context, such as LEEP, when a similar merger occurs, students are presented with many potential opportunities--time and space to develop and share and share and develop capacities.

7.2.3 Magic

In order for this sort of integral transformation, or magic³ to happen, barriers must be broken. This is influenced by many types of change -- venue, perspective, approach, etc. In Chapter 2, a number of perceived student barriers were considered. Drawing on these insights in the context of educational research on students in this class (adult, graduate, etc.), there seem to be a number of core stages in overcoming barriers to engagement in the kinds of deep learning (Newman et al., 1997, Christopher et al., 2004, Vermunt, 2003) leaders require. How does this happen in LEEP?

³ Thanks to Matt Beth for sharing this metaphor of LEEP in action.

7.2.3.1 LEEP Learner-Leader Model

Based on this inquiry, I propose the LEEP Learner-Leader Model emerges from six elements. Two through five may be considered basic elements, while one and six are principally relational:

1. Arrive – Beginning the LEEP voyage requires at least >16 years of education, knowledge of LIS as a field, and acceptance into a degree program. In addition, it requires time, money and other resources.⁴ Getting to this place requires a great deal of individual commitment dependent on a variety of circumstances. Learning, like other activities, requires space. Sharing space (whether real or virtual or a combination of both) is the basic element of this collaborative relationship. As discussed in Chapter 4, access to a principally online option is significant. Many participants would not have been able to pursue studies locally.
2. Feel welcome – In discussing peer-contributions, students emphasize the value of receiving encouragement in order to deal with difficult circumstances. As part of this study, this issue is particularly evident as part of early engagement and in adopting non-LEEPers.
3. Trust others enough to compromise yourself – As discussed in Chapter 2, adults are not accustomed to being out of control. This state puts them at risk of not knowing (and possibly being ridiculed). This must be overcome. In LEEP, learning is a “trust +” model. Clearly, an ability to trust others (and, in this case, be ready to learn) does not only emerge or develop within a particular context. Some learning contexts may actually discourage trusting. It may be--and in LIS often seems to be significantly--

⁴ Coming to graduate education is about paying for something difficult. In today’s market driven world, this seems almost counterintuitive.

based on earlier relationships. When this is the case, individuals begin supporting others in feeling welcome soon after shared space is established.

4. Share of yourself – Learning space must be sufficiently developed to accommodate sharing of ideas. This usability involves design, maintenance, and ongoing development based on emergent learning needs. Person-centered space facilitates many forms of relationships.
5. Build collaborations – In the context of a particular environment, this is where the magic happens – the learning zone.⁵ Here, in LEEP, and other contexts, students are open to share knowledge through many types of exchange, including peer-based cognitive apprenticeship.⁶ In keeping with Perreault’s description of fluid leader-follower roles (discussed in Chapter 2), students are able to comfortably experiment and assume multiple roles. In LEEP, this includes both course-based and extracurricular engagement. Just as children at play, those who enter into this zone, grow as part of a collective force much greater than themselves.⁷
6. Extend – As new knowledge is developed and leaders emerge and interact, the potential for application within new collectives extends. As in the two visual models included in Chapter 2, forces stimulate new experience, as reflection and action, out and across many contexts.

⁵ Borrowing from Vygotsky’s zone of proximal development.

⁶ Cognitive apprenticeship is a term used by Brown, Collins, & Duguid (1989) to describe learning based on acquiring and developing knowledge as part of/useful for authentic activities.

⁷ For additional insights on ludic space in online classrooms, see Jenkins, 2004 and James, 2004.

This model emerged within a multimodal (principally online) graduate education program at a highly regarded U.S. institution. While this context includes some preexisting positive forces, basic elements of the model are not necessarily bounded by mode or level. More generally, they reflect holistic, socially grounded models of learning that can be developed and applied in other domains.

In Chapter 3, I introduced three constructs for considering LEEP: scheduling option, learning management system, and community of learners. Earlier discussion indicated that the first two constructs are not particularly stable. In essence, developing learners and building learning communities involves highly dynamic actions. At the completion of this study, I'd like to propose a thought to complement the final construct. This one actually emerged before the study, from students participating in the LEEP Retreat. When we asked, what's LEEP all about, the overwhelming response was – *It's the people...!* LEEPers truly form a remarkable group of individuals. Within the context of a leadership-focused discipline encompassing a core yet interdisciplinary scope and within a rich, multimodal environment, learners and leaders encounter many opportunities to flourish.

7.3 More Questions

Understanding learners and promoting effective learning to leading involves considering complex sets of relationships. In order to contribute to the development of tomorrow's learners and leaders, we must keep asking questions. There is an urgent need to build and share broad and intricate understanding based on human potential in a rapidly evolving world.

While there are many possibilities to consider questions across developmental contexts, I would like to end this inquiry closer to where I started -- thinking about LEEP and education for LIS, where there are still plenty of emergent constructs and questions to consider.

Several questions, ranging from specific to general, are presented below:

- What would student reflections (e.g., several years later) on experience in LEEP reveal?
- How are learning and leading transformation extended beyond LEEP?
- What new opportunities and challenges will emerge as more diverse students discover LIS through online and/or hybrid education?
- How can LEEP, and other models of education, support and benefit from other aspects of learners and leaders' diversity?
- Considering the rates of change currently being experienced, what kinds of strategies to meet the ongoing educational needs of LIS practitioners might be considered (outside of the degree program)?
- What can those of us involved in LIS educational contexts do to encourage all learners to feel welcome and develop trust in order to promote noisy engagement?⁸
- What can those of us involved as leaders in LIS educational contexts do to support others in having opportunities to *arrive* too?
- What possibilities exist for promoting more positive developmental forces within other educational contexts?

⁸ Based on Nipper's (1989) notion that a noisy (highly-engaged) learner is a successful learner.

In embarking on future research, an emphasis on respecting constituents by considering their experiences is paramount.

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APPENDIX A: GSLIS COURSES AVAILABLE TO LEEP STUDENTS (2002-2005)

LIS 403 Literature and Resources for Children
LIS 404 Literature and Resources for Young Adults
LIS 409 Storytelling
LIS 451 Introduction to Network Information Systems
LIS 453 Systems Analysis and Management
LIS 454 Using Networked Information Systems
LIS 456 Information Storage & Retrieval
LIS 458 Instruction and Assistance Systems
LIS 501 Information Organization and Access
LIS 502 Libraries, Information & Society
LIS 503 Use and Users of Information
LIS 504 Reference and Information Services
LIS 505 Administration and Management of Libraries and Information Centers
LIS 506 Youth Services Librarianship
LIS 507 Cataloging and Classification I
LIS 510 Adult Public Services
LIS 512 History of Libraries
LIS 522 Science Information Sources and Reference Services
LIS 523 Social Sciences Information Sources and Reference Services
LIS 524 Arts and Humanities Information Sources and Reference Services
LIS 525 Government Publications
LIS 526 Online Information Systems
LIS 530B Medical Literature and Reference Work
LIS 530E Business Information
LIS 530G Legal Research
LIS 577 Cataloging and Classification II
LIS 578 Technical Services Functions
LIS 581 Administration of Archives and Manuscript Collections
LIS 590CD Collection Development

LIS 590CI Community Information Systems
LIS 590CM Change Management
LIS 590CT Competitive Intelligence
LIS 590EV Evaluation of Library and Information Services
LIS 590FM Financial Management in Libraries
LIS 590I Indexing and Abstracting
LIS 590IA Information Architecture
LIS 590II Interfaces to Information Systems
LIS 590ISM Information Services Marketing
LIS 590JJ Information Resources Management
LIS 590KK Adult Popular Literature
LIS 590LI Legal Issues in Library and Information Science
LIS 590LT Learning Technologies
LIS 590LWL Web Design in Organizations
LIS 590RO Representing and Organizing Information
LIS 590S Human Resource Management in Libraries and Information Centers
LIS 590WRT Writing in Library and Information Science

Additional information on courses is available at <http://www.lis.uiuc.edu/courses>

APPENDIX B: ENTRANCE SURVEY

1. What factors influenced your decision to begin pursuing your degree? [IQ1]

2. Do you have any concerns about pursuing your MS? If yes, please explain. [IQ2]

3. What kinds of knowledge and experience do you bring to the program that you expect will be especially useful? [IQ3]

4. Given your current knowledge of opportunities in library and information science do you have a specific career objective? If yes, what type of position do you hope to pursue? [PQ12]

For the following questions, use a scale of 1-4 (1= extensive; 2=moderate; 3=relatively little; 4=none).

5. Characterize your experience and comfort with working in groups. [PQ13] ____

6. Characterize your experience and comfort with public presentations. [PQ14] ____

7. Characterize your experience with and knowledge of carrying out a research project. [PQ15] ____

8. Characterize your knowledge of evaluating the impact and quality of service provided by an organization. [PQ16] ____

9. Characterize your current level of ability in computer and communication technologies. [PQ17] ____

10. Characterize your experience with searching for information. [PQ18] ____

11. Characterize your experience with and knowledge of analyzing information quality and content. [PQ19] ____

12. Characterize your knowledge of social and technological change that is impacting the creation, organization, retrieval, dissemination and preservation of information. [PQ20] ____

13. Characterize your level of interest in and commitment to the field of library and information science at this time [PQ21] ____

14. Additional comments

APPENDIX C: LETTER OF CONSENT FOR SURVEY PARTICIPATION

July 200N

Dear incoming student,

We are always interested in enhancing our programs. In order to improve, we must have an understanding of our students' needs and expectations. This provides a basis for improving our curriculum and communicating more effectively with prospective and current students. In order to attain an understanding of your academic needs and expectations, I am asking you to complete this questionnaire. It should take 10-15 minutes of your time. I hope this research will provide an opportunity for you to reflect on your own studies, careers and profession. For LIS faculty and administrators, I expect this research will provide an opportunity to develop a greater understanding of academic interests and expectations of new students. I will strive to ensure your views are clearly represented.

The information you provide will be summarized. Group results will be reported, but no information about individual participants will be released at any time. Your name is needed on this page for consent and to match your answers to those that result from a follow-up questionnaire, which will be distributed later in your program. I will use your name to numerically code the survey sheets to compare "before" and "after" responses systematically. It won't be used in any other way. This research is being supervised by Professor Linda Smith. You may contact her at lcsmith@uiuc.edu or 217.333.7742 for additional information about this project. Collect phone calls are accepted for persons who live outside the local calling area.

Your participation in this survey is completely voluntary and you may decline or stop at any time. Your decision will have no effect on your grades or status at the University of Illinois. If you have any questions about the rights of research participants, please contact the Institutional Review Board Office (IRB) office at 217.333.2670 or irb@uiuc.edu. Collect phone calls are accepted for persons who live outside the local calling area.

I greatly appreciate your taking time to participate. Once you complete the questionnaire, you may return it to me directly or leave it in my mailbox (located on the second floor of GSLIS). Thank you in advance for your cooperation and support.

Sincerely,

Rae-Anne Montague
Ph.D. Student

I, _____ give consent to participate in the above study. I understand my name will not appear with any data presented from this research.

Signed: _____ Date: _____

APPENDIX D: LETTER OF CONSENT FOR FOCUS GROUPS

Dear participant,

This focus group is part of my dissertation research entitled, "An Exploration of student contributions and experiences in online education for library and information science." It is taking place during October, 2004 in LIS 308, 501 E. Daniel St., Champaign.

I hope this research will provide an opportunity for you to meet others with interest in this topic, consider new ideas and reflect on your own experiences as well as your career and profession. In order to work toward these goals, I am asking for your consent to use information and ideas from your contributions during the focus group. In using this information as part of a research project, I will strive to ensure your views are clearly represented.

Professor Linda Smith is supervising this research. Researchers will not release information about individual workshop participants at any time. In publications or reports that result from this project, anonymity will be assured by the use of pseudonyms. However, you should be aware, confidentiality cannot be guaranteed in a focus group setting, and that there is a risk that confidentiality may be breached by other participants. You may contact Professor Smith at lsmith@uiuc.edu or 217.333.7742 for additional information about this project. Collect phone calls are accepted for persons who live outside the local calling area.

Your participation in this research is completely voluntary and you may decline or stop at any time. Your decision will have no effect on your status with the University of Illinois. If you have any questions about the rights of research participants, please contact the Institutional Review Board Office (IRB) office at 217.333.2670 or irb@uiuc.edu. Collect phone calls are accepted for persons who live outside the local calling area.

I greatly appreciate your taking time to participate in this project. Thank you in advance for your cooperation and support.

Sincerely,

Rae-Anne Montague
Ph.D. Candidate

I, _____ give consent to participate in the above research. I understand my name will not appear with any data presented from this work.

Signed: _____ Date: _____

APPENDIX E: FOCUS GROUP OVERVIEW

Welcome

Welcome to this focus group designed to explore student experiences with online education for library and information science. Summarized, not individual, information from this discussion will be used as data for Rae's dissertation. Rae asked me to tell you how much she appreciates you taking time out of your busy day to participate in this session.

Introductions

I'd like to invite you to begin by briefly introducing yourself. This might include your name, cohort, geographic location, place of employment or any other information you'd like to share.

Guidelines

Thank you. Now, let me explain a bit about the procedures. The key issue for this session is that everyone's ideas count. Everyone will have an opportunity to discuss the issues. After each question we'll simply open up the floor for discussion. Feel free to respond to each other's ideas or comments.

Questions

1. How does LEEP compare with your previous (other face-to-face) educational experiences? [FQ4]
2. LIS students draw on a wide range of knowledge and experience. Describe the kinds of skills and experiences you find yourself drawing on during LEEP. [FQ5]
3. In LEEP, how do you contribute to your colleagues' learning? Program success? [FQ6]
4. Describe a class activity (e.g., a group project or presentation) you found particularly rewarding in LEEP. [FQ7]
5. Have your LEEP classmates' contributions ever surprised you? What are some examples? [FQ8]
6. What sorts of tensions arise in LEEP? How are they overcome? [FQ9]

7. What aspects of LEEP do you find most interesting? Most challenging? Most valuable? [FQ10]
8. How has your experience in LEEP affected your career? Your perceptions of LIS? Other areas? [FQ11]

Closure

Before we wrap up, I'd like to give everyone the opportunity to include final comments or point out something they found particularly important or interesting during the session.

Thank you all very much for participating.

APPENDIX F: EXIT SURVEY

This survey is a follow-up to initial questionnaires completed during LEEP orientation. It is part of a study to understand student growth. It should take 10-15 minutes of your time. I hope this research will provide an opportunity for you to reflect on your own studies, careers and profession.

1. Please comment on your experience as an online student compared to previous experiences in “traditional” classroom settings. [EQ22]

For the following questions, use a scale of 1-4 (1= extensive; 2=moderate; 3=relatively little; 4=none).

2. Characterize your experience and comfort with working in groups. [PQ13] ____

3. Characterize your experience and comfort with public presentations. [PQ14] ____

4. Characterize your experience with and knowledge of carrying out a research project. [PQ15] ____

5. Characterize your knowledge of evaluating the impact and quality of service provided by an organization. [PQ16] ____

6. Characterize your current level of ability in computer and communication technologies. [PQ17] ____

7. Characterize your experience with searching for information. [PQ18] ____

8. Characterize your experience with and knowledge of analyzing information quality and content. [PQ19] ____

9. Characterize your knowledge of social and technological change that is impacting the creation, organization, retrieval, dissemination and preservation of information. [PQ19] ____

10. Characterize your level of interest in and commitment to the field of library and information science at this time [PQ 21] ____

11. Additional comments (e.g. – overall experience with the program, specific aspects you found particularly rewarding or challenging) [EQ23]

12. What is your current job or what career do you plan to pursue? [PQ12]

Your participation in this survey is greatly appreciated. Please click "finish" to submit your questionnaire. If you wish to review any of your answers or change them, please use the "back" button. Once you hit finish you will not be able to make any further changes. Thanks! Rae-Anne Montague

APPENDIX G: FALL 2004 GSLIS COMMUNITY BULLETIN BOARDS

General Bulletin Boards (#1-12) and Bulletin Boards by Specific Interest (#13-33)

1. Announcements
2. LEEP news
3. Events
4. Administrative & academic question and answer
5. Feedback to GSLIS
6. Tech support
7. GSLIS discussions
8. LEEP talk
9. Open forum
10. Students [only]
11. Students at a distance
12. Testing
 13. K-12
 14. Youth services
 15. Congratulations to graduates
 16. Websites [of interest]
 17. Classifieds
 18. Travel/accommodations
 19. Film lovers
 20. Book readers
 21. Music discussion
 22. Excursions
 23. Products [of interest]
 24. Student chapters [includes 5]
 29. Jobs
 30. Assistantships
 31. Scholarships
 32. Job hunting
 33. Practica/internship

AUTHOR'S BIOGRAPHY

Rae-Anne Montague was born and grew up in Halifax, Nova Scotia, Canada. She graduated from St. Mary's University (SMU) with a Bachelor of Science with Honours in 1990. She worked for two years as an elementary teacher at Colegio Inglés in Torreón, Coahuila, México and then went back to SMU to pursue graduate studies in education. In 1995, she returned to México to work at the American School of Torreón for five years as a teacher and elementary school librarian. During this period she pursued her Master of Science in Library and Information Science through the Graduate School of Library and Information Science (GSLIS) at the University of Illinois at Urbana-Champaign (UIUC) online via LEEP. In 2000, Montague moved to Champaign to pursue doctoral studies and began working with LEEP. Montague is currently Assistant Dean for Student Affairs at UIUC GSLIS. Her principal research interests include multimodal education, learning technologies, and diversity.