

Recruiting and Educating the 21st Century Digital Librarian

In this three-year project, the School of Library and Information Science (SLIS) at the University of Iowa (UI) partnering with four units within the University of Iowa: the UI Libraries, Academic Technologies, the WiderNet Project and the International Writing Program, will provide a unique opportunity to recruit and train librarians with special emphasis on digital librarianship. The project will provide selected students with formal training in librarianship along with guided experience in digital projects. This proposal is in response to priority 1 of the IMLS initiative.

NARRATIVE

A well-accepted definition of digital libraries is one provided by the Digital Library Federation¹:

“Digital libraries are organizations that provide the resources, including the specialized staff, to select, structure, offer intellectual access to, interpret, distribute, preserve the integrity of, and ensure the persistence over time of collections of digital works so that they are readily and economically available for use by a defined community or set of communities.”

As observed by Clifford Lynch², digital libraries represent “a field with an incredibly rich, and, as yet, poorly chronicled pre-history and early history.” A critical turning point was the period between 1994-2004 when digital library research obtained substantial funding from major agencies such as the *National Science Foundation*, the *Library of Congress* and the *Institute of Museum and Library Services*. With respect to the present time Lynch states that with digital libraries/services we have “... a relatively mature set of tools, that can now be used to serve many organizations and purposes”.

In deploying digital libraries and derivative services, libraries of different types and sizes have been and will continue to be central. As social agencies, libraries serve specific needs in our society³, whether these are societies defined by the academy, corporate sector or the broader public. Libraries are on the front lines of the efforts to reduce the digital divide⁴. Libraries and well-trained librarians are undoubtedly central in our national effort to broadly and equitably disburse the benefits of digital libraries and services.

Reflecting the national scenario we observe a wide array of exciting digital services projects in the UI microcosm. Together these cover a wide range (from digitizing and organizing image, voice and video based web collections, to using web crawlers for harvesting topical web pages and designing institutional repositories). Our proposal is motivated by this rich context and our strong MA in LIS curriculum with existing courses relevant to digital libraries. It is also motivated by the national need for trained librarians as recognized by this IMLS initiative for the 21st Century Librarian, and the many exciting and critical opportunities involving digital librarianship expertise. The *World Digital Library* initiative announced recently by the *Library of*

¹ Digital Library Federation. <http://www.diglib.org/> (accessed Nov. 11, 2005).

² Clifford A. Lynch, “Where Do We Go from Here? The Next Decade in Digital Libraries,” *D-Lib Magazine*, 11:7/8 (July/August 2005)

³ Robert S. Martin, “Libraries and librarians in the 21st century: Fostering a learning society,” *C&RL News*, 65(11) December 2004.

<http://www.ala.org/ala/acrl/acrlpubs/crlnews/backissues2004/december04/librariesin21.htm> (accessed Nov. 11, 2005).

⁴ Toward Equality of Access. The Role of Public Libraries in Addressing the Digital Divide. Review report sponsored by the Bill & Melinda Gates Foundation. February 2004.

<http://www.gatesfoundation.org/Libraries/> (accessed November 5, 2005).

Congress illustrates the global reach of these opportunities⁵. Moreover, digital libraries/services are central to promoting information literacy and lifelong learning - capabilities proclaimed recently by the UNESCO and IFLA as a “basic human right in a digital world”⁶. Here in Iowa the need for well trained digital librarians is clearly recognized, (eg. see attached support letters from the State Librarian, the Directors of the UI Libraries and the Des Moines Public Library).

We request IMLS support to recruit and train students and provide assistance to place these graduates in positions involving digital libraries and digital services. Our goals are:

- **Goal 1:** To recruit 2 cohorts with 10 students in each cohort into the UI MA in LIS program with emphasis on digital librarianship.
- **Goal 2:** To train the recruited students with a curriculum that emphasizes preparation for excellence in digital librarianship. The proposed curriculum will interweave course-based learning with project-based experience.
- **Goal 3:** To contribute to digital library projects and services at different UI units.
- **Goal 4:** To contribute to the national pool of well-trained library professionals firmly grounded in librarianship and in digital services.

We recognize that the IMLS recently funded training programs at the Masters and doctoral levels focusing on digital librarianship. While designing our program we consulted many publicly available proposals and had discussions with the principal investigators of several projects. We have incorporated many good ideas such as strategies for recruiting and for combining classroom and experience based learning. A support letter from Professor Javed Mostafa, *Indiana University*, PI of one recently funded IMLS program is attached. Additionally, discussions with Professor Mika, *Wayne State University* yielded good ideas. We are confident that our training program has complementary features as well as the breadth and depth necessary to graduate nationally competitive digital librarians capable of having significant, positive impact on library services.

PARTNERS/MENTORS

This proposal involves four partners all from within UI: (1) UI Libraries (with projects in 3 distinct subunits), (2) the WiderNet Project, (3) International Writing Program, and (4) Academic Technologies. These partner units offer seasoned mentors and rich contexts for projects as described next. Students will follow a “clinical rotation” model (detailed later), gaining in-depth experience in 2 to 3 projects over their training program. Additionally, program long bi-weekly meetings involving students, mentors and faculty within a 1 credit Topics seminar will provide all IMLS students broad exposure to the full spectrum of projects.

Partner 1: UI Libraries, (Contact: Nancy Baker, Director).

Unit 1. Digital Services Department, UI Libraries (Mentor: Paul Soderdahl).

The mission of the Library’s Digital Library Services department is to facilitate the creation, use, and preservation of digital content by offering a wide array of resources and services to faculty, departments, centers and institutes, and librarians in support of teaching, learning, research, and related activities. Under Paul Soderdahl’s mentorship students may participate in one or

⁵Library of Congress Launches Effort to Create World Digital Library. News from the Library of Congress, November 22, 2005. <http://www.loc.gov/today/pr/2005/05-250.html> (accessed November 24, 2005).

⁶ UNESCO and IFLA. The Alexandria Proclamation on Information Literacy and Lifelong Learning. Bibliotheca Alexandrina, Egypt. November 9, 2005. <http://www.ifla.org/III/wsis/BeaconInfSoc.html> (accessed November 24, 2005).

more of the following projects: (1) *Newspaper Digitization* (exploring unique challenges such as large image size and contextual full-page browsing); (2) *Digital Preservation* (designing systematic long-term storage solutions for archival digital objects that may involve a combination of off-line storage and dim archive); (3) *Iowa Academy of Science Digitization Project* (digitizing more than 100 volumes (1875 - 1988) of the *Proceedings of the Iowa Academy of Science*); (4) *Institutional Repository* (defining and implementing the UI institutional repository to support local needs). Paul Soderdahl is also a co-principal investigator on this proposal.

Unit 2. Information Commons Production Services (ICPS), Hardin Library for Health Sciences, UI Libraries. <http://www.lib.uiowa.edu/commons/icps/> (Mentor: James Duncan)

ICPS offers collaborative, client-centered services to support the creation and delivery of educational content and information resources. By partnering with individuals and departments, ICPS extends the traditional service role of the library into more entrepreneurial ventures involving multimedia authoring, digitization, publishing, information design and application development. Since 1998, this award-winning unit has successfully carved out a new role for the UI Libraries, serving as a showcase for what is possible given collaboration and a spirit of entrepreneurship. Under the mentorship of James Duncan, students may participate in one or more of the following projects: (1) *Iowa Head & Neck Protocols Project* (developing a hybrid Web/CD-ROM companion to the Iowa Head & Neck Protocols Manual for the Department of Otolaryngology); (2) *Iowa Orthopaedic Journal* (provide conversion services for this peer-reviewed journal, marking up contents in XML using the PubMed Central Journal Publishing DTD); (3) *Iowa Public Health Information (IPHI)*, a project serving public health professionals across the state – <http://www.iowapublichealth.org/> (design a web-accessible database with public as well as administrative interfaces).

Unit 3. Preservation Department, UI Libraries. (Mentor: Nancy E. Kraft).
Project: Iowa Heritage Digital Collections, <http://iowaheritage.lib.uiowa.edu/>

IHDC, an online collection of Iowa history and culture, brings together documents, maps, finding aids, educational materials, and other media from a wide range of Iowa organizations. These include colleges, universities, libraries, schools, historical societies, museums, archives etc. IHD enables, for example, cross-collection searching of these distributed collections. Under the mentorship of Nancy Kraft, IHDC director, IMLS students will learn about methods for integrating collections built by organizations distributed across Iowa. They will study key aspects such as maintaining consistency and interoperability of metadata, of input data formats, and of image sizes, the use of common platforms and mechanisms for distributed and centralized preservation. This project is especially interesting as it brings to the foreground many of the social, economic, educational and technological aspects of collaborating with different organizations.

Partner 2: UI WiderNet Project. <http://www.widernet.org/> (Contact: Cliff Missen).
Project: eGranary Digital Library, (Mentor: Cliff Missen)

The eGranary Digital Library created by the WiderNet Project (a service organization of the University of Iowa) provides access to millions of digital resources to institutions in developing countries lacking adequate Internet access. Authors and publishers who have granted permission to distribute their works via eGranary include the U.S. Centers for Disease Control, Columbia University, Cornell University, MIT Press, UNESCO, World Bank and WHO. The eGranary Digital Library has been installed in Intranets of more than 70 educational institutions in Africa, and in countries such as Bangladesh and Haiti. Under the mentorship of Cliff Missen director and developer of eGranary, students will have a live laboratory context in which to learn about the different challenges and opportunities of working with collections harvested

from the web. They will study and gain hands-on experience in key aspects such as acquisition methods (both manual and using web crawlers and harvesters), metadata classification, collection organization and the design of interfaces tailored to different communities. Students will learn about bandwidth management and augmentation schemes to deliver digital information to traditionally underserved populations, with an emphasis on mixing asynchronous and synchronous technologies to produce cost-effective results. They will find ample opportunities to learn to respond to the information needs of populations in the developing world and in underserved areas of the US.

Partner 3: International Writing Program, (Contact: Chris Merrill, Director)

Project: IWP Digital Library, UI IWP and SLIS. <http://iwp.info-science.uiowa.edu/cgi-bin/library>. (Mentor: Professor James Elmborg)

Founded in 1967, the IWP was the first writers' residency to reach across national borders in the world of creative writing. Established writers from across the globe gather for three fall months in Iowa City. Over the years, IWP has hosted more than 1,000 writers from over 100 countries. Since 2003, Prof. Jim Elmborg has developed the IWP digital library project. Guiding a team of graduate students he has created a globally accessible research archive containing IWP authors' writings (samples) and recordings of their presentations. Students funded by this IMLS initiative will join the IWP team. Mentored by Professor Elmborg they will work with digital media (sound and video recordings) that document the extensive program of public presentation by the visiting writers. They will also write metadata including summaries of the recordings to serve as initial access points for researchers. Professor Elmborg is a Co-PI on this proposal.

Partner 4: Digital Media Solutions, Academic Technologies, UI. <http://at.its.uiowa.edu/> (Contact and Mentor: Molly Langstaff)

The mission of Academic Technologies (AT) is to assist UI instructors and researchers in using technology to enhance teaching, learning and research. The Digital Media Solutions group within AT specializes in assistance with developing digital audio and video assets. Assistance can range from editing a small movie to show in class, to creating a searchable collection containing hundreds of videos. Under Molly Langstaff's mentorship, students will gain experience of working with IT staff, Library staff and faculty on joint projects. Students may participate in one or more of the following projects: (1) *Digital Media Asset Management, Service Pilot – an ITS & Library Partnership* (develop procedures, processes, policies, and the technical and organizational infrastructure to enable the creation, publishing, and archiving of institutional and individual digital collections); (2) *The Iowa Journalists Oral History Project*, <http://www.uiowa.edu/~acadtech/journalists/> (develop standards-based metadata for this existing digital collection and move to a centrally supported solution); (3) *Videos of Normal Language Development* (work with the Speech Pathology Department to create, organize, and deliver videos that exemplify language and cognitive milestones in child development)..

The PI Professor Padmini Srinivasan, the Co-PIs Professor James Elmborg and Paul Soderdahl in collaboration with project mentors will assign students to projects based upon matching interests. Approximately 1-2 students/cohort will be assigned to each mentor.

IMPACT: The following outcomes are anticipated from our proposal.

1. Outcome: SLIS will attract new enrollments to the MA in LIS program through its focused program on digital librarianship, with assistantships (1/2 time) and its recruiting strategies.

Indicators: (1) Percent of students indicating that the advertised program of study contributed significantly to their decision to enroll in the UI MA in LIS program (2) Percent of students who indicate that the assistantship provided a significant motivation for enrolling in the program (3) Percent of students indicating interest in our program due to our project-based recruiting strategies.

2. Outcome: *The project will directly and indirectly increase the number of qualified professionals for employment as librarians throughout the country, particularly in institutions servicing diverse communities.*

This initiative will produce 20 nationally competitive digital librarians capable of operating in diverse contexts and defining leadership roles. Moreover, these graduates, their mentors, the other individuals from the partner organizations with whom project members interact, SLIS faculty and staff, will jointly form a synergistic “digital librarianship” community. This community will likely attract additional students to UI for digital librarianship beyond the lifespan of this proposal.

Indicators: (1) Percent of graduates indicating being well-prepared for a career in digital librarianship. (2) Percent of graduates indicating that the program significantly contributed to their success in finding full-time employment. (3) Percent of graduates who indicate that the program prepared them to work in diverse communities. (4) Number of new individuals expressing interest in admission to SLIS as a result of this initiative, as reported by mentors, students and faculty.

3. Outcome: *The project will contribute synergistically to activities in digital librarianship.*

Explicit mechanisms such as the bi-weekly topics course offer significant opportunities for connecting mentors and students from different projects. This can potentially lead to cross-fertilization of ideas and projects. This will likely provide cascading benefits, generating new collaborations and projects.

Indicators: (1) Number of new collaborations between mentors deriving from this program, as indicated by the mentors. (2) Number of new collaborations between SLIS and mentors deriving from this program, as indicated both by SLIS faculty and mentors. (3) Number of new digital projects initiated by this program, as indicated by mentors, students, and SLIS faculty.

4. Outcome: *The project will contribute to results or products that will benefit multiple institutions and diverse constituencies.*

Students will participate in digital libraries projects over their entire program. Selected projects have wide reach. For example, the *institutional repository* project will at least benefit the UI community if not also external readers of scholarly publications from UI. Others such as the *Iowa Academy of Science Digitization* project and the *Iowa Public Health Information* project will at least provide benefits state wide. Both the *eGranary* digital library and the *IWP* digital archive projects have built in international audiences with potential to also serve rural areas with inadequate bandwidth. Thus student effort will directly benefit diverse communities from multiple institutions.

Indicators: (1) Number of projects in which students contributed significantly as indicated by mentors. (2) Number and types of user groups reached by these projects, estimated by mentors.

5. Outcome: *The project reflects an understanding of library service needs in the communities served by the applicant(s) and addresses issues facing libraries of similar size and type.*

Proposal partners and mentors have been involved in the selection of projects. Each project is of interest and relevance to user groups and communities typically served by libraries of different

types. E.g. the IHDC project is relevant to the services offered and issues faced by public, state and regional libraries. Thus the knowledge gained will be applicable to similar contexts.

Indicators: (1) The relevance of each project involving significant student participation, to different kinds of libraries (public, academic, special, etc.), as estimated by mentors and SLIS faculty. This may also be determined by surveying a sample of librarians from the state of Iowa on their perceptions of the value of these projects.

6. Outcome: *The project reflects a vision of potential change in the field.*

Program graduates will be rigorously trained using a synergistic combination of classroom and experience-based learning. Guided by visionary mentors and professors students will learn to select and implement the most appropriate digital strategies for a given objective in a given organizational and human setting. They will be ready to effect positive changes in their careers.

Indicators: (1) Percent of graduates who indicate interest in defining leadership roles in digital librarianship. (2) Percent of graduates who actively seek out positions involving digital projects. (3) Percent of graduates accepting positions involving digital projects.

DESIGN

Recruiting

Caroline Austin, *Project Coordinator*, will take the lead in this with collaboration from the PI (Srinivasan) and Co-PIs (Elmborg and Soderdahl). First we will create a website describing the program, procedures for applying, projects (with links to the web sites of mentors) and the curriculum (with links to course syllabi). We will then email several groups of individuals about this program and website, including potential students, alumni, select librarians from Iowa and at least the neighboring states. Special attention will be given to recruiting underrepresented students in the library profession: African American, Hispanic, Latino(a) and Native American students specifically and also males in general. (Please see the next section on Diversity for more details). Pointers to the program will be posted on mailing lists such as JESSE, PUBLIB, DIGLIB, IFLA-L, MEDLIB-L, ALF-L, SLAPA-I, LITA-I. We will advertise in newsletters such as *Black Caucus Newsletter* and enlist the support of organizations such as the American Indian Library Association and Chicano/LatinoNet (CLNet). We will also request professional associations such as ALA, ASIST, SLA, PLA, and state level library organizations (e.g. Iowa Library Association) to assist in advertising our program, with special emphasis on recruiting minority students. We will produce and post brochures on the notice boards of select UI departments (e.g. journalism, psychology, computer science and geography). We will distribute brochures to relevant student organizations on campus (e.g. student chapter of *Association for Computing Machinery* and the *Women in Science and Engineering* program). We will distribute recruiting materials to colleges, the other regents universities of Iowa, the major libraries around the state and to the other Schools of Library and Information Science in the nation. We will request the SLIS advisory committee, consisting of leading librarians and information professionals, to spread the word about this training program. Finally, the UI Libraries in partnership with SLIS is currently leading an IMLS training program titled "Recruitment and Education of University Librarians in Sciences and Health Sciences." (2003-2006). We will avail of recruiting mechanisms developed in that project as well.

Diversity

The University of Iowa has a long established commitment to recruit and retain a multicultural, multiethnic student body. Several initiatives at the university have successfully recruited minority students. One outstanding example is the *Ethnic Inclusion Effort for Iowa Engineering*

that has successfully recruited 19 minority students over the last 3 years. We also have the *Men in Nursing Mentoring Task Force* of the UI College of Nursing. This group received a citation from the *American Association of Colleges of Nursing* for their outstanding results in recruiting male students – in a traditionally female dominated field. The Graduate College (which hosts all graduate degree programs and is also the college in which SLIS is placed as an academic unit) has an Office of Graduate Ethnic Inclusion. This office aims to build a sustainable practice of inclusion to attract and retain top graduate scholars, from underrepresented communities, campus wide. It oversees key initiatives across campus including *Alliance for Graduate Education in the Professoriate (AGEP)* and *Summer Research Opportunities Program (SROP)*. The PI Professor Srinivasan is an active participant in SROP projects. Aiming toward good citizenship we will avail of all possible opportunities to recruit students from underrepresented populations including African American, Hispanic, Latino(a) and Native American populations. We will also strive to recruit males to the profession.

Training

A digital librarian is first and foremost a librarian. Thus the first principle guiding our training program is to provide a strong education reflecting the mission and goals of the profession and preparing for leadership in a changing field. The UI MA curriculum is well-rounded emphasizing key dimensions including conceptual structures, organization of information, text retrieval, database systems, managerial strategies, ethical and philosophical issues; the information cycle from production, acquisition to use; collection development; research methods and the special characteristics of different kinds of libraries.

The second principle is to provide a strong education in digital librarianship and digital services. This includes for example, the study of methods to build or /and acquire sustainable, scalable and useable digital collections and services using appropriate standards and best practices to ensure interoperability and persistence. We recognize the current debate on the particular skills needed by librarians (and therefore by digital librarians) and the type of training needed to stay up-to-date with developments. Efforts such as the IMLS sponsored study led by Dr. Griffiths (University of North Carolina) on the future of librarians in the workforce will certainly help clarify curricular requirements⁷. In the meantime, our curriculum offers key graduate courses in digital librarianship: *Digital Libraries* (offered since 2001), *Electronic Publishing* (offered since 2000), *User Education: Multimedia* (offered since 1999), *Text Retrieval* (offered since 1989) and *Search and Discovery* (to be offered starting 2006) are some examples. Additionally we have cross-listed courses from the UI Management Sciences departments such as *Web Mining*, *Databases*, and *Knowledge Management*. In a 2001 survey of LIS websites Saracevic and Dalbello⁸ observe that 32% of LIS schools offer independent DL courses. UI SLIS with its offerings falls in this category.

Ensuring that the theoretical and practical dimensions of study are intertwined synergistically is the third principle guiding our program. Spink and Cook⁹ noted a dichotomy between CS and LIS digital libraries courses with the former offering more technical material and the latter having more managerial content. Liu¹⁰ made similar observations. We agree that it is important to effectively combine theoretical foundations with practical experience. For instance in *Electronic Publishing*, our students complete a reasonably sophisticated XML based term project

⁷ The Future of Librarians in the Workforce. <http://www.libraryworkforce.org/tiki-index.php> (accessed November 28, 2005).

⁸ Saracevic, T. & Dalbello, M. (2001). "A survey of digital library education." *Proceedings of the American Society for Information Science*, 38, 209-223.

⁹ Spink, A. & Cook, C. (1999). "Education for Digital Libraries." *D-Lib Magazine*, 5(5), 1999.

¹⁰ Liu, Y. Q. (2004). "School Education for Digital Libraries." *New Library World*, 104(1/2), 60-68, 2004.

while also evaluating electronic journals, digital storytelling sites, “talking books” etc. from the perspectives of end users, libraries, editors, publishers etc. Additionally we will mutually reinforce classroom learning and experiential learning by the following strategies:

- Guided by experienced mentors students will participate in digital library projects throughout their MA in LIS curriculum.
- A “clinical rotation” model will be followed with students rotating through 2 - 3 projects (minimum 1 semester/project). This will provide depth (and some breadth) in experience.
- Each semester students will participate in a 1 credit, bi-weekly topics (seminar) course lead by the PI and Co-PIs. This will provide a forum for exchanging ideas and collaborative learning. Each session will involve at least 1 mentor/partner. A goal is to evolve from the traditional teacher - pupil roles toward “just-in-time”, adaptive roles for all individuals. This will also provide breadth in experience.
- As a capstone event we will schedule, during the last semester of each cohort, presentations by three to four nationally known leaders in digital librarianship or a closely related area. This potentially introduces them to visionary thinking and role models as they prepare to embark on their careers.

The fourth principle derives from the fact that digital library services span a complex spectrum of options from the more standardized at one end to the more cutting-edge and entrepreneurial. A well-educated digital librarian selects knowledgeably from this spectrum, making choices befitting the human, technological and organizational context. In collaboration with project mentors, we have selected a range of projects. Some are fairly standard for this day and age (such as the *Iowa Academy of Science Proceedings* digitizing project and the *Iowa Orthopaedic Journal* project) others are less common (such as deploying web crawlers for harvesting and maintaining a collection of web sites in the eGranary digital library context). Projects also reflect varying levels of “maturity”. For example the IWP digital archive project is well defined. Others will be at relatively early stages providing ample opportunities to work directly with user groups, analysis of user needs etc. The UI *institutional repository* project and Academic Technologies’ *Digital Media Asset Management* project, for example, are at an early stage. Although each student directly participates in only two to three projects, the bi-weekly topics course offers broad exposure to the full range of projects. In fact, a key strength of our training is in this blending of focused training opportunities and broad exposure to a spectrum of digital projects alongside course-based learning.

In summary, Robert S. Martin, former director of IMLS recently wrote “..we need to go beyond our now-traditional notions of “education” and embrace a bold new vision of learning. We need to think beyond our institutional boxes and develop a seamless infrastructure for learning across all the social agencies and organizations that create, maintain, and provide access to resources that support learning.”¹¹ We have considered this charge seriously in designing our program with its four principles. Through coursework and by participating in digital projects contextualized in a variety of UI “social agencies”, students will learn to think of a “seamless” infrastructure for learning. By participating in the bi-weekly, program-long topics (seminar) with faculty and mentors, our graduates will develop the confidence to move seamlessly between student, teacher and project participant roles and promote an atmosphere that values multiple perspectives. By collaborating with different user groups students will look beyond the technological know-how and learn to extend appropriate digital services to support the information needs of our communities.

MANAGEMENT PLAN

¹¹ Robert S. Martin.

The School of Library and Information Science will serve as the fiscal agent for this grant. Most of this grant involves direct funding of student assistantships. SLIS regularly administers assistantships that come from several sources including from research projects. Thus the staff and system to manage these funds are already in place. Additionally, the project PI, Professor Srinivasan, has experience as PI of several research projects including those funded by the *National Library of Medicine*, the *National Science Foundation* and private companies with combined value of over ½ million dollars.

PROJECT EVALUATION

We will assess program effectiveness at several points over the three years of the initiative. We will assess effectiveness from the perspective of students, faculty and mentors. It should be noted that our evaluation will cover the specific outcomes based indicators specified earlier. Below we provide a more general description of the planned evaluation. Where appropriate questionnaires will also include a free-format question inviting feedback.

Upon Admission: Students will complete a “pre-assessment” questionnaire focusing on (1) recruiting strategies (effectiveness); (2) student background (goals, expectations, perceived strengths, weaknesses, career plans) and (3) areas of interest for projects.

Each Semester: Students will complete a questionnaire on program effectiveness (course work, project experience, bi-weekly topics course, advising and mentoring). Mentors will complete a questionnaire on the effectiveness of student participation in projects and of the bi-weekly topics course.

Last Semester before Graduating: Students will complete a “post-assessment” questionnaire focusing on: (1) program effectiveness (course work, project experience, bi-weekly seminars, capstone presentations by invited speakers, advising and mentoring); job search (training sessions on resume writing, interviewing strategies, presentations, portfolios etc.); (3) career preparedness (professional activities, kind of position sought).

End of 3 Year IMLS Program: At least a year would have elapsed after the graduation of students from cohort 1. These graduates will complete a questionnaire exploring (1) current position (nature of their position, kinds of digital projects they are involved in, leadership opportunities etc.); (2) program effectiveness (level of preparedness, program effectiveness related to their current position).

We will also conduct in depth interviews of a sample of students, faculty, and mentors at different time points. We will use the feedback and the results of our analysis of these questionnaires to refine and deliver the best possible education program we can offer.

DISSEMINATION

We are committed to sharing our findings with the broader LIS community. Project results will be shared through appropriate publications and presentations in regional, state, and national professional meetings. Venues include for example, the *Joint Conference on Digital Libraries*, the conference of the *Association of Library and Information Science*, the *ALA Annual Conference*, the conference of the *American Society for Information Science and Technology* and the annual meeting of the *Iowa Library Association*.

The project website (which we will create before recruiting begins) will be regularly updated. This will link to participating mentor sites (and their projects), this proposal, reports generated, evaluation tools, advertising and recruiting materials such as brochures, any press announcements on the project as well as appropriate contact information for key project personnel. As students approach graduation, their portfolios and resumés will also be posted.

SUSTAINABILITY

The curricular elements of the program (including a Topics course within which the bi-weekly seminar can be offered) are already in place in the SLIS MA program. Feedback obtained during and after this program will be used to refine our courses. Our curriculum will continue to be used to train students in digital librarianship and digital services. Additionally, the project will result in a community that is focused on “digital librarianship” which will likely attract new partners, collaborations and projects. It will also likely attract more students to the MA program, beyond the lifespan of this proposal. Such students will readily find digital projects in which to gain significant experience. Student participation in such projects has the potential of being at least partly funded by partners as well as by SLIS scholarships.