DRAFT

*Chapter Two*

# The Scholarly Commons

## *Emerging Research Services for Graduate Students and Faculty*

Merinda Kaye Hensley

[2.0] As reference models change in response to technology and the emerging needs of scholars, academic libraries are exploring innovative ways to more broadly support research activities. The Scholarly Commons (SC) at the University of Illinois at Urbana-Champaign was established to better serve the needs of faculty and graduate students pursuing in-depth research and scholarly inquiry. The suite of services builds on the traditional model of reference by administering on-demand and consultation services, programmatic offerings, a space where researchers can use technology to further their research, and a common entry point that can direct scholars to relevant campus resources and experts. The element that has been most effective in preparing these activities, however, is the development of partnerships with several campus organizations. These collaborations deeply enhance library and campus services provided to a cross-disciplinary learning environment.

[2.1] Revisioning reference services and creating the Scholarly Commons was part of a larger, systematic review of library services referred to as "New Service Models."[1] After several years of library-wide investigation and discussion, the administration dedicated resources to open a new type of service space during a time of consolidating traditional reference points. Recommendations from October 2008 address growing demand for re-imagined scholarly services:

[2.2] > Scholar Services are understood to encompass traditional Library services for faculty, including research consultation, instructional design, and identification of information resources, as well as emergent service needs, including

> scholarly communications education, data services, digitization and metadata services, scholarly publishing services, and personal research data management.[2]

**[2.3]** In addressing increasing demands from interdisciplinary inquiry, a Scholarly Commons leadership team was assigned to investigate cutting-edge approaches to teaching and research rooted in five core values for the development of new research support including service, innovation, risk-taking, collaboration, and community. It is these values that drive the motivation for evolving traditional reference services in the library. "As important, the design of scholar services programs must be fluid, and its principal players agile, in order to allow for new initiatives to grow as these broader changes continue to unfold."[3] The coordinator was charged with managing resources and building collaborative relationships in an effort to create nimble and forward-thinking services for the campus that support the evolving challenges faced by researchers across disciplines.

**[2.4]** The Scholarly Commons opened in August 2010 as a pilot effort in a space on the third floor of the Main Library. While the space was not expansive, it did have interconnected rooms in order to provide consultation services, a modest meeting room, an office with two computer stations that included sound-proofing for web usability purposes, and an office for the coordinator. Services began to expand rapidly and the Scholarly Commons outgrew its space in less than one year.

**[2.5]** During the same time period, reference services continued to change. In late 2011, the library's New Service Model Team acknowledged that in-person reference interactions were declining while virtual questions were increasing exponentially and both venues were seeing an increase in complexity.[4] In response, an implementation team recommended strategies for innovating reference services throughout the library system by consolidating desks into four service points, plus one dedicated space for monitoring virtual reference questions through the online chat system. The Main Library maintained the Information Services Desk in a central location,[5] but staffing changed to reflect the interdisciplinary nature of questions. Librarians across departmental libraries combined to create a "hub" to staff the Information Services Desk along with library staff and graduate assistants from the Graduate School of Library and Information Science. A Reference Services Committee was formed to address staff training and assessment needs. The new unit, Reference, Research, and Scholarly Services, was charged with overseeing the Scholarly Commons, an effort to address the more complex and highly technical questions that were arising in the humanities and social sciences, separated from the constraints of a traditional reference desk.

**[2.6]** While the reference desk at Illinois has expanded over the years to multiple venues for offering research assistance (e.g., chat reference and embed-

ded librarians), this model was not robust enough to engage scholars with their increasingly intricate research projects. This type of research most often reflects the intersections between interdisciplinary research and technology. Examples of questions include managing and cleaning data using qualitative and quantitative software programs, creating data-visualization requests for high-quality scanning and OCR technology, using software and collaborative space to perform web usability tests, answering questions related to copyright and author's rights, and much more. The Scholarly Commons began with two existing projects, data services and a series of open workshops that addressed the advanced research and information-management needs of graduate students and faculty.

[2.7] In March 2012, the Scholarly Commons moved into its current space in the Main Library. Leadership for the Scholarly Commons is currently managed by a pair of coordinators as a portion of their assigned duties. The space includes a dozen public-access computers with a wide variety of research-related software, consultation desks for partners, collaboration space, a reference collection, and four different types of scanners. The Scholarly Commons also manages a large conference room with a touch-screen monitor, an instructional space with computers, and a usability lab outfitted to be nearly sound proof. The Scholarly Commons is open forty hours per week, but opens later in the day and closes in the early evening to better reflect graduate-level research patterns. The space is staffed primarily by students from the Graduate School of Library and Information Science as part of the library's pre-professional assistantship program, who provide a triage of assistance, answering basic questions and connecting more complex questions to the librarians and partners as necessary. When patrons enter the space, they can expect to use technology resources (e.g., software and scanners) with basic assistance from the person staffing the desk, to drop in on data services consultation hours offered five days per week, and to consult the reference collection. The Scholarly Commons does not have an allocated budget at this time; however, a generous gift from the University of Illinois Division of Intercollegiate Athletics (DIA) funds all services, marketing, and outreach activities. The DIA was interested in funding the Scholarly Commons specifically because of its mission to create an innovative space and develop services that address the needs of advanced scholarship.

[2.8] The following chapter is a case study of the strategic partnerships the Scholarly Commons has developed during its first two years, relationships that have been built on a profusion of services: consultations, learning opportunities in-person and online, a sandbox of hardware and software to explore new research techniques, seminar events, and invited guest speakers. Current areas of specialization include data services, digital humanities, digitization work, scholarly communication and copyright education, web and computer

usability, and new efforts in publishing. The following questions will be addressed for each strategic partnership:

- Who is the partner? What is their mission? [2.9]
- How does the partner's service profile align with the goals of the Scholarly Commons? [2.10]
- What services are provided? [2.11]
- Are there identified areas of growth? [2.12]

The Scholarly Commons continues to make progress toward its initial vision, to "foster the development of a collaborative culture of scholarly inquiry at Illinois by maintaining an environment in which students and scholars can access, and contribute to, the resources made available by academic, research, and support units across campus."[6] [2.13]

## LITERATURE REVIEW [2.14]

The Scholarly Commons takes inspiration from similar existing services across institutions. One of the most established programs in the country, the University of Virginia's Scholars Lab brings together "digital humanities, geospatial information, and scholarly making and building at the intersection of the digital and physical worlds."[7] The University of North Carolina at Chapel Hill also offers instructional and advanced assistance with data collection, geospatial projects,[8] and scholarly communication.[9] The University of California, Los Angeles, gives scholars access to a data registry, a database for recording the location of data sets for publications and research.[10] Indiana University at Bloomington has recently expanded their Scholars' Commons Series to incorporate seminars on a wide variety of scholarly topics, and a brown bag series on digital libraries, a half-day workshop on getting published in a journal, a digital humanities series on computational techniques, and engagement with Geographic Information Systems (GIS) Day.[11] The University of Kansas's Center for Digital Scholarship[12] and the University of Michigan[13] support digital publishing services, including digital repositories and online publishing systems for journals and monographs. [2.15]

There are two recent studies in the literature that give an overview of the growth of scholarly services. In a series of interviews with ten libraries, Craig Gibson and Meris Mandernach constructed an overview of innovative reference service models that are emerging to support scholars: libraries are moving toward a staffing model where librarians are available on an on-call basis; librarians are increasingly engaged within departments and being included on research projects; research questions are being answered online and services are being offered at the point of need (e.g., offices, laboratories); [2.16]

external partnerships involve a trade-off of space; and new spaces are being created to accommodate collaborations and programming.[14] In a similar vein, Lucinda Covert-Vail and Scott Collard systematically review graduate student services, provide specific examples for how libraries are partnering across campus, and point out that "libraries need to exploit all available partnering opportunities in order to identify and market services to graduate students" and "institutions that have created strong partner relationships with academic units cite their effectiveness and value, with non-library partners serving as effective promoters of library resources and services."[15]

[2.17] PARTNERS ADVISORY BOARD

[2.18] An advisory board was created in order to keep all external partners up to date on Scholarly Commons activities and to provide a voice for their opinions on past and future services. The partners meet once per year in the spring, a venue to share accomplishments from the past year and an opportunity for input for the coming year, and receive regularly scheduled e-mail updates.

[2.19] **Partner: Applied Technologies for Learning in the Arts and Sciences (ATLAS)**[16]

[2.20] **Service area: Data Services**

[2.21] Data services in the Scholarly Commons is led by three entities: the numeric and spatial data librarian, the Data Services Committee, and a partnership with the staff from Applied Technologies for Learning in the Arts and Sciences (ATLAS) in the College of Liberal Arts and Sciences. Prior to its partnership with the library, ATLAS was charged with serving only the College of Liberal Arts and Sciences. However, for the past decade, reference services across disciplines are experiencing growing demand from scholars working on finding, using, managing, and archiving data. The library's partnership with the ATLAS portfolio provides data services to the entire campus: acquiring data sets needed for teaching and research; locating, downloading, and preparing data for secondary analysis; identifying and creating course materials and teaching tools (plus customized data sets drawn from various data repositories); and consulting around software problems with standard statistical packages. Services offered in collaboration with ATLAS and the Scholarly Commons have also expanded to meet research needs for statistical or geospatial analysis.[17]

[2.22] The Scholarly Commons works closely with the Data Services Committee[18] in order to create a service profile that addresses researchers working with data throughout its lifecycle, including the development of data management plans and data curation. The charge of the committee is to investi-

gate best practices pertaining to the provision of numeric and spatial data and assistance offered to data users in the library around multiple topics such as data procurement, access to and reuse of data purchased by the library, training and instruction for data users, and assessment of services; administer the Data Purchase Program; embed and promote data services to the campus; and look for opportunities to collaborate with researchers to strengthen the campus environment for using, documenting, and storing data.[19]

Data services consultation hours are offered four days per week and staffed by trained librarians and ATLAS. Researchers may drop in or make scheduled appointments with a specific expert. The Data Services Committee also administers a data-purchase program each semester, advertising a call for proposals for the purchase of data sets, which are archived and open for use by future researchers. Data literacy is primarily addressed through a series of data-related workshops. The data-centric librarians and ATLAS staff teach workshops on a wide variety of data-related topics. Examples include working with census data, basic GIS training, introduction to data-management plans, and an introduction to the Interuniversity Consortium for Political and Social Research (ICPSR). The Scholarly Commons space supports computers imaged with qualitative and quantitative software packages (e.g., SPSS, SAS, STATA, ArcGIS) and routinely reviews the packages based on feedback and requests. [2.23]

Data literacy efforts are currently focused on increasing staff training opportunities for subject-specialist librarians, and the creation of expanded in-person and online learning opportunities. [2.24]

**Partner: Survey Research Laboratory**[20] [2.25]

**Service area: Data Services** [2.26]

One of the most popular services offered by the Scholarly Commons is the consultation hours staffed by the Survey Research Lab. Established in 1964, the Survey Research Lab administers an array of services dedicated to the process of survey design and analysis. Survey Research Lab services are provided to the University of Illinois system as a for-fee service; however, the Scholarly Commons uses a portion of its funds to buy out staff time for consultations at no cost to graduate students and faculty. The services maintained by the Survey Research Lab staff include sample and questionnaire design, data collection and cleaning of data sets, and analysis of data. Staffing consultation hours one day per week brings visibility to Survey Research Lab expertise and further develops relationships with campus researchers. In turn, the Scholarly Commons purchases access to several qualitative and quantitative data software programs, trains the graduate assistants to answer basic data-related questions, and purchases reference titles at the suggestion of Survey Research Lab staff. In looking toward the future, the partners have considered expanding in-person learning opportunities and workshops on [2.27]

survey-related topics and offering half-day seminars covering the basics of data collection (e.g., data setup, how to identify and deal with missing data, and basic analysis techniques).

[2.28] **Partner: Campus Information Technologies and Educational Services, Academic Technologies Services**[21]

[2.29] **Service area: Teaching and Learning**

[2.30] The Scholarly Commons and campus instructional technology services have a similar educational goal for the academic community, providing scholars with assistance related to managing information through technology. Campus Information Technologies and Educational Services (CITES) is comprised of a division of teaching and learning, Academic Technologies Services. The staff are dedicated to exploring how technology can be leveraged for the university classroom (e.g., course-management systems, implementing the "flipped" classroom, supporting multimedia projects). To date, Academic Technology Services has partnered to offer workshops in the Scholarly Commons classroom on the integration of technology into teaching. Example workshops include how to best use presentation software for teaching and presentations, creating multimedia projects using iPads, and collaborative research strategies through the CITES-managed wiki and cloud computing service. Academic Technology Services, like all partnerships with the Scholarly Commons, benefits by expanding their reach to the campus community by increasing exposure to their services and in taking advantage of the triage system for referrals. In looking to identified areas for growth, the Scholarly Commons aims to work more closely with the Undergraduate Library's Media Commons,[22] a partnership with CITES that supports the creation of digital media.

[2.31] **Partner : Graduate College**[23]

[2.32] **Service area : The Savvy Researcher Workshop Series and Campus Outreach**

[2.33] The Graduate College, in working with scholars in over one hundred disciplines, is in a unique position to reach students in all disciplines of a very large campus community, not unlike the mission of the Scholarly Commons.

[2.34] The Savvy Researcher is an open workshop series that covers the advanced research and information-management needs of graduate students and faculty particularly around using technology in research. The Graduate College cosponsors the Savvy Researcher workshop series by advertising on their website and on a listserv, a weekly message that reaches a large percentage of graduate students. The listserv includes descriptions of offerings for the upcoming week, thereby highlighting the role the Scholarly Commons can play in students' professional development. The Graduate College has also contributed to the educational mission of the Scholarly Commons in

developing and co-teaching a workshop related to the job search process. The workshop covers effective job-search strategies and introduces a variety of online tools meant to organize research related to the job hunt. And finally, the Scholarly Commons serves the Graduate College by advising on issues related to copyright concerns for the online submission and archiving process of dissertations. The Scholarly Commons team is currently working with the Graduate College to pioneer a new initiative, the Image of Research.[24] The annual competition, similar to other library awards for research, calls for graduate students to submit imagery related to their research, which will be showcased as an exhibit and online.

**Partners : Hathi Trust Research Center[25] and Illinois Program for Research in the Humanities[26] and Institute for Computing in Humanities, Arts, and Social Science[27]** [2.35]

**Service area : Digital Humanities** [2.36]

The English and Digital Humanities Librarian and the Scholarly Commons are working to provide a suite of support services related to the digital humanities. The team from the Scholarly Commons and the English and Digital Humanities Librarian meet regularly to discuss current digital humanities projects and to brainstorm ways that they can support increasingly complex digital humanities projects. There are three partners working in this arena: the Illinois Program for Research in the Humanities, the Hathi Trust Research Center, and the Institute for Computing in Humanities, Arts, and Social Science. [2.37]

First, the goals for the Illinois Program for Research in the Humanities are focused on promoting conversations across the humanities, arts, and social sciences through workshops, fellowships, lectures, and offering some services. There are two projects on the horizon including cosponsoring lectures and exploring options for supporting Scalar,[28] an open-source presentation and publishing service. [2.38]

Second, the Hathi Trust Research Center works to administer computational access to digital works in the public domain so that scholars can analyze texts and the associated data. The Scholarly Commons has partnered with the Hathi Trust Research Center to arrange front-end documentation, training, and support to scholars worldwide. While this Scholarly Commons project is still in the pilot stage, the plan is to serve as a portal to the Hathi Trust Research Center. [2.39]

Third, the Institute for Computing in Humanities, Arts, and Social Science administers support for grants to accomplish large-scale humanities projects and provides access to high- performance computing. One of the primary areas of collaboration with the Institute for Computing in Humanities, Arts, and Social Science is to establish support for faculty and graduate students who aren't quite at the level or as comfortable with the tools that the [2.40]

Institute for Computing in Humanities, Arts, and Social Science uses. The partnership is working to create beginner support in geographic information systems, text mining, network analysis, and so on.

[2.41] **Partner : Office of Undergraduate Research**[29]

[2.42] **Service area : Publishing**

[2.43] The Office of Undergraduate Research is a provost initiative to foster collaborative undergraduate research efforts and aid in the development of educational opportunities for faculty and students across disciplines. In partnering with the Scholarly Commons, the Office of Undergraduate Research has allocated resources to archive undergraduate research projects in the institutional repository and in the creation of open-access undergraduate research journals. The Scholarly Commons purchased a hosted installation of Open Journal Systems, an open-source software that curates journals, in order to collect, edit, and publish journal articles. The publishing of original student work affords an opportunity to create information literacy initiatives to address the student as content creator and curator and educate graduate student advisors and faculty members on scholarly communication issues. Current workshop sessions include how to conduct a literature review, citation management, creating posters for the research symposium, and training on scholarly communication issues specific to the needs of undergraduate students (e.g., open access). A third partner in this effort, the University of Illinois Writing Center, provides peer-tutoring training for the undergraduate students editors. The Scholarly Commons reciprocates involvement in undergraduate research twofold: by accepting an invitation to serve on the Office of Undergraduate Research Advisory Board, and by curating a blog that reaches out to undergraduate research and teaching faculty by disseminating research tips and undergraduate research events. Future opportunities for the Scholarly Commons will build on the expansion of publishing efforts beyond journal publications and more educational efforts regarding scholarly communication issues.

[2.44] **Partner : Student Money Management Center**[30]

[2.45] **Service area : Teaching and Learning**

[2.46] Academic libraries are increasingly involved with campus partners outside of traditional library-related issues. The Association of College and Research Libraries (ACRL) president, Trevor Dawes, emphasizes, “Being embedded in the academic culture gives us a unique opportunity to provide access to the information, resources, education, and tools that our community members need to make good financial decisions in our increasingly complex global financial ecosystem.”[31] The Student Money Management Center, a division of the University Student Financial Services and Cashier Operations, works to provide educational initiatives to improve student understanding of finan-

cial literacy. The Student Money Management Center partners with the Scholarly Commons to offer a variety of workshops in the Scholarly Commons instructional space about information-management issues (e.g., how to protect your online identity and exploring how students' attitudes toward money shape their financial decisions). The Scholarly Commons also developed a bibliography of financial-literacy resources for students.[32] Looking toward the future, the Scholarly Commons is participating in campus-wide efforts to expand financial-literacy education to students at all levels of the university.

**Partner : ORCID**[33] [2.47]
**Service area : Scholarly Communication** [2.48]
ORCID is an online identification system and central registry that facilitates researchers' ability to navigate their workflow for manuscript submission and grant applications. As online systems continue to expand, researchers are increasingly aware of the responsibility to manage their online presence. This partnership takes the form of a volunteer ambassadorship, with the Scholarly Commons interweaving ORCID throughout workshops and campus-wide outreach efforts. For example, in a session about managing an online scholarly presence, librarians talk about the impact of personal research through online metric systems (e.g., ImpactStory,[34] ORCID). Marketing efforts through posters, website development, handouts, and giveaways are avenues for showcasing the work around the Scholarly Commons' mission to provide education on a wide variety of scholarly communication issues, including bibliometrics. [2.49]

## INTERNAL PARTNERSHIPS [2.50]

Subject-specialist librarians and Library Information Technology Services are at the heart of the success of the Scholarly Commons. The holistic approach to librarianship requires that all librarians are responsible for data services and scholarly communication within their disciplines and the Scholarly Commons model administers a solid underpinning of support for gradually learning new skills in emerging research areas. Staff training in the library is two-fold: training is developed for subject librarians from experts in specific areas (e.g., scholarly communication); plus the library purchases access to online training opportunities offered by the ACRL and other similar organizations. [2.51]

**Partner : Library Information Technology Services**[35] [2.52]
Library Information Technology (IT) provides the crux of support essential to running the sandbox environment[36] in the Scholarly Commons. The space [2.53]

holds a dozen public-access computers, including three Macs, all of which are imaged with software programs not available on other library computers. Examples of software are ABBY FineReader, the Adobe Suite of products, AcrGIS, Atlas.ti, SPSS Statistics, Morae, Oxygen XML editor, Python, R and Rstudio, and much more.[37] In 2012, Library IT and the Scholarly Commons successfully petitioned for a professional staff position to maintain licensing and imaging support for the hardware in the space, as well as to support the large-screen monitor and technology in the conference room and to keep the licenses up to date in the instructional space. Start-up challenges comprised of setting a workflow for establishing a model for the ongoing acquisition, maintenance, support, and renewal of hardware and software. Currently, staff are looking into breaking software down into clusters within the Scholarly Commons space so that not all computers need to have all software programs, many of which take up considerable space on the hard drive. This decision should also offer more flexibility in supporting service programs, including adapting to the needs of teaching faculty as they increasingly incorporate specific software needs into their courses. As an example, a teaching faculty member approached the Scholarly Commons to give students access to QGIS,[38] a free and open-source geographic information systems program. Library IT was able to add the software to the computers on short notice and the staff responded by learning the basics of QGIS in order to answer basic student questions. The Scholarly Commons is fielding an elevated number of requests to purchase and install software for students to use as part of their courses and this presents a challenge in how many software programs the staff is feasibly able to support. The Scholarly Commons, as a learning and lab space, continues toward a workflow that enables agility in testing new technologies for research as well as for teaching and learning.

**[2.54] Partner : Subject Specialists**

**[2.55]** The Savvy Researcher workshop series is mainly supported through the work of the subject-specialist librarians and external partners. From 2009 to 2013, the Savvy Researcher has contributed over forty unique workshops to the campus, reaching an average of 1,200 attendees per year. In looking for ways to expand library instruction opportunities, the workshops build on knowledge the librarian brings to the classroom. For example, librarians often assist with classes in demonstrating how to find information related to discipline-related work; however, there is usually little time to teach citation-management skills or to get into the details of data management. Subject librarians take leadership of the Savvy Researcher in specific areas in order to teach a wide variety of workshops related to advanced research and information-management skills. Example workshops include introducing the basics of several citation managers, demonstrating how to negotiate publication agreements, finding government statistics, using digital tools for archival

research, finding grants to support research, practical copyright for teaching and research, current awareness tools, creating research posters, and much more.[39] Almost all of the sessions offer online support through web pages or research guides. New workshops are consistently under development (e.g., bibliometric analysis of research output), with ideas being generated from assisting students in the Scholarly Commons, reference interactions, suggestions from teaching faculty, students, and librarians, and formal assessment techniques. The Savvy Researcher workshop series brings together the expertise of the partners and librarians and is an amplification of the educational mission of the Scholarly Commons.

Another area where subject librarians offer expertise to the campus is web and computer usability. The Digital Resources and Reference Librarian and the Technical Architect for Web Content provide expert support on an as-needed basis. The usability lab offers a space for researchers that is nearly soundproof with a Mac and PC and the corresponding software to perform usability testing. The Scholarly Commons collection development policy also includes web and computer usability. [2.56]

## ASSESSMENT [2.57]

To assess traditional reference services, the University Library employs the Reference Effort Assessment Data (READ) Scale[40] and inputs data into an online management system, Desk Tracker.[41] The Scholarly Commons has grown steadily since its inception, but gathering assessment data for an innovative and new service has presented significant challenges. Assessment data for the Scholarly Commons looks much different than the data gathered for the Information Services Desk. Traditional reference service questions revolve around locating materials and assisting students with starting a research project. In tracking data for traditional reference services, librarians record the number of questions by assigning a READ Scale number and data related to the type of question (e.g., directional, looking for a specific resource, technical help with computers, research assistance), and a subject area. [2.58]

In constructing a narrative about how the Scholarly Commons helps researchers, the interactions are more complex, users are usually repeat visitors, and questions are not only heavily technology-based but also vastly unpredictable, making them not easily quantifiable. Researchers often find the Scholarly Commons because they either are facing a technology-centric problem or have a research-related question that has many parts. In response, the Scholarly Commons coordinators modified the assessment input form to more clearly reflect the kinds of interactions faced on a daily basis. To supplement the data gathered by librarians and partners, there are formal [2.59]

assessment paper forms, a brief questionnaire asking patrons about their research and their experience in the Scholarly Commons. The coordinators have also implemented informal assessment strategies and are constantly watching Scholarly Commons' activities in motion, closely monitoring how researchers are interacting with the space and the services they receive from staff and partners.

## [2.60] FUTURE PLANS AND DEVELOPMENT

[2.61] While the Scholarly Commons provides an entry point for services related to research data stewardship, the eResearch Task Force points out that the library, "cannot advance substantively unless there is both campus-level technical and personnel infrastructure to support data curation and preservation and domain-specific expertise to support research data management, preservation, and sustained access."[42] The eResearch Task Force acknowledges that "services for which campus researchers currently lack support include (a) a robust, secure storage and network infrastructure that is accessible to all campus units, (b) a local research data repository service, (c) data management and publishing services, and (d) data transformation and migration services."[43] The Task Force specifically recommends that the initiative collaborate with a series of campus partners: the Office of the Vice Chancellor for Research, Campus Information Technologies and Educational Services, and the National Center for Supercomputing Applications, as well as the colleges and their respective research centers. The Scholarly Commons will be the hub for research data services and the implementation committee is charged with overseeing the development of library-wide training opportunities, identifying external research data organizations with which the initiative should be engaged, and creating best practices for subject-specialist librarians working with faculty and researchers.[44] Efforts will be spearheaded by a director of research data services, a position that is supported by the University Library and the vice chancellor for research, and two data curation specialists in order to address needs related to data storage, networking, and manipulation and visualization.[45]

## [2.62] CONCLUSION

[2.63] The overarching goal of the Scholarly Commons is to move from supporting discrete tasks related to technology and research to driving the educational process significantly forward by providing services that support a larger and more holistic picture of digital scholarship. Academic libraries are just beginning to adjust and innovate to the technology challenges our researchers face. The most difficult element of this endeavor is being unable to predict the

questions our researchers will ask us; hence the need to prepare broadly. In bringing together partnerships across campus and performing regular environmental scans of our academic communities, the Scholarly Commons is building a community of researchers, one that is attempting to stay on the cutting edge of research endeavors. Our goal is to build on strategic campus partnerships through a combination of consultation services, robust staff training, and information-literacy efforts, in order to construct a foundation in which researchers can continue to collaborate with our knowledge of the research process.

## NOTES [2.64]

1. University Library, "New Service Models," last modified April 24, 2013. www.library.illinois.edu/nsm. [2n1]
2. University Library, Scholarly Commons Leadership Team, "The Scholarly Commons: Bringing People Together in Support of Scholarship," University of Illinois at Urbana-Champaign, October 3, 2008, accessed September 21, 2013, www.library.illinois.edu/nsm/scholcom/ScholalryCommonsReport.pdf. [2n2]
3. Ibid, 6. [2n3]
4. University Library, Reference Services Implementation Team, "Reference Services Implementation Team: Final Report," University of Illinois at Urbana-Champaign, July 2011, accessed September 12, 2013, www.library.illinois.edu/nsm/reference/ReferenceImplementationNSMFinalReport_070611.pdf. [2n4]
5. The three other in-person desk locations include the Undergraduate Library, Physical Sciences at Grainger Engineering Library, and Life Sciences at the Funk Family ACES Library. [2n5]
6. University Library, "The Scholarly Commons: Bringing People Together in Support of Scholarship," 1. [2n6]
7. University of Virginia Library, "Scholars' Lab," accessed December 1, 2013, www.scholarslab.org. [2n7]
8. The University of North Carolina at Chapel Hill, "GIS & Data Services," accessed December 1, 2013, http://library.unc.edu/services/data. [2n8]
9. The University of North Carolina at Chapel Hill, "Scholarly Communications Office," accessed December 1, 2013, http://library.unc.edu/scholcom. [2n9]
10. University of California at Los Angeles, "UCLA Data Registry," accessed December 1, 2013, www.library.ucla.edu/service/data-registry-home. [2n10]
11. Indiana University at Bloomington, "IU Libraries Scholars' Commons Series," accessed December 1, 2013, http://libprod.lib.indiana.edu/tools/workshops/workshop-listings. [2n11]
12. The University of Kansas, Center for Digital Scholarship, "Digital Publishing," accessed December 1, 2013, http://cds.lib.ku.edu/services/journal-publishing. [2n12]
13. University of Michigan Library, "Michigan Publishing," accessed December 1, 2013, www.publishing.umich.edu. [2n13]
14. Craig Gibson and Meris Mandernach, "Reference Service at an Inflection Point: Transformations in Academic Libraries," in *The Proceedings of the ACRL 2013 Conference*, ed. Dawn M. Mueller (Chicago: ACRL, 2013), 491–99, accessed October 1, 2013, www.ala.org/acrl/sites/ala.org.acrl/files/content/conferences/confsandpreconfs/2013/papers/GibsonMandemach_Reference.pdf. [2n14]
15. Lucinda Covert-Vail and Scott Collard, "New Roles for New Times: Research Library Services for Graduate Students" (Washington, DC: Association of Research Libraries, 2012), accessed September 21, 2013, www.arl.org/storage/documents/publications/nrnt-grad-roles-20dec12.pdf. [2n15]

[2n16] 16. University of Illinois, Applied Technologies for Learning in the Arts & Sciences, "ATLAS," accessed December 1, 2013, www.atlas.illinois.edu.

[2n17] 17. University of Illinois Library, "Data Services Task Force," last modified March 9, 2011, accessed August 25, 2014, www.library.illinois.edu/committee/dataservice/dstf.html.

[2n18] 18. Membership includes staff from ATLAS and the Numeric and Spatial Data Librarian, Engineering Research Data Services Librarian, Life Sciences Data Services Librarian, and the Scholarly Commons Coordinators.

[2n19] 19. University of Illinois Library, "Numeric and Spatial Data Services," last modified September 5, 2013, accessed August 25, 2014, www.library.illinois.edu/sc/datagis/index.html.

[2n20] 20. University of Illinois at Chicago, "Survey Research Laboratory," accessed December 1, 2013, www.srl.uic.edu.

[2n21] 21. University of Illinois, Campus Information Technologies and Educational Services, "Online Teaching and Learning," last modified November 21, 2013, accessed August 25, 2014, www.cites.illinois.edu/onlinelearning/index.html.

[2n22] 22. University of Illinois Library, "Media Commons," last modified April 4, 2013, accessed August 25, 2014, www.library.illinois.edu/ugl/mc.

[2n23] 23. University of Illinois at Urbana-Champaign, "The Graduate College," accessed December 1, 2013, www.grad.illinois.edu.

[2n24] 24. Modeled after a similar program at the University of Illinois at Chicago: http://grad.uic.edu/cms/?pid=1000645, accessed December 1, 2013.

[2n25] 25. Hathi Trust Digital Library, "Our Research Center," accessed December 1, 2013, www.hathitrust.org/htrc.

[2n26] 26. University of Illinois, "Illinois Program for Research in the Humanities," accessed December 1, 2013, www.iprh.illinois.edu.

[2n27] 27. University of Illinois, "Institute for Computing in Humanities, Arts, and Social Science," accessed December 1, 2013, http://chass.illinois.edu.

[2n28] 28. The Alliance for Networking Visual Culture, "Scalar," accessed December 1, 2013, http://scalar.usc.edu.

[2n29] 29. University of Illinois at Urbana-Champaign, Office of the Provost, "Office of Undergraduate Research," accessed December 1, 2013, http://provost.illinois.edu/our.

[2n30] 30. University of Illinois at Urbana-Champaign, University Student Financial Services and Cashier Operations, "Student Money Management Center," accessed December 1, 2013, www.studentmoney.uillinois.edu.

[2n31] 31. Trevor A. Dawes, "Libraries, ACRL, and Financial Literacy: Helping Students Make Sound Decisions," *College & Research Libraries News* 74, no. 9 (October 2013): 466–67, accessed November 10, 2013, http://crln.acrl.org/content/74/9/466.full.

[2n32] 32. University of Illinois Library, "Financial Literacy," last modified December 16, 2013, accessed August 25, 2014, http://uiuc.libguides.com/financialliteracy.

[2n33] 33. ORCID, "Connecting Research and Researchers," accessed December 1, 2013, http://orcid.org.

[2n34] 34. ImpactStory, accessed December 1, 2013, http://impactstory.org.

[2n35] 35. University of Illinois Library, "Library IT Help Desk," last modified October 21, 2013, accessed August 25, 2014, www.library.illinois.edu/ithelp.

[2n36] 36. A sandbox environment is a flexible technology-enhanced work environment where the Scholarly Commons partners with Library IT in order to respond as quickly as possible to download new software programs so that researchers can assess its needs in support of their academic work.

[2n37] 37. University of Illinois Library, "Room 306 Main Technology," last modified September 16, 2013, accessed August 25, 2014, www.library.illinois.edu/it/helpdesk/groupspaces/main306sc.html.

[2n38] 38. "QGIS," last modified December 15, 2013, accessed August 25, 2014, www.qgis.org/en/site.

[2n39] 39. University of Illinois Library, "Savvy Researcher Workshops," accessed December 1, 2013, http://illinois.edu/calendar/list/4068.

[2n40] 40. Bella Karr Gerlich, "The READ Scale," accessed December 1, 2013, http://readscale.org.

41. Compendium Library Services, "Desk Tracker," accessed December 1, 2013, www.desktracker.com. [2n41]

42. University Library's eResearch Task Force, "eResearch Services at the University Library—Final Report of the Library eResearch Task Force," University of Illinois at Urbana-Champaign, January 16, 2013, accessed August 25, 2014, http://hdl.handle.net/2142/42561. [2n42]

43. Ibid, 7. [2n43]

44. Ibid, 3. [2n44]

45. Ibid, 8. [2n45]

## BIBLIOGRAPHY [2.65]

Covert-Vail, Lucinda, and Scott Collard. "New Roles for New Times: Research Library Services for Graduate Students." Washington, DC: Association of Research Libraries, 2012. Accessed September 21, 2013. www.arl.org/storage/documents/publications/nrnt-grad-roles-20dec12.pdf. [2.66]

Dawes, Trevor A. "Libraries, ACRL, and Financial Literacy: Helping Students Make Sound Decisions." *College & Research Libraries News* 74, no. 9 (October 2013): 466–67. Accessed November 10, 2013. http://crln.acrl.org/content/74/9/466.full. [2.67]

Gibson, Craig, and Meris Mandernach. "Reference Service at an Inflection Point: Transformations in Academic Libraries." In *The Proceedings of the ACRL 2013 Conference*, edited by Dawn M. Mueller, 491–99. Chicago: ACRL, 2013. Accessed October 1, 2013. www.ala.org/acrl/sites/ala.org.acrl/files/content/conferences/confsandpreconfs/2013/papers/GibsonMandemach_Reference.pdf. [2.68]

University Library, Reference Services Implementation Team. "Reference Services Implementation Team: Final Report." University of Illinois at Urbana-Champaign, July 2011. Accessed September 12, 2013. www.library.illinois.edu/nsm/reference/ReferenceImplementationNSMFinalReport_070611.pdf. [2.69]

University Library, Scholarly Commons Leadership Team. "The Scholarly Commons: Bringing People Together in Support of Scholarship." University of Illinois at Urbana-Champaign, October 3, 2008. Accessed September 21, 2013. www.library.illinois.edu/nsm/scholcom/ScholalryCommonsReport.pdf. [2.70]

University Library's eResearch Task Force. "eResearch Services at the University Library—Final Report of the Library eResearch Task Force." University of Illinois at Urbana-Champaign, January 16, 2013. Accessed November 13, 2013. http://hdl.handle.net/2142/42561. [2.71]