

Environmental Scan 2015

By the ACRL Research Planning and Review Committee

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Association of College and Research Libraries
American Library Association
50 E. Huron St.
Chicago, IL 60611-2795

Telephone: (800) 545-2433, ext. 2523
Fax: (312) 280-2520
E-mail: acrl@ala.org
Web: www.acrl.org

ACRL ENVIRONMENTAL SCAN

Introduction and Methodology

The 2015 Environmental Scan of Academic Libr

books can serve very different purposes for researchers and patrons, whether for basic searching or for actual reading (Rod-Welch et al. 2013; Styer 2012; Li et al. 2011).

Although there continue to be predictions of bookless libraries (with books no more than aesthetic decoration), only a few high-profile examples have emerged. According to a recent *Thakara S+R US Library Report* (Long & Schonfeld 2014), the transition to e-books has not been as smooth as earlier predicted. For example, most library directors report that large-scale acquisition of e-books has led to large-scale de-accession of print materials. Another *Thakara S+R Report* focused on faculty (Housewright et al 2013) provided evidence that most faculty are still wary of an e-only monograph future. Even for the sciences, only around 15% of faculty surveyed responded favorably to the statement that within the next five years "it will not be necessary to maintain library collections of hard-copy books." Rather, faculty indicated that print titles (particularly low-use titles) were more likely to move to a storage facility. With that said, only around 20-25% of library directors still consider the acquisition of print books as a means to build research collections a high priority. Some collection managers have addressed e-book growth by establishing and expanding approval plans, which are no longer reserved for STEM publications. Even with e-book approvals, though, significant percentages of titles are still received in print within profiled call number ranges.

Implications

Libraries should continue to work with vendors and each other to better manage the sharing and preservation of e-book content.

Libraries will need to continue to manage a hybrid e- and print monograph world for some time to come, balancing users' needs and preferences, space issues, and access.

Streaming AV has its own set of challenges that are currently in a state of discussion and negotiation between libraries and vendors.

New publisher models of patron-based acquisition such as evidence-based models are still relatively new, and need to be carefully assessed.

Textbook/Course-Adopted Readings and Libraries

Textbook affordability and course reading support continue to be substantial areas of discussion among librarians (Demas 2014), with numerous initiatives being piloted. Several states have addressed textbooks through legislation, as has the federal government, requiring students to have access to textbooks prior to class enrollment. The role of libraries in textbook support and acquisition continues to be in flux. Libraries have begun promoting open educational resources (OERs) through direct grants as a means to address rising costs. Other institutions have begun to focus on course-adopted readings, rather than traditional textbooks, and promote e-collections as a means to better meet patron demands for these high-use materials (e.g., University of North Carolina-Greensboro pilot). Another approach has been to purchase textbooks for certain fields and place them on reserve—using either existing collection dollars or special funds.

Implication

Libraries can play an important role in providing more access to textbook and course-adopted texts (particularly with eBooks), but need to take heed of and collaborate with the many internal university players in the textbook and course readings ecosystem.

Curating Collective Collections/Collaborative Print Management

Shared print repositories continue to be of great interest to academic libraries as a means to more efficiently manage and sustain legacy print collections, expand access, and create or repurpose existing physical space in individual libraries. A 2013 OCLC Report, “Understanding the Collective Collection” (Dem

Two new ARL Spec Kits #337 (Britton and Renaud 2013) and the afore-mentioned #345 (Crist and Stambaugh 2014), focus on retention policies and shared and collaborative print initiatives across numerous institutions and consortia. They provide significant guidance in establishing infrastructure and addressing potential issues in print resource management, including communication strategies with relevant stakeholders. The ARL Spec Kit #337 on Print Retention Decision-Making “examines research libraries’ print retention decision making strategies related to storage of materials in three different types of facilities or circumstances: on-site, staff-only shelving; remote shelving; and collaborative retention agreements.” Spec Kit #345 on Shared Print Programs “explores the extent of ARL member libraries’ participation in shared print programs, the type and scope of programs which they choose to participate, the rationale for participation, the value and benefits the programs provide to ARL and other libraries, and the roles different libraries are playing in them.” A particularly interesting section of the Shared Print Programs study focuses on shared print monographs and “future” services, i.e., potential leveraging of these retrospective collections in light of e-books and digitization. New possible services considered include coordinated digitization of shared collections, scan-on-demand services, metadata crosswalks between shared print and digital copies, and enhanced interlibrary lending networks.

Access to and discoverability of these shared collections is another issue that should be considered. How are users able to locate these collections in a seamless fashion? Several consortia and regional institutions are implementing or have already implemented joint/shared ILS to manage these shared things in both print and electronic formats.

Implication

There should be a continued review of the collaborative and coordinated management and use of retrospective print collections and how to enhance services associated with these collections and their digital counterparts.

Collections Assessment

Collecting metrics on library collections has long been a source for evaluating the usage of the collections and their relevance to academic programs they support. Metrics have also been used to reflect the size, rank, and prestige of institutions. The current trend continues to focus on how collections help support the library’s alignment with the campus vision/mission/goals, and to what degree they contribute to research, student success, and other criteria.

Traditionally these metrics have focused on collections owned and managed by the library. As the library’s curation role expands to e-research, data, open access scholarship, born-digital resources, and open educational resources, the potential for tracking and assessing what is held in institutional repositories has raised some practical issues on what to measure and the need for standards for cross-institutional and global comparisons. In addition, further studies are being undertaken to assess how the increased

dissemination of scholarship might help advance research and increase institutional standing (Webometrics n.d.).

The development of altmetrics that measure the impact of new modes of scholarly communication (such as blogs, social media, in

Institute of Medicine study, the interpretation and implementation of HIPAA policy has been costly and has caused unintended negative impacts on health research in many ways (Nass, Levit, and Gostin 2009). The study calls for a new legal and regulatory framework to better protect privacy and facilitate responsible health research through such approaches as requiring the data provider to establish stronger security safeguards and implement legal sanctions to prohibit unauthorized re-identification of information after it has been de-identified. No matter how the new OSPT policy will handle similar technical, legal, and ethical issues of public data access, academic librarians, serving both the data creators and data users, will have opportunities to provide valuable services beyond data management plan creation (Goben and Salo 2013).

Implications

The future of research data services at academic libraries will continue to be driven by larger academic factors and government policies, as well as even broader national development priorities and international competition and collaborations.

Academic libraries need to pull together their human and intelligent resources and collaborate on developing state-of-the-art, cross-institutional digital platforms for disseminating scholarly projects in multiple formats.

Academic libraries can leverage their expertise and experience in curation, preservation, and data management to support, educate, and facilitate government agencies that now need to make their data and information more publicly usable and accessible.

Understanding Researchers' Data Sharing and Management Practices

Broader and institutional-level policies and requirements that regulate and potentially change researchers' behaviors affect the very tangible practices of research data sharing, management, and preservation. Also important are research communities' norms, their awareness of available resources, individual researchers' motivation to increase their research visibility (Kim and Stann 2012). Increasing numbers of scientists are beginning to reflect on their own data sharing abilities and challenges. Institutions are trying to identify researchers' real data needs and develop more targeted programs for research data services. Meanwhile, academic librarians have also conducted more survey and interview studies on large and small groups to identify researchers' current strategies of dealing with data.

Based on an international survey of over 1,000 scientists, one study found that, although most researchers realize the importance of sharing and preservation, they are usually limited by time, budget, and information about currently available support and tools (Tenopir et al. 2011). Another international study of over 2,000 scientists, conducted by the publisher Wiley (Ferguson 2014), revealed substantial and disciplinary differences in research data sharing and found that researchers are more willing to share if they can get full credit for sharing data and thus increase their overall impact within research communities.

From the scientists' perspectives (Marx 2012; Budin-Ljone et al. 2014), extensive technical challenges still arise when sharing data in a broader range of communities. Even sharing across consortia within the same disciplines is difficult, especially when reuse of data requires detailed information on research methods and software tools. Faced by these challenges, scientists are not motivated enough to invest in better solutions partly because not enough forms of recognition or ethical standards of sharing data have been developed.

Smaller scale studies of scientists' research communities have developed deeper dialogues between librarians and researchers and provided opportunities for librarians to introduce newly created data services to their users (Diekema et al. 2014; Williams 2013a). Librarians have learned that most researchers are not aware of libraries' various support services throughout the research data life cycle, and librarians have had to educate researchers about their expertise and knowledge in the relevant fields of research data.

Obvious gaps exist between the available resources and information and the researchers who need data management and shared support services. Therefore, libraries must still develop outreach and education efforts with an eye to innovation, and then implement new services, programs, or research projects. Detailed strategies might include, for example, a bibliographic study of academic publications to identify researchers to target with data curation services (Williams 2013b) or plans to take advantage of the end dates of funding life cycles, when researchers need to implement their data archiving plans (Nilsen et al. 2013). These ideas have been suggested to maximize buy-in for library data services.

Implications

Disciplinary and methodology differences influence researchers' data collecting, analyzing, and sharing behaviors and thus require data services librarians to develop a deeper understanding of research processes, in order to provide suitable assistance within each research field.

Increasing numbers of data management and curation services will be developed based on an evaluation of specific research programs' needs and practices.

Innovative outreach strategies are needed for academic libraries to market their existing data services to users who are usually unaware of librarians' expertise and the available tools and resources.

Advances in Data Curation Services

As the Data Curation Policy Working Group of OCLC (Erway 2013) has pointed out, although academic libraries are still the stewards of research data who care about the long-term preservation of this special asset, collaboration between campuses and even institutions is key to services' success. Collaboration with other campuses or institutional units, such as research and research compliance offices and, especially, research departments, could even enable a smaller research-intensive university to

into a detailed list of core content and competencies for articulated data literacy instruction, including additional newly identified competencies in data management (Prado and Marzal 2013). Data librarians in academic libraries are exhibiting more collaborative and collective efforts for instruction on data information literacy: gathering user information, engaging in conversations across institutions a

and departments are facing this new challenge opportunity to acquire new skills and knowledge related to data management.

In many disciplinary fields, such as science, business, and health, librarians are paying attention to this new professional demand and publishing studies on the meaning and

Discovery Services

Coherence at Scale sponsored by CLIR and Vanderbilt University has been formed to analyze national-scale digital projects that help transform higher education.

them to make information connections that contribute to the creation of new knowledge.

In support of non-consumptive scholarly research, libraries, in collaboration with content vendors, should explore options for providing data mining functionality in aggregated databases.

Library Facilities

The Ithaka S&R US Library Survey 2013, mentioned earlier in this report, also highlights the recognition of the library as a place important to the university and to student success. In this survey of library directors, “provi

multiple modes of teaching and learning, including collaborative and individual work in support of emerging high-impact practices. Many libraries offer multimedia production facilities and lend technology tools that support media-rich content creation.

Digital scholarship centers as described by Lippincott, Hemmasi and Lewis (June 2014) are increasingly found in academic institutions of all types and involve a variety of disciplines with the goal of locating expensive equipment, expertise, and services such as assistance with planning research projects, use of software, metadata, intellectual property issues and preservation. As the author

Mobile application development rooms offer students the opportunity to develop new mobile apps and test their product on a variety of devices. New libraries such as the Hunt Library (completed in 2013) at North Carolina State University (NCSU Libraries, no date) provide access to large-scale visualization techniques, a game lab, decision theaters, video and audio studios as well as a makerspace with a laser cutter and 3D printer.

“Makerspace” is a general term and can include a host of concepts ranging from hands-on arts to building a robot. These are fun and exciting times for libraries to be able to add value from a campus perspective. Students enjoy working collaboratively and testing out new technologies for free or a nominal fee; faculty embrace the new technologies offered at the library and imagine ways of incorporating library services into classroom curricula, and library administration can report on the increase use of the space, services and circulation. These new technology services place the library at the center of campus and increase its visibility and therefore its value. As more libraries explore these spaces, resources such as the LibraryMakerspace-L@lists.ufl.edu will become available for libraries wanting to initiate 3D services to create a makerspace environment, tapping into the expertise and knowledge of library colleagues who are already offering such services.

Libraries are increasingly called upon to offer students the opportunity to be creative and innovative in a high tech environment. Libraries may provide technologies in the building or make them available for circulation. To make the best use of these services, internal library procedures and policies related to user safety and damage need to be created prior to beginning the service. Providing a 3D printer requires additional policies, guidelines, space considerations, staff workflows and training (Garcia et al.; Gonzalez and Bennett 2014; Moorefield-Lang 2014; Colegrove 2012).

These opportunities serve students but also pique the interest of faculty and researchers who then can develop course curricula and the lab for assignments. Libraries may want to further develop these campus partnerships and be included on grants and other funding initiatives for the maintenance and purchase of new technologies.

Implication

Establishment of technology-related services requires planning for continuous support and infrastructure, including: training for users, availability of staff with the requisite skill sets to support the services, availability of physical facilities with sufficient space and power, ongoing availability of resources to keep the services up-to-date as well as establishment of appropriate policies and guidelines. Additional expertise related to library and instructional technologies, media production, and other emerging technologies must link with institutional assessment and space planning in order to ensure library facilities meet user expectations into the future.

Scholarly Communication

Academic Library as Publisher

Publishing by academic libraries has steadily increased in the past few years. Hahn (2008) reports the results of a 2007 survey of ARL libraries. At the time of the survey,

Implication

Rights management is a complex landscape in which to maneuver. Librarians can advise on best practices and the development of institutional policies.

Altmetrics

As scholarly communication increasingly takes place online, alternative metrics are

Library Impact on Student Success

Academic libraries exist in a time of increased accountability as performance-based

Teaching and Learning

Librarians are partnering with faculty development personnel to take advantage of acknowledged educational high impact practices. Collaborations involve more than one-time instruction, instead focusing on course design and application of active learning in research skill development. They also continue to experiment with alternative service models to support and enhance rapidly evolving user needs and preferences. Models include tiered services targeted to distinct needs of undergraduate students, graduate students, faculty members, and researchers. Where resources allow, "personal" librarians are designated for first-year students to create initial connections and foster service awareness. Liaison librarians are assigned to academic departments, programs, and other initiatives to develop resources and services targeted to those specific audiences. Academic support services are co-locating wi

comprehensive suites of online learning tools and environments. As assessment of library websites and online course content continues to expand, the need for special skills in these areas grows.

Implications

Pedagogical innovations such as flipped classrooms, gamification, or high impact educational practices provide

Conclusion

The trends and issues outlined in this document highlight the rapidly changing environment in which libraries provide resources and services as well as the evolving roles for library staff. With higher education under increased scrutiny to demonstrate the value of a post-secondary degree, it is incumbent upon academic libraries and librarians to document and communicate the Library's value in supporting the core mission of the institution. Libraries increasingly have the opportunity to play a significant role in overall student success through collaboration across campus and in the assessment of student learning. The shifting landscape of scholarly communication, fluctuating publishing models, and focus on data management presents new opportunities for librarians to engage with researchers and public alike. Advances in technologies and a continued focus on the user experience present new expectations for the development, discovery and delivery of content and services in the virtual environment and in the library's physical spaces. While this environment can be viewed as challenging, it also presents opportunities for academic libraries to strategically support the core missions of colleges and universities.

Appendix A: ACRL Research Planning and Review Committee 2014-2015

Jeanne Davidson (Chair)
 Head of Public Services
 South Dakota State University

Wayne Bivens-Taetou

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Lisabeth Chabot (Vice-chair)
College Librarian
Ithaca College

Michelle Leonard
Associate University Librarian
University of Florida

Chris Palazzolo, PhD
Head of Collections (Woodruff Library)
Emory University

Lorelei Tanji
University Librarian
University of California, Irvine

Minglu Wang
Data Services Librarian
Rutgers University - Newark

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