ACRL Research Planning and Review Committee

2016 top trends in academic libraries

A review of the trends and issues affecting academic libraries in higher education

Every other year, the ACRL Research Planning and Review Committee produces a document on top trends in higher education as they relate to academic librarianship. The 2016 Top Trends report discusses research data services, digital scholarship, collection assessment trends, content provider mergers, evidence of learning, new directions with the ACRL Framework for Information Literacy, altmetrics, emerging staff positions, and open educational resources.

Research data services (RDS)

The latest survey of U.S. and Canadian college and research libraries reports that the number of libraries offering research data services has remained flat.[1] This is somewhat unexpected, based on responses to the survey conducted by David Fearon[2] in which nearly a quarter of respondents indicated plans to offer a range of data services. Consistent with previous surveys, Carol Tenopir et al. found that RDS are more common in four-year and research universities than two-year institutions. Many libraries currently providing RDS have taken a traditional approach by offering informational and consultative services that align with existing liaison and reference roles, far fewer are offering technical services.

Data policies and data management plans
Following through on the 2013 OSTP Memorandum,[3] many federal funding agencies released their Public Access Plans in 2015. An informal group of library-based data specialists created a comparison chart of these plans, available in Figshare.[4] Jennifer Thoegersen compares the policy elements in federal funding agency plans and the Interagency Working Group on Digital Data (IWGDD) report,[5] while Kristin Briney analyzed institutional research data policies. Supporting faculty and administrators in navigating these policies is an important opportunity for libraries.[6]

Professional development for librarians providing RDS
Most libraries are shifting existing staff into data positions rather than hiring new data librarians, creating a growing demand for professional development opportunities.[7] The range of professional development opportunities for librarians to educate themselves in good data practices increased throughout 2015 and will continue to grow in 2016, chiefly as a result of two initiatives. The first includes two NIH BD2K awards to develop a MOOC[8] and two curricula for teaching research data management.[9] The second is the creation of an ACRL Research Data Management Roadshow, which will take the form of a day-long workshop designed for library administrators, subject liaisons, and other specialists.

Digital scholarship

To advance the educational and research processes, libraries are developing digital

scholarship centers, often in partnership with other campus units. These centers extend traditional methods of research by applying new technologies, such as GIS data, visualization, and big data across the curriculum. Digital asset management, digital preservation, training, consultations, and tools for digital scholarship are among the suite of services and resources provided. Alix Keener identifies challenges associated with creating space for collaborative research relationships in digital scholarship: the role of librarians as collaborators/service providers, program planning for diverse constituencies, and continuous skill development.[10] ACRL's Digital Scholarship Center Interest Group provides a forum for engaging on this topic.

Recognizing that a library's success in meeting its mission is best informed by outreach and engagement, many libraries actively seek feedback from their constituents. User experience (UX) work informs website, service, and resource development. Harvard University has opened a User Research Center (URC) to coordinate UX work across the institution's libraries and to make evidence-based decisions that lead to more effective programs and services. Among the tools in the URC are a screen-monitoring system, eye-tracking device, monitors and a wall screen for observing user activity, and portable devices for off-site projects.[11]

Cornell University and Ithaka S+R recently partnered to study the day-to-day practices of academic researchers and the associated implications for library services, resources, and spaces. The resulting report, "A Day in the Life of a (Serious) Researcher: Envisioning the Future of the Research Library," discusses the following themes: information seeking, academic activities, brainwork, associated academic activities, library resources, space, and self-management.[12]

Collection assessment trends

There has been a remarkable shift to the incorporation and integration of more continuous, ongoing, flexible, and sustainable review of collections rather than ad-hoc project-based models.[13] "Rightsizing" the collection has become a norm.[14] There is an increasing need to establish more holistic and agile approaches (both qualitative and quantitative) to manage budgetary constraints while ensuring that collections are "responsive" and committed to institutional research and curricular requirements and needs. In doing so, libraries have established new collection analyst positions, employed new tools (e.g., visualization, predictive analysis), untapped (or undertapped) data sources (EZProxy logs), and the leveraging of external partners and actors, such as consortia and non-profit consultants and tools[15] and Ithaka S+R's What to Withdraw Tool.[16]

Of particular interest is the growth of post-assessments that have appeared regarding the utility of the common journal "big deals."[17] Other collection assessment trends, as illustrated by recent conference panels and presentations (e.g., Charleston Conference and Electronic Resources and Libraries), have included re-evaluation of pay-per-view models for recurring resources, assessment of gold open access content within traditional subscription journals, and re-evaluation (or "tune-ups") of the increasingly common demand-driven acquisition models.

ILS and content provider/fulfillment mergers

Greater consolidation of journal vendors continues, with potentially significant impacts on pricing, collection budgets, and institutional negotiation. A recent *PLOS* article analyzes the share of output published in the journals of the major scientific publishers and discusses the economics of scholarly publishing.[18] In the area of collections discovery, we see the increasing consolidation of vendors,[19] and, in particular, the acquisition of traditional fulfillment service providers (e.g., Yankee and Coutts) by content platform providers such as EBSCO and ProQuest, and the acquisition of library system vendors (e.g., ProQuest's purchase of Ex Libris). As Roger Schonfeld notes, "there has been a broad shift among content platforms, not only aggregators but

publishers like Elsevier and Nature, to invest in tools and systems."[20]

Although these mergers and acquisitions do bring about the possibilities for greater efficiencies, innovation, and integration, they limit the marketplace significantly and their repercussions are hard to predict. For example, YBP invested considerable resources in creating interoperability with ALMA (the ExLibris ILS). YBP was subsequently acquired by a competitor with its own discovery service (i.e., EBSCO's EDS). A potential concern on the YBP front is its neutral stance among publishers, aggregators and librarians, which may be questionable with the recent acquisition.

Evidence of learning: Student success, learning analytics, credentialing

Student success continues to be an important focus for higher education institutions, where the trend towards performance-based funding and accreditation criteria includes an emphasis on learning outcomes, retention, and matriculation. The March 2015 Conference of the American Association for Colleges and Universities had as its themes: diversity, learning, and student success.[21] In July 2015, the U.S. Secretary of Education Arne Duncan laid out a vision for the future of higher education where student success and student outcomes are achieved, and costs of higher education, drop-out rates, and the length of time-to-degree are lowered.[22]

There are various methods for boosting student success—from forming learning communities, support and incentives for completion, peer tutoring, flipped classroom techniques, and adaptive learning modules to programs for first-year students, first-generation students, transfers, veterans, or other student populations. Libraries, as key partners in higher education, participate in student success strategies and also conduct their own studies, assessments, and initiatives. One important initiative is ACRL's Assessment in Action (AiA) program, which examines the impact of the library (instruction, reference, collections, space, and more)

on student learning/success. Karen Brown and Kara Malenfant summarize some of the lessons learned and highlight sample libraries' contributions.[23] In 2016, ACRL also published *Putting Assessment into Action: Selected Projects from the First Cohort of the Assessment in Action Grant.*[24]

There is growing interest in mining available data systems to analyze the learning process and to make improvements in teaching, learning, and/or the student experience. Institutions are using this "learning analytics" approach to track individual student's interactions and academic progress. A good overview of the field has been released by the Learning Analytics Workgroup.[25] See also the Code of Best Practices for Learning Analytics.[26]

Questions about the value of traditional academic degrees relative to the current job market and the cost of higher education have sparked interest in credentials that give credit for shorter increments of educational attainment than the standard two-year or four-year degree program offerings. Credentials offer the opportunity to reduce social inequality by providing alternative paths to educational training and skills-building through low-cost and less time-intensive options.[27] For academic libraries, the credentialing trend presents opportunities to award badges or certificates for discrete sets of knowledge that libraries provide such as information literacy and digital media competency.[28]

The quality and value of these new types of credentials are still a question mark for students and employers alike. In October 2015, the Lumina Foundation, the Center for Law and Social Policy (CLASP) and its Center for Postsecondary and Economic Success (C-PES), and the Corporation for a Skilled Workforce sponsored a National Credentialing Summit.[29] Lumina has also funded the Comprehensive Student Record Project, which focuses on the development of extended transcripts to document nonclassroom activity.[30] The American Council on Education has released reports that call for a less fragmented credentialing system in higher education and

for better communication about the value of students' competencies.[31]

New directions with the Framework for Information Literacy for Higher Education

Digital fluency in the Framework

ACRL's recently adopted information literacy framework recognizes information as an ecosystem and encourages librarians to pursue a broader agenda based on the new information literacy concept as a "set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning."[32]

Several new models or ideas of information literacy have been either explicitly or implicitly, partially if not all, incorporated into the new Framework. One is the metaliteracy model proposed by Thomas P. Mackey and Trudi E. Jacobson.[33] They consider the influence on the learning process of social media and social networking and call on librarians to acknowledge these interactive digital and networked social resources and learning spaces and their meanings of enabling learners to collaborate, participate, produce, and share. Maggi Savin-Baden points out that digital fluency means not only being able to use the most recent social media and networking technology to produce and share, but also acquiring the ability to understand complex issues, such as identity management and commodification of participation.[34]

The Framework for Information Literacy for Higher Education is not without criticism, even though it is based on many existing information literacy theories and has gone through a rigorous drafting and public hearing process. The threshold concepts and theory that the framework was based upon have not been experimentally or empirically tested, so this is an area to monitor for activity and knowledge growth.

Critical information literacy in the Framework

Critical Information Literacy (CIL) problema-

tizes and politicizes notions of information literacy as a series of steps to follow and outcomes to achieve, and "places librarianship within a critical theorist framework that is epistemological, self-reflective, and activist in nature."[35] In his review of the CIL literature, Eamon Tewell argues that it is "perhaps indicative of critical IL's influence upon the profession at large [that] the forthcoming ACRL Framework for Information Literacy for Higher Education accounts for perspectives far more critical than those indicated in the previous Standards that the task force was charged with revising."[36] Instead, the Framework "appears to reject North American higher education's climate of continual standardized assessment measures by moving away from easily quantifiable outcomes."[37]

The Framework also emphasizes the concept of "information privilege," which involves "making people more aware of the structures of power, money, and privilege surrounding information,"[38] and Ian Beilin claims that the Framework "has opened up the possibilities for action and maneuver on the part of instruction librarians," and that makes it in some sense a progressive document.[39] Thus, the Framework has, in some librarians' view, a political element absent from the earlier Information Literacy Competency Standards.

Altmetrics

The penetration of altmetrics in both publisher and repositories is increasing rapidly, though the main providers of altmetrics have remained stable: Altmetric, ImpactStory, and Plum Analytics. Citations are one result of a complex series of information-use behaviors that include previously invisible precursors like reading, bookmarking, saving, annotating, discussing, and recommending articles. Social media platforms such as Twitter and Mendeley provide data (e.g., altmetrics) to expose these precursor behaviors.[40] These data may be valuable as leading indicators of impact, but first we must achieve a deeper understanding of the systems producing these data.

Several recent publications identify current challenges in using altmetrics data for research evaluation purposes. These include the need for specific definitions, strategies for improving data quality from providers, promoting use of persistent identifiers, transparent methods for calculating specific output types, and use cases for various stakeholder groups.[41, 42] Although many technical and implementation issues remain, the uptake of altmetrics is growing.

Emerging staff positions

In the spring of 2015, the School of Information at San Jose State University analyzed 400 recent position postings for library and information science professionals. General trends that emerged: familiarity with technology and technical support, focus on the user experience, support for virtual services, digital humanities, and knowledge management. The corporate sector is also increasingly interested in professionals with these skill sets. Collaboration, teamwork, and communication were among the most common skills across all position descriptions. Job seekers are encouraged to keep abreast of emerging technologies, data analysis and visualization, and geographic information systems.[43]

Open Educational Resources (OER)

OER are experiencing a watershed in higher education in the United States, as articles in major news media drive public awareness of the high cost of college-level textbooks. This growing public awareness may drive a broader range of infrastructures to address not only the development of OER on campuses but solutions to address hosting and discoverability of OER. In February 2016, Amazon announced the development of an OER platform aimed at the K-12 market, and higher education seems a likely next development.[44]

OER are not limited to the tradition textbook format. They include a range of course materials, including entire courses, lesson plans, modules, and recorded lectures. The savings to students can be substantial and when multiplied across a large course demonstrate a real value, particularly when the OER is shared with other institutions and is constructed to be easily updated and reused. David Annand notes that open resources require faculty expertise, time, and infrastructure and financial support from campus or external sources, so even as OER save students money at the institutional and policies levels, sustainability is an important issue.[45] The benefits of OER extend beyond the fiscal impact. Recent research has indicated that OER are viewed positively by both faculty and students and that they contribute to student success.[46, 47]

Libraries in higher education are collaborating across campus to promote and support OER. Kristi Jensen and Quill West identify the following leadership opportunities for libraries in OER: "supporters in policy, help in finding quality materials, and professional development around copyright, open licensing, and integrated course design."[48] In a 2014 report, Carmen Kazakoff-Lane identified a similar set of

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opportunities and provides more details on the barriers to faculty adoption of OERs and MOOCs and the ways that libraries can be collaborators.[49] Some ways that libraries have manifested this leadership include faculty incentive programs such as the ones at UCLA and Emory University and advocating for OER, often in partnership with other campus units.[50] There are statewide initiatives such as SUNY Open Textbooks which amplify the resources of many campuses. A few campuses have achieved degrees that rely entirely on OER, an example being Tidewater Community College where the library has become a partner in the OER endeavor after the launch. Librarians can also help faculty to find existing OER for reuse and assist them with locating source materials for inclusion in OER. Issues such as copyright and open licensing fit within the thread of Open Access publishing and author rights, areas where some academic libraries have already taken leadership roles on their campuses.

In 2015, the ACRL Board formed a task force to serve as an advisory group to the *Choice* editor and publisher as an OER review service is evaluated and planned. For libraries wishing to learn more about OER, ACRL's Scholarly Communication Toolkit includes links to blogs, handouts, and presentations.[51]

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