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ACRL Research Planning and Review Committee

## 2018 top trends in academic libraries

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

Members of the ACRL Research Planning and Review Committee: Chris Palazzolo (chair) is head of collection development and social sciences librarian at Emory University, email: [cpalazz@emory.edu](mailto:cpalazz@emory.edu) (<mailto:cpalazz%40emory.edu?subject=>); M. Kathleen Kern (vice-chair) is director of Miller Learning Center Library Commons at the University of Georgia, email: [mkathleen.kern@gmail.com](mailto:mkathleen.kern@gmail.com) (<mailto:mkathleen.kern%40gmail.com?subject=>); Allison Benedetti is director of Powell, Arts and Music Libraries at UCLA, email: [abenedetti@ucla.edu](mailto:abenedetti@ucla.edu) (<mailto:abenedetti%40ucla.edu?subject=>); Thomas Reed Caswell is director of public services at the University of North Florida, email: [t.caswell@unf.edu](mailto:t.caswell@unf.edu) (<mailto:t.caswell%40unf.edu?subject=>); Nancy Falciani White is library director at Randolph-Macon College, email: [NancyFalcianiWhite@rmc.edu](mailto:NancyFalcianiWhite@rmc.edu) (<mailto:NancyFalcianiWhite%40rmc.edu?subject=>); Michelle Leonard is associate university and science librarian at the University of Florida, email: [mleonard@uflib.ufl.edu](mailto:mleonard@uflib.ufl.edu); (<mailto:mleonard%40uflib.ufl.edu%20?subject=>) Jenny Oleen is scholarly communication and copyright librarian at Western Washington University, email: [jenny.oleen@www.edu](mailto:jenny.oleen@www.edu) (<mailto:jenny.oleen%40www.edu?subject=>); Eamon C. Tewell is reference and instruction librarian at Long Island University, email: [eamont@gmail.com](mailto:eamont@gmail.com) (<mailto:eamont%40gmail.com?subject=>); Minglu Wang is data services librarian at Rutgers University, email: [mingluwang@gmail.com](mailto:mingluwang@gmail.com) (<mailto:mingluwang%40gmail.com?subject=>); and Andrew J. Wesolek is the head of digital scholarship at Clemson University, email: [awesole@clemson.edu](mailto:awesole@clemson.edu) (<mailto:awesole%40clemson.edu?subject=>).

**E**very other year, the ACRL Research Planning and Review Committee produces a document on top trends in higher education as they relate to academic librarianship. Topics in this edition of ACRL Top Trends will be familiar to some readers who will hopefully learn of new materials to expand their knowledge. Other readers will be made aware of trends that are outside of their experience. This is the nature of trends in our current technological and educational environments: change is continual, but it affects different libraries at different rates. The 2018 top trends share several overarching themes, including the impact of market forces, technology, and the political environment on libraries.

## Publisher and vendor landscape

Publishers and database providers continue to move beyond their traditional functions of research dissemination and distribution into areas of enriched discovery, analytics, productivity, and research workflow.

In August 2017, Elsevier purchased institutional repository and publishing platform bepress. This purchase followed Elsevier's purchases of SSRN and Plum and exemplifies a trend of major publishers purchasing and developing services that radically extend their capabilities beyond publishing.<sup>1</sup> More recently, Digital Science has announced a new tool, Dimensions, which is intended to "reimagine" article discovery and access through, among other things, citation databases and research analytics suite.<sup>2</sup> Clarivate Analytics, perhaps best known for providing access to indexing and citation resources, such as Web of Science, Journal Citation Reports, and Endnote, has continued to expand its commercial reach into the scholarly infrastructure realm and ecosystem with the acquisition of Publons (peer-review platform) and Kopernio (which aims to provide more seamless access to licensed and open access content).<sup>3</sup>

As these large publishers and vendors turn more attention to the publishing infrastructure and elements of scholarly communication, they are becoming full-service providers supporting every aspect of scholars' publication workflow from discovery to dissemination.<sup>4</sup> These changes could have major impacts on smaller publishers, independent service providers, and academic libraries in the coming years.<sup>5</sup>

The attraction of this model lies in streamlining disparate elements of academic research and publishing with a single provider that can coordinate funding, data collection and analysis, collaboration across institutional and international boundaries, writing, publication, and promotion of published materials. How researchers find information impacts the marketplace.

Kyle Siler argues that academics are more likely to acquire information through online search than through reading and if this is the case, large publishers have the infrastructural advantage in making scholarship more visible. This might seem like a familiar conundrum for libraries to contemplate: Is this the new version of the "Big Deal," where

we are caught between demonstrating our value to researchers and determining sustainable commitments to licensed content and platforms?

An article in the *Chronicle of Higher Education* is one of the recent calls to members of the academic community to be more informed about the choices they make and be more active to change the climate.<sup>7</sup> The efforts of European institutions, particularly in Germany and the Netherlands, to forward alternative approaches to open access and negotiations with major publishers, are other notable examples of actions toward sustainability of the scholarly information ecosystem.<sup>8</sup>

Attempts to change the payment model for scholarly publishing have also gained traction in the OA2020 movement. This is a trend for librarians to monitor, as it could have significant implications for collections budgets, subscription and campus priorities.

In an effort to streamline access to licensed content and reduce or eliminate the need for users to resort to tools like SciHub and ResearchGate (threatened with a lawsuit), publishers, librarians, and other stakeholders have been collaborating on RA21.<sup>9</sup> HighWire Press, meanwhile, has partnered with Google Scholar to develop CASA (Campus-Activated Subscriber Access).<sup>10</sup> These tools propose a federated identity system that would eliminate the need for IP authentication and proxy servers, allowing users to login once and be recognized across all participating platforms.

There are numbers of issues at play in the establishment and diffusion of federated identity systems,<sup>11</sup> including 1) privacy concerns associated with the aggregation of this much user data, 2) potential challenges for smaller publishers unable to participate in the federated process, and 3) an increase in barriers faced by on-campus users. Access and discovery will continue to be both a priority and a challenge for libraries, as outside companies and individuals develop alternative mechanisms that are perceived as easier to use.<sup>12</sup>

## Fake news and information literacy

Though far from being a new phenomenon, *fake news* has proved to be highly influential as a descriptive term and rhetorical device. Fake news played a significant role in the 2016 presidential election,<sup>13</sup> and is a phrase frequently used by the current President of the United States to undermine mainstream news media. Libraries have responded to the issue of fake news, defined as deliberate misinformation that relies on attention-grabbing or inflammatory content to spread widely and influence others, by promoting information literacy as a means of verifying the accuracy and credibility of information. Initiatives, such as IFLA's "How To Spot Fake News" infographic, have gone viral and appeared in international news.<sup>14</sup>

Fake news and other forms of specious information presented as fact have drawn new attention to the old problem of resource evaluation and information credibility. Librarians have been quick to respond, and information trust and fake news are topics of forthcoming research studies from Project Information Literacy, a book from ALA Editions, and the spring 2018 issue of *Reference and User Services Quarterly*.<sup>15</sup> Academic librarians have developed numerous workshops and research guides devoted to fighting fake news and to promoting information literacy.

Going forward, it will be important to consider the complexity of fake news and the limits of information literacy in fighting it. A recent study found that fake news may not be as profoundly influential as previously reported, primarily affects hyperpartisan readers, and generally is used by individuals to reinforce what they want to believe.<sup>16</sup> The problem of fake news is not restricted to facts as information alone is unlikely to change one's beliefs.<sup>17</sup> The impact of the fractured and contested media landscape is well worth further consideration and action from the profession, and opens possibilities for partnerships with other people on our campuses who face the same concerns.

## Project management approaches in libraries

Project management principles focus on an incremental, team-based approach when tackling large, digital projects enabling libraries to effectively and efficiently prioritize staffing models, collections, and budgets. Project management has become part of the everyday work of many academic librarians, and most of them have participated in three-to-eight projects in the last five years.<sup>18</sup> This is especially true as academic libraries collaborate on scholarly digital projects or involve institutional partners beyond the library or campus.<sup>19</sup>

Michael J. Dulock and Holley Long report on how their library incorporated project management methodology adapted from techniques used in agile software development to deliver digital objects and collections with recommendation for other libraries.<sup>20</sup> Documentation and visualization of the iterative process has evolved from group editing bulleted, narrative texts and Gantt charts to more robust, collaborative software and applications that can be shared across many users and several institutional partners.

With an increased need for the knowledge and skills associated with formal project management principles, many professionals traditionally trained in library and information science find themselves lacking or needing additional coursework to become familiar with, or certified, in project management.

James H. Walther, a library and information management professor, examined the specific skill of project management by tailoring graduate coursework to incorporate personal course plans. From this approach he recommends using this teaching method more broadly in library and information science education.<sup>21</sup> Brett D. Currier, Rafia Mirza, and Jeff Downing propose that project management planning skills have always existed within libraries and librarians, but an increased involvement in digital humanities initiatives requires an adjustment to a more “holistic mindset,” where librarians “position themselves as collaborative partners on projects instead of service providers to projects.”<sup>22</sup>

## Textbook affordability and OER

Open Educational Resources (OER) continue to demonstrate importance in a number of ways: sustainable collections in libraries, affordable textbooks for students, new options for curriculum development, and avenues for digital scholarship. Challenges to faculty adoption include difficulty finding resources, lack of resources in a subject area, quality, and the content updates.<sup>23</sup> These perceived barriers can turn into opportunities for librarians to cultivate partnerships with faculty in the discovery, advocacy, and preservation of OER.

To build a sustainable OER collection in any medium, librarians must first identify user needs in supporting curriculum and research through a variety of collection management practices. By incorporating OER into the curriculum, librarians have the unique opportunity to develop collaborations with faculty, subject librarians, and academic technologists to assist in determining what OER are available, assessing their quality, and adding these materials into the course management system (CMS).<sup>24</sup>

Librarians have also advocated for the adoption of OER through grant award programs and assistance in developing and publishing OER.<sup>25</sup> OER production can be a goal for library-based publishing efforts by leveraging advocacy efforts through the library and publishing experience through university presses to reduce costs for students, while showcasing research and teaching strengths at a university.<sup>26</sup>

Libraries are not the only group advocating for OERs and textbook affordability. There are numerous campus partners, including students. To help students with controlling the cost of their education and to encourage faculty to choose affordable options, some schools include designators in their course registration systems to indicated courses with low-cost and zero-cost required texts.<sup>27</sup>

A number of libraries are also leveraging their e-book content to support textbook affordability initiatives. These initiatives focus on providing e-access to course texts, as well as offering faculty the ability to consider and select available e-book titles for course use.<sup>28</sup> Limitations in the marketplace, such as DRM restrictions and required logins and software that users may not have already installed, are impediments to implementation.

Products from publishers and CMS platforms may create opportunities for libraries to work with faculty. The CMS Canvas allows for a feed from the bookstore into individual courses highlighting required texts.<sup>29</sup> EBSCO Course Builder integrates with the Blackboard CMS to enable faculty to search EBSCO<sup>30</sup> and quickly create their own links to readings from within the CMS.

These approaches are an evolution of the traditional print and e-reserves roles of the library, and leverage content that the library has licensed, creating an opportunity for awareness of the library’s value for the library to support faculty course development in new ways.

## Learning analytics, data collection, and ethical concerns

The use of learning analytics, which involves the mining and analysis of student data to make improvements or predictions based on past student behavior, has intensified across higher education. Academic libraries are part of this trend, tying the use of library materials and services to student performance measures, such as GPA and retention rates. The use of learning analytics is viewed by some librarians and administrators as a promising tool for achieving positive outcomes for students and institutions, as well as for illustrating ways that academic libraries contribute to institutional productivity and academic achievement. The ACRL *Academic Library Impact* report advocates working with stakeholders to “statistically analyze and predict student learning and success based on shared analytics.”<sup>31</sup>

Learning analytics, however, may pose significant conflicts with ALA’s Code of Ethics and “professional commitments to promote intellectual freedom; protect patron privacy and confidentiality; and balance intellectual property interests between library users, their institution, and content creators and vendors.”<sup>32</sup>

Across higher education, concerns are being raised about reducing student learning and experiences to a set of variables and using data to identify “at-risk” students. The ethical dimensions of involvement in this area will be of increasing importance as college and research library participation in analytics programs progresses.

Librarians and other information professionals have raised concerns regarding how patron data is captured by library discovery tools and, in particular, how and with whom it is shared. Libraries seek to provide more refined and efficient services (marketing, discovery interfaces, collection use), but these improvements may be generated or

informed through the analysis of user activity, creating a conundrum between user service and user privacy.<sup>33</sup> For example, proxy servers might involve collecting user IDs (and associated demographic information) and relating them to use of resources originating from that user. Issues of privacy and data aggregation and retention must be considered and balanced against library service enhancement, and often necessitate sustained communications between campus IT and the library.<sup>34</sup>

## Research datasets acquisition, text mining, and data science

With the growth of data science and quantitative research needs, collection managers have engaged in the establishment of more defined guidelines and best practices for the acquisition of standalone spatial and quantitative datasets. Data sources now go beyond text and numeric data, extending to multimedia data, social media data, and hypertext and hypermedia data.<sup>35</sup>

Relevant mining techniques and methods range from information extraction, information retrieval, natural language processing, classification, and clustering to different ways of text summarization.<sup>36</sup>

Datasets possess their own sets of acquisition and management challenges, including licensing restrictions, access and ownership, support, maintenance, discovery, and cost. Some libraries are beginning to offer more secure and dedicated funding lines for research datasets.<sup>37</sup> Most libraries are determining the best means of managing, funding, and developing these small data set collections.<sup>38</sup>

There are challenges to the librarian and researcher since data sources are usually in silos and use different standards, rendering data integration difficult.<sup>39</sup> When dealing with datasets containing sensitive information, such as social media data, enterprise data, and health data, privacy-preserving techniques need to be applied carefully throughout the data integration, sharing, and processing stages.<sup>40</sup>

Getting access to data remains a significant challenge. Many datasets are copyright-protected, and fair use rights could be limited by licenses.<sup>41</sup> There are still a variety of approaches among vendors for access to their respective corpus of data/text, which may or may not be in line with library best practices or library technical capabilities (e.g., dedicated servers for storage or development of content requirement of local developer resources to support).

Librarians can assist researchers by clarifying legal aspects and negotiating licensing permissions with publishers.<sup>42</sup> By creating guides on text and data mining tools and methods and providing information on library databases and data sources, librarians support training and awareness of the data resources and tools that they purchase. Librarians and library technicians also provide support in areas such as digitization, data extraction, data preparation, and even devising models for data analysis.<sup>43</sup> At the end of text and data-mining projects, libraries may help preserve the datasets for reuse, assist researchers to contribute to open access datasets, and record metadata for discovery.<sup>44</sup>

The establishment of data science programs at numerous institutions has led to the need for librarians to adapt and integrate growing management, accessibility, and technical subject expertise to support data scientists.<sup>45</sup> Professional associations and information science programs should continue to expand and enhance training in data management and data analytics to prepare librarians in using and addressing big data questions with colleagues and patrons.<sup>46</sup>

## Collection management

### Acquisition model developments

Demand-driven acquisition (DDA) patterns continue to evolve as the majority of publishers have altered, restricted or eliminated their short-term loan (STL) options (particularly for front-list titles). These market changes and publisher responses to revenue losses have challenged the sustainability and attractiveness of broad-based e-book DDA.<sup>47</sup>

A more viable option for numerous libraries has been to engage with established library vendors for new DDA plans that do away with the STL model and provide non-DRM (digital rights management) access to university press titles. Although the corpus of titles, particularly frontlist titles, remains limited, aggregators are working to provide more DRM-free options, as well, for purchase through book jobbers.

Outside of "traditional" e-book DDA plans, newer streaming video plans have become increasingly popular to meet demand for streaming content.<sup>48</sup>

The evidence-based acquisitions model (EBM) is a newer development, in which libraries make an upfront financial commitment to a publisher list of titles, and subsequently choose an agreed amount of titles for perpetual ownership. While this model is attractive to libraries and publishers alike, principal concerns of the EBA model are

the potential need for long-term annual commitment, due to potential variations in e-book use by discipline, and 2) the need for robust usage statistics for decision-making.

## Open access collection development policies and funding schemes

A continuing challenge for collection budgets and policies surrounds the funding of open access initiatives, including the support of article-processing charges. David W. Lewis has called on libraries to consider devoting 2.5% of their budgets to supporting the open access infrastructure.<sup>49</sup> Depending on how the open access investment is defined<sup>5</sup> and an individual library's budget, 2.5% could have a substantial impact on the collections budget.

Cumulatively, if many libraries devote 2.5%, this could also have a substantial impact on open access initiatives. Therefore, it is incumbent upon libraries, particularly collection managers, to establish clear policies that outline parameters for the support and funding of specific open access initiatives and programs.<sup>51</sup> In addition, there is increasing discussion about how to incorporate open access developments into collection decision-making, in particular, in relation to ever-increasing serial budgets (an open access-adjusted cost per download measure as proposed by Kristin Antelman).<sup>52</sup> There has been some movement both in the United States and Europe for vendor licenses that allow for suspension of author-processing charges in the publisher's journal.<sup>53</sup>

## Legacy print collections

Several new large-scale print retention initiatives are in various stages of development, including the HathiTrust Print Retention Program, which has amassed retention commitments of more than 4.8 million volumes from member institutions.<sup>54</sup> At the same time as libraries are digitizing collections and purchasing more in electronic format, there is discussion in the profession about how to manage, promote, and engage users with the library print collection. The Arizona State University report on open stacks, funded by the Andrew W. Mellon Foundation, begins to explore potential approaches to better tailor, diversify, and market the local print collection, and includes materials and tools to help guide individual libraries.<sup>55</sup> Interestingly, some traditional measures, such as in-house usage, are being used to better understand patron engagement with onsite collections.<sup>56</sup>

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