Disruption and Disintermediation

A Review of the Collection Development and Management Literature, 2009–10

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This paper reviews the literature of collection development and management from 2009 and 2010. Themes and trends reflect the profound effect of environmental forces on libraries, including the economic recession, changes in scholarly communication, and an increasingly networked environment. Libraries reduced print collections and moved them to storage or shared repositories and assessed collections to find efficiencies and demonstrate value. Research libraries moved away from collecting everything toward mission-focused collecting, with an emphasis on unique collections. Collaboration across libraries, within institutions, and with nonlibrary partners continued as a key management strategy. Libraries shifted from a just-in-case to a just-in-time approach to collection development, and subject specialists identified new areas of responsibility, such as data curation.

The literature of collection development and management in 2009 and 2010 reflects the disruptive and ever-changing environment in which libraries operate. The chorus of calls for fundamental change to the way that libraries do business grew stronger and more urgent. Many of the trends and issues identified in this review are accelerated, refined, or mature versions of those found in the previous two collection development and management literature reviews. The review by Phillips and Williams of the 1997–2003 literature focused on the changing nature of local collections, solidification of cooperation and collaboration as best practices, and new tools for collection assessment and evaluation of electronic resources (e-resources).[1] Bullis and Smith identified the collection and management of digital resources as the overriding theme in the literature from 2004 to 2008, along with the effect of a stagnating economy on library budgets, a culture of continuous assessment, and the response by collection managers to efforts by publishers to offer more bundles of electronic publications.[2]

Scope and Method

The scope of literature related to collections is daunting. Johnson suggests that collection development and management encompasses "selection, the determination and coordination of collection policy; assessment of the needs of users and potential users; collection use studies; collection analysis; budget management;

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identification of collection needs; community and user outreach and liaison; planning for resource sharing . . . decisions about weeding, canceling serials, storage, and preservation . . . [and] the organization and assignment of responsibilities for its practice."[3] This review has a more limited scope because the topics of acquisitions, serials, open access, and preservation are covered fully in other literature reviews. Selections are largely limited to peer-reviewed literature and key reports from nonprofit organizations and government agencies, with a focus on libraries in North America and the United Kingdom. Almost all relate to the work of academic and research libraries, but only because very few works on public and school libraries fit the scope of this review.

The author browsed tables of contents of library and information science journals, examined bibliographies and works cited, searched library and information science commercial databases, WorldCat, Google Books, Google Scholar, and viewed websites of library and higher-education organizations and research centers. More than 600 citations for books, articles, and reports were assessed for relevancy, yielding approximately 400 publications that were evaluated further for relevancy and quality. The final selections for this review are intended to enliven or inform the conversation about collection management and the role of collections in libraries, demonstrate best practices, shed light on the future of collection management, and represent the dominant themes, trends, and issues found in the 2009–10 literature:

- continual change as library collections transition from analog to digital
- exploration of the research library's role in data management and curation
- removal of print collections to shared repositories
- collaboration and cooperation across libraries and within institutions
- emphasis on special collections and unique material
- patron-driven acquisitions and just-in-time collection development
- e-books at the tipping point
- practical work in selection, electronic resource management, weeding, storage, inventory, and assessment
- new roles for subject selectors and collection managers

Environmental Scan: Continual Change

The number of predictions in the library literature for 2009–10 that take aim squarely at collections is striking. In 2009, a group of associate university librarians known as the Taiga Forum issued ten provocative statements.[4] Among the statements are the following, all prefaced by the phrase "within the next five years":

- Collection development as we now know it will cease to exist as selection of library materials will be entirely patron-initiated.
- The only collection development activities involving librarians will be competition over special collections and archives.
- Libraries will have abandoned the hybrid model to focus exclusively on electronic collections, with limited investments in managing shared print archives.

The following year, the Association of College and Research Libraries (ACRL) released "2010 Top Ten Trends in Academic Libraries," which include the following:

- Academic library collection growth is driven by patron demand and will include new resource types.
- Budget challenges will continue and libraries will evolve as a result.
- Digitization of unique library collections will increase and require a larger share of resources.
- The definition of the library will change as physical space is repurposed and virtual space expands.[5]

Such predictions reflect a palpable unease about the future of libraries. Several thoughtful papers articulated the societal and cultural forces at play and explored strategies to ensure the viability of libraries in a digital age. Grafton expressed his thoughts on the future of libraries in catastrophic terms with the title of his paper, "Apocalypse in the Stacks? The Research Library in the Age of Google."[6] He identified four concurrent global crises facing libraries: a financial crisis caused by the proliferation of resources, a spatial crisis caused by the massive production of print, a use crisis caused by the transformation in scholars' working habits, and an accessibility crisis caused by changes in texts and reading.

The ARL surveyed members in 2008 and 2009 about the impact of the global recession that began in earnest in 2008. Lowry found that only 13 of 93 libraries had not experienced budget cuts in either year; the rest were even worse off in the second year, with 79 percent reporting flat or reduced budgets.[7] The effect of the economic crisis in 2009 was so alarming that the ARL and the International Coalition of Library Consortia (ICOLC) each issued a statement to publishers urging them to be flexible in pricing and avoid reducing content or access. The ARL asked publishers to consult with research libraries regarding the development of new publishing models and avoid the loss of important scholarly content.[8]

Reports and studies from other organizations focused on the changing habits and attitudes of libraries' user communities. The Ithaka S+R *Faculty Study 2009* found that faculty had largely embraced e-journals and were

increasingly comfortable with relying exclusively on digital versions of scholarly materials.[9] Nearly all faculty in all disciplines rated the library's role as purchasing agent for information resources as very important. The report confirmed that the academic library is increasingly disintermediated from the discovery process.

In response to the challenges posed by the global environment, a number of voices called for radical or transformational change. Greenstein advised university libraries to accept broader institutional roles, cut costs, and focus on areas that add distinctive value.[10] Subject librarians should lend support to scholars in new ways, such as curating digital material for research, and re-engineer collection management practices for efficiencies. Heath saw the role of the future library as an "interactive meeting space, rather than as storage facilities for analog formats whose existence may or may not meet the critical information needs of the community."[11] In his view, corrective and massive change in collection-building are all that stand between libraries and obsolescence. A research library must maintain a research collection that is custom-suited to its faculty and the quality of which must match those of other preeminent universities. At the same time, the library must acquire and preserve resources that make it distinctively different. Harloe's reflection on four-year undergraduate institutions identified strategies relevant to their teaching mission, which is changing from providing instruction to actively engaging undergraduates in knowledge production.[12] One challenge for college libraries is creating access to high-quality collections while reconfiguring space for active learning, study, and research. With the arrival of digital collections and advanced forms of resource sharing, college libraries can build high-level research collections and devote less space to the storage of print collections and more to activities that support teaching and learning. *Transformational Times* recommended that libraries radically reconfigure their organizations and services, develop new capabilities for dealing with new forms of scholarship and teaching, special and hidden collections, and research data.[13]

The All-Digital Library

Three seminal publications in 2009–10 thoroughly and thoughtfully explored the challenges facing collection managers in a networked environment and provided a solid foundation and structure for moving forward. Horova observed, "The collection is everywhere and nowhere—it is a cloud of distributed resources in a variety of places around the globe that are made centrally available via the library."[14] This statement gets at the crux of matter: libraries can no longer corral and control the knowledge universe in containers and collections. The challenge is for libraries to reimagine their roles in the face of rapid change. While the core professional values of equity of access, intellectual freedom, and stewardship remain unchanged, in an environment where collections may be physical or virtual, owned, or leased, the means of expressing these values is changing drastically. Horava articulated ten well-developed strategies for a new approach to collection management in the networked environment, such as seeking a balance between competition and collaboration, seeking creative partnerships with publishers and vendors, measuring collection value in new ways, focusing on what is sustainable, and changing current practices to add value for our patrons.

Hazen, like Horava, conducted an environmental scan of the library and information landscape.[15] In "Rethinking Research Library Collections: A Policy Framework for Straitened Times, and Beyond," Hazen addressed the changing context of collection development, including the ubiquity of highly diverse digital and freely available web resources, intense financial pressures, and contractual restrictions that restrict access to information. To assist libraries in developing new approaches to content and collections, Hazen advanced a set of guiding principles, such as actively engaging in the reformulation of scholarly communications and broadening their focus to an evolving range of content, whether owned or not.

The three essays in the Council of Library and Information Resources (CLIR) publication *The Idea of Order: Transforming Research Collections for 21st Century Scholarship* are critical to an informed conversation about the future of collections and collection management.[16] Spiro and Henry asked, "Can a New Research Library Be All-Digital?" and attempted to provide answers that question.[17] By their definition, digital libraries provide online-only access to collections, although they may hold special collections and support interlibrary loan services for print resources. In an extensive literature review, the authors examined the current digital resource landscape and identified obstacles that block the transition to an all-digital library. Courant and Nielson documented that the cost of maintaining a local copy of an electronic book is less than half of the cost of keeping a book in a high-density offsite storage facility.[18] Their essay, "On the Cost of Keeping a Book," provides valuable information for libraries that increasingly must choose between keeping a work in digital or print format. The final paper by Henry and Smith reports on a study by CLIR that assessed the benefits and limitations for scholarship of texts made available through large-scale book-digitization projects such as Google Books.[19]

Libraries began to explore whether public domain titles might substitute for physical research collections. Jones compared the catalog of the Boston Athenaeum against Google Books and found a match rate of 59 percent.[20] Although the digitized images were not always reliable, Jones concluded that the value provided by full-text indexing

was incalculable. At the University of Colorado Denver, the library used digital books to fill gaps in its physical collection.[21] Brief MARC records for titles in Mbooks, a digital collection of books from University of Michigan Libraries, were loaded into the catalog. Beall discussed the need to develop policies about the level of access that libraries should provide to the growing number of digitized books.

In addition to issues posed by mass digitization, changes in scholarly communication created significant opportunities and challenges for collection managers and subject specialists. The ARL Digital Repository Issues Task Force forecast an emerging service category involving the collection and management of new scholarly outputs, such as simulations, learning objects, data, images, and performances.[22] Nabe's manual on developing and managing institutional repositories (IRs) provides strategies for identifying and selecting content, including underexposed material such as technical reports, data sets, and student publications.[23] Mullen's *Open Access and Its Practical Impact on the Work of Academic Librarians* is recommended for its comprehensive overview of open access and a chapter focused specifically on its affect on collection development.[24] Mullen addressed important issues such as assessment tools for open access resources, new roles for collection development librarians and liaisons, preservation, and the effect of self-archiving and IRs on traditional literature.

The Research Library's Role in Data Management and Curation

The emerging role of libraries in data curation received considerable attention. In "The Imperative for Data Curation," Ogburn discussed the vulnerability of scientific data files to loss because of their size, reliance on software, lack of standards, distributed ownership, and dispersed storage.[25] The author called on the research library community to collaborate across disciplines and institutions, acquire new skills and knowledge, and build funding and planning for the care and retention of data into the front end of the research process. A study by the ARL E-Science Task Force found that ARL libraries were beginning to support such services by engaging in multi-institutional collaborations and reassigning existing staff or hiring new ones.[26] In *The Data Deluge*, Friedlander equated the traditional collection management functions of appraisal, selection, acquisitions and weeding with the data management activities of storing, retaining and purging.[27] A report by Erwin, Sweetkind-Singer, and Larsgaard provides a commendable example of a cooperative program established to manage and preserve large sets of data.[28] The University of California at Santa Barbara and Stanford partnered to develop the National Geospatial Digital Archives, a federated network of institutions that collects and preserves geospatial data and imagery. The magnitude of these data required cooperative strategies and close collaboration between collections librarians and digital archivists, including metadata specialists and programmers. The authors described the multiple collection development policies that guide the project as a whole as well as the individual collecting partners who sign on to the network. The policies were based on those for traditional paper maps and tailored specifically for digital data by including criteria for metadata, versioning, file formats, and other features.

The Hybrid Library

"A new research library cannot presume to be completely reliant on digital resources. . . . A hybrid model of electronic and print materials will need to be juggled and budgeted for the foreseeable future," Henry wrote in his introduction to *The Idea of Order*.[29] Three articles on reference collections provide a snapshot of libraries and their collections in this transitional state. Kessler surveyed New York librarians in public and academic libraries about their print reference collections.[30] Reference collection managers overwhelmingly reported that the size of their print collections had decreased in the last five years as sources migrated online. Outdated material was discarded and, in many cases, useful material was relocated to circulating collections. Korah and colleagues conducted a national survey on the purchase and use of electronic reference books.[31] More than 70 percent of the respondents indicated they preferred acquiring reference materials in electronic format and had been purchasing reference e-books for more than two years. Rix surveyed public libraries in the Southern California Metropolitan Cooperative Library System and surrounding areas about reference collections and staffing.[32] Many had reduced the size of their print collections by 30 percent or more and reallocated space for more popular collections and user services. Notably, reference staff devoted more of their time to other purposes, such as programming, developing a virtual presence, or creating digital repositories of distinctive material, such as local history collections. The publication of an updated edition of Cassell and Hiremath's *Reference and Information Services in the 21st Century* just five years after the first edition is evidence of the speed of change.[33]

Managing legacy print government documents in a digital age presents unique challenges. Because of legislative restrictions, regional depository libraries are unable to deaccession print documents. The ARL and the Chief Officers of State Library Agencies (COSLA) commissioned Ithaka to conduct a comprehensive study on the Federal Depository Library Program (FDLP).[34] Schonfeld and Housewright's report provides an extensive set of recommendations regarding the disposition of library print collections as well as the preservation of government material

in digital format, which represented 97 percent of all new government documents published in 2009. Russell reported on an agreement between members of the Association of Southeastern Research Libraries (ASERL) for the collective management of their federal documents collections.[35] The plan called for member libraries to create at least two comprehensive print collections with distributed responsibility for cataloging and acquiring items to complete holdings for specific portions of the collection.

Moving Print Collections to Shared Print Repositories

One of Taiga Forum's provocative statements predicted, "Library buildings will no longer house collections and will become campus community centers that function as part of the student services sector."[36] Many libraries are reducing collection footprints to re-purpose existing space for collaborative learning centers, cafés, or other user services. Maskell, Soutter, and Oldenburg reported that increasing duplication of print content in digital format is prompting libraries to analyze print collections to identify candidates for weeding or removal to storage.[37] *What to Withdraw? Print Collections Management in the Wake of Digitization* established a set of criteria to guide libraries in for the responsible withdrawal of print journals.[38]

The theme continued and expanded in 2009–10 with reports and case studies about cooperative efforts to develop shared print repositories for storing and preserving last-copy print monographs and low-use collections. An essential contribution to this effort is a report on the work of the RLG Partnership Shared Print Collections Working Group.[39] The Working Group solicited research libraries for policy documents related to collaborative management of library print collections, looking for common elements that might form a model policy framework. Malpas identified an emerging consensus around a set of core requirements: explicit retention combined with an incentive to participate by providing an opportunity for strategic deduplication, an escape clause allowing participants to recall contributed materials, strict definitions of terms and language, and a commitment to provide access to shared collections.[40] In 2009, the Center for Research Libraries (CRL) convened a meeting of representatives from library consortia and other organizations interested in shaping a national approach to long-term preservation of and access to print collections. According to Kieft and Reilly, attendees discussed the prospect of redeveloping local collections into regional and national collections by creating a collectively managed network of libraries that would serve as a repository of printed texts.[41] Participants identified existing networks that might serve as the foundation and anticipated the next step: reaching consensus on the information, tools, standards, services, business arrangements, and policies needed to create and sustain a national program of print preservation for all types of libraries.

Collaboration and Cooperation

Creating regional and national shared print repositories represent the kind of deep library collaboration that will move libraries in new directions. Chadwell identified what she perceives to be essential requirements to achieve truly transformative collaboration between libraries: excellent communication, jointly held values, and the ability to overcome barriers of trust.[42] Neal called on research libraries to radicalize working relationships in all areas, whether between research libraries, between libraries and their communities, and or in entrepreneurial partnerships.[43] The work of collection-building requires a new approach to organization and staffing as libraries align their collections more closely with teaching and learning in an online environment. Neal discussed 2CUL, a partnership between Columbia University and Cornell University libraries to develop a shared infrastructure for cataloging and acquisitions and document delivery, a long-term digital archive, and a better sense of collection strengths and gaps.

Kinner and Crosetto reviewed the literature on the history of cooperative collection development and the benefits and challenges of academic consortia, with a focus on OhioLINK, a statewide research consortium.[44] Benefits include reducing unnecessary duplication and pooling funds to purchase resources that many would not be able to afford. Finding time for consortial activity and redirecting local funds to consortial requirements are among the challenges. The Colorado Alliance of Research Libraries piloted an initiative to manage duplication of monographs and establish a shared purchase plan.[45] Selectors at participating libraries developed profiles for approval plans in four different subject areas. Fong and colleagues reported that this plan did not meet its goals, in part because selectors had difficulty finding the time to work on the project; however, selectors did succeed in creating a culture of cooperation and experimentation. Another Colorado project proved more successful when libraries in the University of Colorado system created a sustainable model of cooperative collection development for acquiring e-resources.[46] Pan and Fong offered sound advice: assist individual member libraries in retaining as much local autonomy as possible, allocate and track funds accurately, retain sufficient funds to support local needs, and develop collection development policies in line with local needs. In making a case for a cooperative collection development project in a public library network, Nous and Roslund observed that collaborative collection development for print monographs is a strategy often overlooked

by public libraries, which tend to question the value of purchasing books that go to patrons outside their funding communities.[47] The authors argued that budget challenges, efficiencies available through collaboration, and consortial support are incentives to reconsider.

Cooperative collection development and management extended across type of library as well as in partnership with nonlibrary entities. Waibel and Massie reported on a gathering of public, museum, research, and university libraries in New York City to explore possibilities for a variety of cooperative ventures.[48] Participants were skeptical that they could agree on a joint collection development policy, but agreed to consider projects of limited scope for areas in which one library might collect and another might divest.

Increasing Emphasis on Special Collections and Unique Materials

The importance of special collections as a defining characteristic of individual research libraries received considerable attention. A discussion report from the ARL Working Group on Special Collections sent an urgent message: "The time is now to meet the challenges and responsibilities that these materials present."[49] *Special Collections in ARL Libraries* examined major issues in the management and exposure of special collections material, broadly defined as "any kind of vehicle for information and communication that lacks readily available and standardized classification schemes, and any that is vulnerable to destruction or disappearance without special treatment."[50] This definition includes born-digital, nontraditional material, such as e-mail messages and blogs, which will require the development of new processes and standards to make them useable over time. The Working Group recommended that the community of research libraries establish shared databases for registering descriptions of "their respective collecting strengths, and based on this, identifying gaps in provision. This information can help individual organizations to avoid costs that might turn out to duplicate the efforts of others."[51]

Papers delivered at a joint forum of the ARL and the Coalition for Networked Information (CNI) on the topic of distinctive collections were published in *Research Library Issues*. Lynch described special collections as "a nexus where technology and content are meeting to advance scholarship" and urged librarians to practice effective stewardship.[52] Carter reviewed themes from the forum: resource reallocation toward mainstreaming and sustainability, user-centered mission alignment with teaching and research, and collaboration on infrastructure to connect researchers with distinctive collections.[53] Waters urged libraries to process the mountains of material that remain unprocessed, engage scholars and students in the development of special collections as scholarly resources, and link special collections across institutions.[54] Likewise, *Taking Our Pulse* reported results from a 2009 OCLC Research survey on special collections.[55] Among its key findings are that far too many rare and unique materials remain hidden, the size of special collections is growing rapidly, and digitization and born-digital archival records are the most challenging issues. The report recommended that libraries develop metrics for standardized measurement for use and management, take collective action to preserve at-risk audiovisual materials, and develop models for large-scale digitization.

In an article that examined issues surrounding digital special collections and making them available for researchers on the Internet, Proschaska identified exposure of hidden collections as a priority for libraries.[56] Three papers reported on efforts to describe and identify unique or hidden materials held by libraries across North America. To assist libraries in determining which long-playing (LP) vinyl recordings could be responsibly weeded or moved to storage, Imre and Cox surveyed academic libraries about their collection-development, preservation, and circulation practices for LP collections, which represent a large portion of the 46.4 million sound recordings in U.S. libraries and archives.[57] The authors estimated that 38 percent of the responding libraries owned uncataloged LP collections. They urged librarians to make cataloging a priority so that the library community could identify unique items with historical value for preservation or digitization. Nixon surveyed research libraries with significant collections of historic corporate annual reports, which many libraries have discarded or no longer collect.[58] She reported a low level of overlap for more than 38,000 annual reports held in twelve libraries and encouraged libraries to preserve and digitize these collections. Wrenn examined records in OCLC's WorldCat to determine how many institutions were cataloging public and other noncurricular faculty lectures.[59] A number of college and universities post these lectures on the Internet for streaming or downloading, but Wrenn found that very few catalog them. Wren recommended that libraries collect and catalog this hidden collection of scholarship, much of which directly complements other scholarly material in collections.

Patron-Driven Acquisitions and Just-in-Time Collection Development

Given the volume of articles published on various purchase-on-demand (POD) and patron-driven acquisitions (PDA) models, librarians in 2009–10 were well on their way to shifting from a just-in-case to a just-in-time approach to collection development. Borrowing from a business concept, a just-in-time approach means that a library acquires "materials its users need when they need them and does not invest

all or large portions of its materials budget in acquiring collections just in case users need them at some future time."[60] To avoid losing relevancy in a competitive market, Chadwell stressed the importance of enlisting "our users regularly in collection building and collection management activities that once were mediated by library staff."[61]

Articles in *Patron-Driven Acquisitions: Current Successes and Future Directions*, a special issue of *Collection Management*, focused on the traditional print interlibrary-based PDA model, the experiences of early implementers of e-book PDA, and experiments with innovative approaches to involving users in the collection development process.[62] Nixon, Friedman, and Ward's extensive literature review introduced the PDA movement, which gathered momentum in the early 2000s.[63] Fountain and Frederiksen surveyed POD programs in member libraries of the Orbis Cascade Alliance.[64] Seven of thirty-six libraries reported implementing user-centered collection development programs, typically at large public universities that purchased books requested through interlibrary loan. Interlibrary loan staff match requests against criteria for purchase and place the order or send it to a librarian for review. Pitcher and colleagues reported on an innovative collaboration at the State University of New York (SUNY) College at Geneseo.[65] The Getting It System Toolkit (GIST) software was developed by acquisitions, interlibrary loan, and collection development librarians to streamline workflow for their POD program. GIST integrates ILLiad (interlibrary loan software) with web application programming interface (API) services, eliminating the manual process of searching vendor platforms and supplies data to an online request form. Selectors then can make an informed decision to borrow or buy based on local and consortial holdings, reviews and rankings, and cost comparisons.

Three articles reported on the reassessment of Purdue University's decade-old POD program. In 2008, Purdue librarians revisited an assessment conducted in 2002. The data were analyzed to determine who used the service, which books were ordered, if they were appropriate for the collection, and if cross-disciplinary research had increased. Anderson and colleagues examined purchases in the liberal arts.[66] Fewer than 5 percent were deemed inappropriate for a university library collection and call number analysis confirmed a strong cross-disciplinary research trend. Results from Bracke's study on science and technology books mirrored that by Anderson and colleagues.[67] Both agreed that POD was successful as a tool to augment collection development but would not replace librarians as the major collection developers. Nixon and Saunders found that titles acquired on demand had a higher circulation rate than those acquired through normal selection processes.[68]

Hodges, Preston, and Hamilton discussed the effect of the evolving e-book environment on patron-initiated collection practices in their study on The Ohio State University Libraries' traditional POD program for print books and a patron-initiated purchase program for e-books.[69] In the e-book model, MARC records for an aggregated e-book collection were loaded into the local OPAC; title purchases were triggered by patron use but limited by cost. The authors found that the majority of titles purchased by patrons showed relatively high use, and selections varied appropriately by level and subject. Nevertheless, the authors expressed a concern about the long-term effect of PDA on the balance of a collection over time. Levine-Clark raised several important questions about larger issues, asking,

> If libraries move en masse to a demand-driven acquisition model, what will be the impact on scholarly publishing? Can monographs on narrow subjects still be published if no library will purchase them at the time of publication? What might be the impact on publishing, on tenure and promotion, and on scholarship in general, especially in the humanities?[70]

In a playfully serious thought experiment, Lewis presumed that in ten years the historic corpus of printed books will be converted to digital files, e-book readers will be common, print-on-demand machines will be cheaper, and publishers will have been forced to develop cheaper economic models.[71] Libraries might then consider a radical alternative to spending funds on building, cataloging, and maintaining a book collection: buy an Espresso Book Machine and pay an operator to either purchase or print books on demand. Patrons could choose whether to keep or return the book. For Lewis, the "user-driven purchase giveaway library" serves the same purpose as a traditional library because both provide the means for communities and organizations to subsidize information use.

E-Books at the Tipping Point

The phrase "at the tipping point" appeared in numerous publications on e-books in 2009–10. E-books became widely available to libraries in the late 1990s but were not widely adopted by academic and research libraries. Spiro and Henry's report in *The Idea of Order* identified many of the problems surrounding e-books.[72] Lack of appropriate devices for reading, resistance by researchers and librarians, concerns about long-term access and preservation, lack of a standard purchase agreement, and economic considerations are among the obstacles that have stood in the way of large-scale acceptance. Lag time between print and electronic publication of a title and lack of a critical mass are major impediments.

Hodges, Preston, and Hamilton observed that PDA did not expand in the 2000s because publishers delayed publication of electronic versions of titles, fearing e-books would cut into sales of print book.[73] The authors noted that academic libraries, faced with changing demographics and shortage of space for print material, were starting to adopt e-book preferred purchase policies, forcing publishers to reconsider the practice of delayed publication. Pomerantz investigated the availability of e-book acquisitions in nursing and business and found that only one-third of purchased titles were available.[74] Despite these obstacles, a Primary Research Group (PRG) report noted that libraries spent more on e-books in 2009 than in previous years.[75] Shelburne attributed the surge of interest in e-books to the availability of content suited to the format, such as manuals, and new business models and services similar to those offered for e-journal acquisition.[76]

The ARL SPEC Kit 313, *E-Book Collections*, presented findings from a survey that asked libraries about issues related to e-books, such as plans for implementation, purchasing processes, cataloging and collection management, marketing, and usage.[77] Of the seventy-five responding libraries, 97 percent included e-books in their collections. Title-level selection was preferred as a more efficient use of funds and librarians continued to express frustration with aggregated collections. Other problems were lag time between print and electronic publication, restrictive digital rights management (DRM), loss of access for interlibrary loan, and limited printing. Most libraries did not have an e-book collection development policy, although responses confirmed that e-book selection and acquisition processes require new workflows. Of the twenty libraries that loaned mobile e-book readers, most preloaded readers with popular titles and added requests from users. Highwire Press surveyed librarians in thirteen countries to gather their views on the scholarly e-book market.[78] Respondents anticipated a significant increase in e-book budgets despite concerns about DRM and preservation. E-books were selected through multiple means, such as patron requests, references in research literature, and vendors. The most popular business model was to purchase with perpetual access, with 38 percent responding that the pay-per-use model was unacceptable because of budgeting concerns.

Davis reviewed national metrics in an article on e-books in public libraries.[79] The percentage of libraries offering e-books showed steady growth, and e-books were available in all libraries serving communities of 500,000 and more. Circulation grew with the introduction of new online delivery services and spending increased sharply while cost per unit declined. PRG conducted a global survey of public, academic, and special libraries about a broad range of e-book issues, including library spending, market penetration by specific publishers, price increases, and contract renewal rates.[80] Among its many key findings, PRG found that consortia accounted for 35 percent of all e-book purchases. Stern addressed the complexity of acquiring and managing e-books, which is multiplied at the consortium level.[81] Consortia must consider practical matters, such as system investments, and make philosophical decisions about the best use of shared resources. Discovery and selection need to be generalized across a consortium but tailored to local needs. In the absence of standard pricing models and best practices for cooperative profiling and shared payment plans, Stern advised librarians to influence the industry by proposing best practices and offering alternatives.

Several case studies present a variety of methods for assessing the use and management of e-book collections at the local level. Grigson evaluated e-book business models by comparing a range of options from a single supplier and by comparing business models from two different suppliers.[82] She concluded that a model based on annual usage limit rather than a simultaneous user limit offered better value for her library. After analyzing usage reports for an e-book collection at the University of Liverpool, Bucknell concluded that acquiring e-books in a Big Deal package was a good investment for the library.[83] Sprague and Hunter combined use statistics with bibliographic data to assess collections acquired from three major e-book providers, including an analysis of title overlap.[84] The authors were surprised to find relatively low use of e-books across all subject areas and platforms at the University of Idaho. They also found that individually purchased titles showed a significantly higher rate of use than package titles, but the high cost of individually purchased titles resulted in a significantly greater cost per use.

The Practical Work of Collection Development and Management

Two monographs published in 2010 provide best practices and expert guidance for collection managers. The second edition of Johnson's *Fundamentals of Collection Development and Management* remains the standard text, especially for academic libraries.[85] A new title by Hibner and Kelley, *Making a Collection Count: A Holistic Approach to Library Collection Management*, focuses on best practices for public libraries.[86]

The dour economic climate of 2009–10 reverberated throughout the reports and case studies on the practical work of collection managers. McKiel reported on an international library survey sponsored by the Charleston Observatory, which is the research arm of the Charleston Conference.[87] Librarians were asked how they were coping with the economic recession. Respondents projected an average budgetary loss of about 5 percent in three years. Libraries identified four methods for managing budget shortfalls: doing things

differently, greater cooperation with other libraries, making cutbacks, or seeking additional funding. Print books and serials were the most likely targets for cuts. In response to a question asking which of four options provide the most effective method for managing the budget, nearly half selected demonstrating value through better usage and outcomes data, one-fourth chose getting a better understanding of costs, followed by putting greater pressure on vendors and more effective benchmarking. Throughout this literature review, readers will find strong evidence that collection managers were focused on finding efficiencies, demonstrating value, and marrying best practices to strategic goals.

Collection Development and Selection

In addition to budget constraints, traditional collection development practices were challenged by the rise of e-books, the popularity of PDA, and the digital duplication of print material. From the perspective of a smaller academic library focused on curriculum-based user needs, Austenfeld stressed the importance of achieving efficiencies by keeping current with changing instructional needs and new programs.[88] By working closely with faculty, the library at North Georgia College and State University developed a model for active participation in the planning process for new courses and programs at the application stage, ensuring timely collection development for emerging areas of study. Kusik and Vargas changed the collection development practices at St. Xavier University in response to an institutional mandate to develop a new financial plan.[89] The library considered priorities for budgeting, collection development, and curriculum in developing a framework to reorganize its physical collections, establish an efficient budget process, and revamp collection development policies. The authors characterized their holistic collection development method as a transformative process that directly linked its collections to the goals of the university. ACRL released *Collection Development in a Changing Environment* by Clement and Foy.[90] The authors surveyed college and small university librarians and solicited samples of collection development policies. Nearly half the respondents had no policy or had policies that had not been updated in at least ten years. All reported participating in one or more consortial arrangements, citing the benefit of access to content they could not afford individually. Few libraries had one person solely dedicated to collection development, and most had an advisory board for faculty input on selection. The authors selected sample policies with a focus on e-resources.

While patron-driven acquisitions dominated the literature on collection building, a few articles describe alternative approaches to user-centered selection. Anderson followed public discussions in the online pedagogical forums of professional history organizations to find out which e-resources faculty used for their research and teaching.[91] Jensen described her use of online survey tools to gather input and feedback from faculty about monograph purchases.[92] Jensen culled information from vendor approval plans and faculty webpages, created a list of candidates for selection, and sent the list to faculty in an online survey. A faculty committee reviewed the results and made final recommendations for purchase. Aguilar, Keating, and Swanback demonstrated the application of reference data to collection decisions.[93]

In tough economic times, gifts-in-kind might seem a welcome way to augment a library's collection. However, as Chadwell observed, gift management consumes hours of staff time.[94] Sales of gifts do not necessarily gross enough profit to sustain operations. In addition, a misperception exists that gifts-in-kind will necessarily lead to gifts of money and endowments. Even then, collections librarians must compete for donor interest. Given the politicized nature of donations and fundraising, Chadwell urged collection managers to take an active role in the cycle of fundraising by learning from and partnering with development officers. Bishop, Smith, and Sugnet discussed the decision by Colorado State University Libraries to eliminate its general gift program and establish a new one that restricts gifts-in-kind to materials supporting archives and special collections.[95] In addition to concerns over program costs, circulation data showed that gift material had low usage. The authors emphasized the importance of collaboration and communication with stakeholders throughout the process. Public libraries are frequent recipients of unsolicited donations. Copper reported on an informal survey of public librarians about donations.[96] When asked if donations were a blessing or a curse, responses varied widely, in part depending on whether gift policies allowed for the sale of donations. Even when volunteers or friends groups assist staff with sorting, selling, and discarding donations, gift programs are not cost effective without a strong policy and a streamlined process.

An abundance of literature addressed building collections in specific subjects or formats or to serve special populations. Both Rauch and Manfredi discussed gay, lesbian, bisexual, transgender, and queer (GLBTQ) collections for young adults in public and school libraries, while Lee and Freedman reported on a lesbian fiction collection at Barnard College.[97] Serchay's book on graphic novels provides practical guidance for establishing a graphic novel collection, while *Graphic Novels and Comics in Libraries and Archives* contains a range of essays on these materials.[98] Williams and Peterson, Downey, and Wagner published articles on graphic novels in academic libraries.[99] Masuchika and Boldt surveyed university libraries about their Japanese manga collections.[100] The Arabic-speaking community in the United States is an emerging special population for library service. Al-Qallaf and Mika surveyed public libraries in Michigan about their collections, circulation patterns, and collection

development policies for Arabic speakers.[101] The authors identified the lack of age-appropriate Arabic language material as a problem for public libraries serving this population.

The Winter 2010 *Library Trends* focused on academic media collections and services. Handman provided a useful overview of changes in digital video production and delivery technologies, current and evolving models for licensing and delivering commercially produced content for online streaming, and the impact of new delivery models on collection development and budgets.[102] Bergman compared results of a survey distributed in 2004 and 2009 and found that video collections had grown despite higher costs.[103] Sightly more than half had already purchased or licensed digital video content or were planning to do so, despite of concerns about resource sharing and subscription costs. At a community college library, Healy used Netflix as a collection development tool for a neglected subject area.[104] Netflix rentals augmented the video collection during the redevelopment process, and the library purchased titles that were requested at least twice.

E-Resource Management

In the hybrid collection environment during this review period, a significant proportion of the literature on best practices focused on e-resources. Because various aspects of e-resource management are covered throughout this review, and in recently published literature reviews on acquisitions, serials, open access, and preservation, only a few publications are discussed here. The ARL's *Evaluating E-Resources*, by Bleiler and Livingston provided a snapshot of how research libraries acquired, managed, and evaluated e-resources.[105] The authors identified weaknesses in the processes and policies of individual library and consortia. Only about half had a collection development policy that addressed commercially available e-resources, one-third did not use standard licensing terms or model licenses, and one in five did not have routine review cycles. Bleiler and Livingston stressed that a lack of established policies and procedures for assessment puts a library at risk for financial loss and recommended that libraries create selection policies and standardized methods for assessment, train staff for contract negotiation, and share strategies, policies, and best practices. Stachokas advocated an integrated e-resources department for managing e-resources that would function like special collections with its own unique functions and best practices.[106] From the perspective of a medical library, Cecchino preferred a distributed approach with an e-resources librarian leading a team of public services, technical services, and systems personnel.[107] Cecchino's paper includes a discussion of cost–benefit analysis (CBA) and return on investment (ROI) methods for evaluating resources.

In their review of the collection literature for 1997–2003, Phillips and Williams observed that studies of ways to measure the cost and benefits of e-resources had been slow to appear.[108] This is no longer the case. The August/September 2010 issue of *Library Technology Reports*, by Grogg and Fleming-May, offered a comprehensive guide to the many tools, products, and methods for measuring e-resource use, including vendor products, emerging standards, and projects to improve protocols for the transfer and management of usage data.[109] Grogg and Fleming-May discussed the limitations of using data generated by COUNTER (Counting Online Usage of NeTworked Electronic Resources), which records only inputs (the number of people who logged on) and outputs (the number of articles downloaded). A chapter on alternatives to inputs and outputs identified the strengths and weaknesses of a variety of tools for assessing user behavior, such as Eigenfactor, Project MESURE (Metrics from Scholarly Usage of Resources), log analysis, and return on investment studies.

Paynter compared strengths of four commercial decisions support systems (DSS): Serials Solutions 360 Counter, Thomson Reuters' Journal Use Reports, Swets' ScholarlyStats, and Ulrich's Serials Analysis System.[110] Paynter assessed the products' usefulness as tools for four types of collection analysis: collection comparison, usage, package deals, and resource sharing. He also identified large-scale issues that needed to be addressed, such as transparency of product data, and made recommendations by size and type of library. The charts and tables in the article provide detailed information about the advantages of each system.

Weeding, Storage, and Inventory

The importance of practices associated with collection inventory, weeding, and storage is evident in the literature related to themes and trends identified in this review: freeing space for the user, the transition from print to digital format, and shared print repositories. According to Lugg and Fischer, in most libraries, "the core collection consists of only six out of every ten monographs currently housed in the building."[111] If unused and duplicate print items were weeded or stored elsewhere, many libraries could remove half their shelving. The issue of duplication extends to overlapping print and electronic versions of titles. The University of Oregon Law Library conducted an overlap study of its entire collection by title and volume.[112] Breakstone reported that by title, 9 percent of the library's print collection was available through online resources, and the overlap by volume was 36 percent. Of the currently updated titles in the print collection, 45 percent also were online. This comprehensive article, situated within the larger context of managing hybrid collections, provides an adaptable method to identify material for cancellation, weeding, or removal to storage.

Collections in storage require their own set of policies

and procedures. Bullard and Wrosch reviewed modifications made to storage policies and procedures in the ten years following the installation of an automated storage and retrieval system (ARSR) at Eastern Michigan University.[113] Online catalog displays were simplified and clarified so patrons could easily identify which books were housed off-site. Because the term "storage" had a negative connotation, librarians renamed the collection ARC (Automated Retrieval Collection). A case study from Georgia Southern University described a complex situation in which an ASRS was installed as part of a library building and renovation project.[114] The library managed the multiyear project by establishing a committee to create criteria to identify candidates for storage and standards for cataloging that material.

Three case studies illustrate the importance of conducting regular collection inventories. Patron complaints motivated Purdue University to inventory the liberal arts library, where 20 percent of the books were either missing or misshelved.[115] After inventorying the collection annually for five years, the number of books reported missing dropped by 90 percent. A problem with misshelved books also prompted an inventory at Eastern Illinois University.[116] After conducting a cost–benefit analysis of inventory data, Sung, Whisler, and Sung determined that the recovery of misshelved books through inventory control was less expensive than purchasing or borrowing the same number of books. Colorado State University inventoried their on-campus storage facility for risk management purposes and to prepare for a move to off-site storage.[117] The inventory helped the library recover quickly from minor disasters and uncovered previously hidden but useful material.

Assessment

A case study by Davidson and Kyrillidou illustrated how collection assessment can demonstrate value.[118] The Ontario Council of University Libraries (OCUL) consortium used Measuring the Impact of Networked Electronic Services (MINES for Libraries) to measure and compare e-journal use during a five-year period. MINES for Libraries is a survey instrument that collects data on user demographics, purpose of use (such as coursework), and the location of the user at the point of use. The data were used not only by the consortium for internal purposes, but by member institutions that used the data locally to argue for resources and demonstrate the relationship of resources to outcomes.

Morrisey addressed the importance of analyzing collection data to demonstrate value to administrators in a paper on data-driven decision-making (DDDM).[119] DDDM is an approach used in the K–12 education field to show financial accountability and demonstrate the success of students and schools. Morrisey gave examples of quantitative measures for various e-resources and stressed the importance of incorporating qualitative data in decision-making. Once data are collected, Morrisey advised librarians to provide a narrative that describes the outcomes for upper-level administrators and ties those outcomes directly to the curriculum. Martin and colleagues focused on the unique needs and interests of comprehensive universities, which emphasize applied research and classroom instruction.[120] Using case studies from three libraries, the authors examined methods to assess e-book collections, collection development policies, and databases, and they explored how such assessment can demonstrate the role of the library in meeting the institution's curricular needs. The authors concluded that the best assessment solutions incorporate deliberate planning, an objective framework, and open communication with librarians and faculty.

Collection analysis also is used to find efficiencies. Libraries use a wide range of assessment methods to collect and measure data for internal purposes, such as input and output data, user satisfaction surveys, list-checking, and other methods discussed in this review. The University of Nevada, Las Vegas (UNLV) Libraries undertook a multiyear comprehensive project "to analyze the entire library collection, including monographs, serials, databases, and other materials."[121] Tucker's detailed article focused on the work of the monographic assessment subgroup, which gathered usage data and budget data from five years to determine whether the monograph budget was appropriate and whether monograph funds should be reallocated. Data were analyzed according to subject areas associated with the nine UNLV colleges. The subgroup also compared the use of approval plan purchases with those purchased from discretionary funds. Findings showed an overall decline in collection use, even in the most heavily used areas of the collection; books purchased on approval had slightly higher use than those selected by librarians. As a result, appropriate adjustments will be made to the monograph budget allocation, fund allocations for specific disciplines, and the approval plan profile.

The Tulsa City-County Library assessed their e-resources to answer questions about the cost of e-resources and to make decisions about existing and potential resources.[122] Library staff collected usage statistics for a five-year period and divided the cost of the database by the number of searches. Instead of using actual cost data for the study, percent increase in cost was used to show trends. Each resource was assigned to a category based on type of use, such as ready reference or books and literature. Results showed that usage and prices steadily increased while the cost per individual search went down and the library decided to retain their current subscriptions, with the exception of magazines, journals, and newspapers databases.

Two articles discussed analyses of diversity-related collections and demonstrated the use of qualitative methods for

evaluation. Ciszek and Young examined a number of possible strategies for developing and assessing diversity-related collections, including circulation and usage statistics, WorldCat Collection Analysis, comparisons to standard bibliographies, focus groups and surveys, stewardship letters, and diversity collection development statements.[123] Maxey-Harris reported on her longitudinal study of e-resources held by research libraries that support multicultural and diversity research.[124] The author created a list of relevant e-resources and then searched the catalog and website holdings of ARL libraries in 2005 and again in 2008. Maxey-Harris identified the top five resources held by institutions with diversity collections.

Redefining Roles for Librarians

As libraries realign their priorities, collection managers and subject selectors are reorganizing their work and redefining their roles. Nesdill, Love, and Hunt reported that selectors at the University of Utah were reorganized into discipline-based teams consisting of collection development, technical services, and special collections librarians.[125] Collection development funds were redistributed among teams according to an allocation formula. Williams described a new "position description framework" developed at the University of Minnesota Libraries.[126] The traditional roles of reference, collection development, and instruction were refined and integrated into new roles, such as e-scholarship and digital tools, campus engagement, and fundraising. Gabridge examined the potential for librarians to serve as data curators and become part of new networks that connect systems to researchers.[127] In the view of Bracke, Herubel, and Ward, collection management will continue to require librarian expertise, but more time will be available for analyzing usage data, developing digital collections, or partnering with researchers to manage data in early stages of research.[128] Librarians need to develop skills and expertise in emerging areas, such as e-science and collaborative print retention activities, as well as participate in campus affairs and conduct their own research.

Conclusion

The "Great Recession" officially ended in late summer 2009, but the negative impact of the global economic crisis on library collections continued through 2010.[129] Flat or reduced library budgets, changes in scholarly communication, the proliferation of e-books, and disruptions in the publishing market accelerated the pace of change as library collections continued their transition from analog to digital format. The literature demonstrated an increased emphasis on collaboration and cooperation across libraries and within institutions as a key management strategy, evidenced in part by a growing body of work on the development of shared print depositories. Other trends included a shift in research libraries from collecting everything to mission-based collecting, with a focus on unique and special collections to distinguish research institutions. Librarians in all types of libraries shifted from a just-in-case to a just-in-time approach to collection development and adopted a variety of PDA methods. A significant body of work addressed all aspects of e-book collection development and management, showing that academic libraries have embraced the e-book despite concerns about issues such as long-term access and the lack of standard purchase agreements and licenses.

The literature on the practical work of collection development and management continued to address selection in specific subject areas and types of formats, electronic resource management, and weeding, storage, and inventory issues. A sizable body of work reported on a range of methods used to analyze collections, reflecting the importance of assessment in an environment that stressed finding efficiencies and demonstrating the value of libraries to external stakeholders. While print collections shrank and digital formats proliferated, subject specialists and collection managers took up the challenge of reinventing their role in the research enterprise, with data curation emerging as a promising area of engagement. As Grafton so eloquently stated, "It's not quite apocalypse in the stacks, but it's certainly a time of shaking, if not of breaking, what had seemed permanent institutions of unquestioned value."[130]

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