by marshall breeding
Independent Consultant and Founder of Library Technology Guides

Coping With Complex Collections: Managing Print *and* Digital

THE INCREASING RICHNESS AND CORRESPONDING COMPLEXITY OF LIBRARY COLLECTIONS ARE A REALITY THAT ISN'T LIKELY TO ABATE, NOR WOULD WE WANT IT TO.

Library collections are becoming increasingly diverse in terms of the many different formats represented, and each brings its own challenges for management and access. Almost any library these days is likely to be involved with print, electronic, and digital formats. The shift from print to electronic formats has been under way for quite some time, but print isn't likely to go away anytime soon. I don't necessarily share the view that libraries will become entirely digital. I'm glad to see libraries increasingly involved with electronic resources and with digitized collections, but I see a very long-term enduring value in physical materials from printed books, manuscripts, archives, and many other items of special interest. Technology has added to the richness of library collections and brings incredible opportunities for ever-wider access. The cumulative process of the proliferation and electronic formats in addition to the physical materials present libraries with significant challenges in managing these heterogeneous collections; it demands a technical infrastructure that can provide appropriate tools for management and facilitate access.

Complex and Diverse Business Models

Libraries will have to deal with an increasingly complicated set of processes for selecting and acquiring their materials. Collections can no longer be managed according to homogeneous metadata formats, fulfillment policies, or business models for procurement. A quick scan of the ways in which libraries acquire materials gives an impression of the complexity involved.

Approval plans or firm orders for selected materials stood as the main acquisitions models for print materials. Ebooks have come on the scene to add still other procurement options. Libraries can subscribe to predefined ebook collections, or they might select titles individually. Some arrangements might involve permanent ownership of titles, while others provide access only for the term of the subscription. Both single user and multiuser options are offered for ebooks, naturally with different price points. The delivery options for ebooks also vary: Some are delivered only through web browsers, while others can be downloaded and read on selected e-reading devices. Despite increased demand for ebooks by patrons, libraries also face fundamental limitations since some of the major publishers will not allow libraries to acquire and lend their titles, preferring to sell or license them directly to consumers.

In recent years, many libraries have implemented what has become known as demand-driven acquisitions. Rather than having librarians select materials in advance with representative or comprehensive coverage of a subject area, a library implements a

process where titles become activated when accessed by a patron, triggering a purchase of that item once past a defined threshold of use. A quick reference to the table of contents of an ebook might not trigger its purchase, but downloading it to an e-reader would.

Acquisitions for journals and periodicals have always been a bit complex. Subscription agents would help libraries with large numbers of subscriptions from different publishers process their renewals, taking into consideration new or dropped titles. Today, publishers offer almost all scholarly journals electronically, with print delivery only sometimes available as an option. Ejournal content may be purchased through "big deal" packages, where a publisher bundles large numbers of titles together at a set price, including both those in high demand and low use. The ever-increasing burden of these big deals has pushed some libraries to drop these arrangements in favor of more selective purchases or even by subsidizing patron purchases of articles on demand.

Besides all of these purchase or license options, the amount of content available through open access publishing continues to grow. While no funds need to be spent, libraries still need to take measures to ensure that open access materials of interest are incorporated into their collections and included within their discovery environments. Some open access publishing arrangements involve up-front charges paid by the authors, which in some cases might be paid by the library, which then introduces yet another business model needing support.

Libraries are also involved with collections of digital multimedia materials. In many cases, the digital collections are created in-house and managed through a digital asset management system. Libraries also purchase or license these digital collections of images, video, digitized manuscripts, statistical data sets, or other research data.

Patron Expectations

Library patrons bring different expectations. Some prefer print while others have become well-acclimated to electronic delivery. They may or may not have the e-reader required for a specific library title, or they may not have an e-reader at all. Having to accommodate a variety of different devices and patron preferences has become yet another complication in providing access to library materials.

In most cases, the form in which the library acquired the content drives the mode of delivery rather than the preferences of the patron. While it would be ideal to offer patrons the flexibility to access any given item from the library in the print or digital format they prefer, it's an expectation that can only rarely be fulfilled.

Strategies for Resource Management

The business of managing a library collection has never been as complicated as it is today. Reviewing the litany of procurement and delivery options common in libraries today makes me dizzy, and I'm sure that I've left out some. In recent years new technology products have been created or existing ones have been enhanced to help libraries address these complexities.

This complicated matrix of content formats, procurement methods, and delivery methods presents enormous challenges for the technical infrastructure that a library needs to support the management and access of its collection. The basic integrated library systems in place in most libraries simply can't handle the demands of the mixed collections and the diverse business arrangements.

I observe at least a couple of ways libraries are responding to the increasing complexity libraries face in managing their collections. One path involves evolving the integrated library system to better handle electronic materials, and the other involves the creation of new types of systems. The direction of development seems to mostly break out according to library types and their associated use and collection patterns. Public libraries have seen a greater impact from the rising interest in ebooks, while academic libraries face more of a challenge with ejournals and other scholarly resources.

ILS Extensions and Connections for Ebook Integration

At least so far, the key response for helping public libraries better manage their growing involvement with ebooks has been through enhancements or extensions to the integrated library systems, largely in the form of integration with external services. In the initial phase of ebooks, a typical arrangement might involve subscribing to an external service, with the one firm, OverDrive, dominating, which manages most of the patron interactions. A library might offer an icon on its website that leads patrons to the OverDrive service, where they search the ebook titles selected by the library with the ability to check out and download items to read. The library might be able to load the MARC records into its ILS for search and presentation in the library's online catalog, but with a link that passes the user to the platform of the ebook service for checkout. This process that divides the management and fulfillment of ebooks and printed books across two platforms results in a fragmented experience for patrons and inefficient collection management for libraries. Patrons have to look at their patron accounts associated with the library's ILS to view print items checked out and to perform renewals, and they would have separate accounts on the ebook provider's platform to perform similar tasks for ebooks.

Several efforts are under way to unify collection management and patron access to ebooks. In a more ideal environment, patrons would have a single library account that displays both print books and ebooks and their corresponding service options. Such capability requires cooperation between the providers of ebook services and ILS developers to enable the technical interoperability to achieve a unified environment between the different formats of books and among the different suppliers. Polaris has worked with 3M to bring a unified ebook lending experience into its Polaris POWERPAC for libraries working with the 3M Cloud Library. SirsiDynix has developed eResource Central to provide a unified patron experience; this includes one-click ebook downloads, initially for libraries using the Axis 360 service from Baker & Taylor, but also for ebooks on EBSCO*host*, with other partners expected in coming months. BiblioCommons has developed ebook integration for its discovery service, with projects involving the 3M Cloud Library and OverDrive under way. These initial examples will be supplemented by other projects and partnerships that work toward helping public libraries deal with this critical issue of ebook lending. These efforts are based on extending the existing integrated library systems to integrate with external ebook platforms. I am not aware of projects under way to develop an entirely new automation system for public libraries that entirely replaces the ILS with a new product designed from the ground up for management and delivery of multiple content formats.

New Library Services Platforms for Academic Libraries

The dynamics in academic libraries differ considerably. As noted previously, academic libraries have seen fundamental change as their journal collections have shifted almost completely from print to electronic form and their acquisitions of new monographic titles have generally plummeted. The integrated library system, with its basic orientation toward print materials, has

FACCTs
Faulkner Advisory on Computer and Communications Technologies

Expert reports for IT, Business, Government, Academic, and Library Professionals

We invite you to discover for yourself why more and more professionals at every level are putting FACCTs reports to work in their organizations.

For a free, no-obligation, no-risk preview:

- **Call us** at (239) 443-0853
- **Email us** at rream@infotoday.com
- **Fax us** at (239) 395-5811
- **Register** at our website—www.faulkner.com

FAULKNER INFORMATION SERVICES
A division of Information Today, Inc.
7905 Browning Road • Suite 116 • Pennsauken, NJ 08109

diminished in its effectiveness for academic libraries. With many libraries spending the majority of their collections budgets on electronic resources, the real need surrounds the tasks associated with the business processes involved with licensed materials rather than on purchased print items.

THE IDEA OF HAVING A SEPARATE ENVIRONMENT FOR MANAGING PRINT AND ELECTRONIC RESOURCES DID NOT PROVE ITSELF IN THE MARKETPLACE.

The initial response, beginning about a decade ago, to the need to provide supporting infrastructure to help libraries manage their increasing body of subscribed materials was a new type of product called the electronic resource management system (ERM). A work group sponsored by the Digital Library Federation defined all of the data elements involved in managing electronic resources, which became known as the ERMI specification, which was the expected foundation for the electronic resource management systems that were subsequently created.

Some of the electronic resource management systems developed include Verde from Ex Libris (announced June 2004), Meridian from Endeavor Information Systems (June 2004), Electronic Resource Management from Innovative Interfaces, Inc. (June 2002), 360 Resource Manager from Serials Solutions (rebranded from early products in March 2007), and ERM Essentials from EBSCO (January 2010). These products were created with the notion that academic libraries with large collections of electronic resources use integrated library systems for print resources and an electronic resource management product to manage electronic collections. This arrangement, however, does not seem to have worked out so well. The electronic resource management systems were complex, and many libraries considered them unwieldy tools for their intended purpose. Compared to the many tens of thousands of integrated library systems implemented in North America by the end of 2011, only 834 electronic resource management products had been purchased, with even fewer implemented in production (Ex Libris Verde: 229, Electronic Resource Management from Innovative Interfaces: 332, and 360 Resource Manager from Serials Solutions: 273). These figures seem to demonstrate that the idea of having a separate environment for managing print and electronic resources did not prove itself in the marketplace.

In this current phase of library technology development, the emerging model for academic libraries brings the management of print and electronic collection components into the same platform. The concept of "unified resource management" has, for example, been the defining characteristic of Alma from Ex Libris and is a concept seen also in the other product in this new field of library services platforms, including Intota from Serials Solutions, Sierra from Innovative Interfaces, OCLC's WorldShare Management Services, and the open source Kuali OLE project. Rather than having entirely separate platforms for dealing with print and electronic materials, these emerging library services platforms support many different processing workflows, metadata formats, and fulfillment policies. Bringing more of the tasks involved in managing library collections under the control of a single system should provide more flexibility and efficiency.

We are in a very early phase of the development and deployment of this new generation of library services platforms. While they seem positioned to see wider adoption in the coming years, traditional integrated library systems remain dominant. OCLC's WorldShare Management has been implemented in about 35 libraries, the first library has implemented Ex Libris Alma in production, and a handful of libraries now use Sierra, while Intota and Kuali OLE remain in development. The expected transition to this new type of automation platform will take many years. Even though the need seems fairly immediate regarding ways to better manage the diverse collections in academic libraries, the change cycles have historically turned slowly.

The increasing richness and corresponding complexity of library collections are a reality that isn't likely to abate, nor would we want it to. I think that it's great for libraries to be involved with such a wide variety of content types and options for delivery and fulfillment. But to help us, we need better tools than the ones developed for the days when libraries dealt mostly with print. Better technology seems to be emerging, though a few steps behind the current needs. I see significant progress under way in the developments related to better ebook integration in the discovery services and integrated library services used in public libraries, and I see the emergence of new flexible platforms for more comprehensive management and discovery for academic library collections. ■

Marshall Breeding is an independent consultant, writer, and frequent library conference speaker and is the founder of Library Technology Guides (www.librarytechnology.org). His email address is marshall.breeding@librarytechnology.org.

Copyright of Computers in Libraries is the property of Information Today Inc. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.