New e-sources, new models: reinventing library approaches to providing access

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Introduction

The lines may be blurring among e-books, e-journals, article databases, and other information sources; the way these sources are managed is still filtered through traditional organizational library structures and traditional divisions between technical and public services librarians. When teaching Introduction to Information Literacy to first year university students, working at the reference desk, or consulting with students in my liaison areas, I see how they understand and misunderstand these various types of information sources and how they access them. If we viewed these resources differently, if we handled them in ways that challenge the organizational models and traditional division in libraries, we could address the issues users face in identifying, accessing, and using these sources effectively.

Continuing resources

In 2000, an Association for Library Collections and Technical Services Task Force on the Review of Revising AACR2 to Accommodate Seriality: Rule Revision Proposals described two forms of resources, “static (now called finite) and ongoing (now called continuing),” based on the intent to continue over time with no predetermined conclusion. Finite resources could be either complete (monographs) or incomplete (multipart) and both incomplete finite resources and continuing resources could be successively issued or integrating” (Association for Library Collections and Technical Services, 2001).

Since then, there has been discussion about the scope of continuing resources. On the one hand, they can encompass just about everything from multiple editions of reference works to e-books, which Lugg described as serials because of the way that libraries handle them, both as packages and as individual titles requiring annual payments for platform rights (Armstrong et al., 2009). On the other hand, I believe we will move more in the other direction. We already search for individual articles in databases, so a journal could easily publish individual pieces, as they are ready, rather than waiting for a complete book. Weinberger describes another example with iTunes, where purchasers select individual tunes, rather than a CD or equivalent (Weinberger, 2007). This brings us full circle to the concept of analytics, and with current technology, such individuation is feasible without the cost and labor that once made analytics prohibitive. Users, of course, do not care whether an item is static or continuing, part of a journal issue or a monograph, or any other bibliographic information until they have to cite it. What they care about is finding material on their topic and accessing individual items to which they have been referred by a professor, in a bibliography, through a colleague, on the web, etc.

User wants and behaviors

When working at The University of Michigan Business School in the late 1990s, business underwent another iteration of the quality movement. The concept was not simply to understand customer needs, but also to “surprise and delight” the customer, as Professor Kim Cameron explained in a number of in-house meetings at the time. In this decade, another concept has been explored by Malcolm Gladwell in his book The Tipping Point (Gladwell, 2000). He explained a new way of understanding why change happens so quickly and unexpectedly, and how things move along to a point where they tip over and take off. These concepts fit together very well in our efforts to understand what a large group of users want. On the one hand, if they are not “surprised and delighted,” they will probably not notice a particular tool or service among the myriad options now available. On the other hand, once their attention is caught, if that offering does not continue to surprise and delight, it may not tip over and take off.

Google has caught the imagination and tipped over into a ubiquitous behemoth. It is quick, it is free, and it almost always gives results no matter what you type into a search box. It has been suggested that many Google searches are simple and factual, not in-depth, which is one reason to favor the library’s more complex tools and resources, but users may continue to search Google regardless. This may be due to their lack of knowledge of the library’s resources or, if they know Google Scholar or Google Books, because it is now a comfortable and familiar entry point.

The immediacy of the Internet and the web has driven expectations. According to Kuniavsky, the world of serials and ubiquitous computing intersect (Kuniavsky, 2009). He argues that rather than “viewing the whole world through the lens of a single magic window…the power…[and] potential of that technology should be brought into everyday life.” Library offerings must now be delivered on multiple devices – computer, phone, etc. With these multiple devices connecting people 24/7, the expectation of
immediate satisfaction is even greater. In addition to educating users about resources and services, librarians must now be able to accomplish these tasks instantly whenever and wherever their users roam.

What is clear, however, is that users want the same easy, free, fast experience they enjoy with Google. There are times, however, when they find that more complex needs, e.g. those generated by class assignments, do not garner the results they need in Google, or, if they use Google Scholar, do not allow access to full text. At that point, some give up, but some come for help in person, by email, through chat, or by telephone, giving the library an opportunity to surprise and delight. How often do we do this? At the very least, it requires that everything work seamlessly from the creation of metadata through the accessibility of resources to the delivery of what the user wants. By the end of the transaction, however, while some users express appreciation, others complain that the process is too complicated and wonder why it cannot be like Google.

In considering these challenges, however, it is important to remember that there are still some users who want the complexity we offer. Library users exhibit a wide spectrum. Some faculty and deep researchers express dissatisfaction with the shrinking research materials available to them and the simplification of searching. Librarians have increased their efforts to find out what users are actually doing and what they say they want (not necessarily always the same thing).

Technology has simplified statistics gathering, which provides insight into use patterns. We have more data than ever about use, even at the article or chapter level. We can identify and what they say they want (not necessarily the same thing). Statistics alone are insufficient. Statistical analysis is often combined with other techniques, such as surveys, focus groups, and controlled observations. The LibQUAL+ Survey is in common use, particularly among research universities. It compares the desired, perceived, and minimal level of expectations for various library services. In examining the 2006 survey results at the University of Virginia, self noted typical faculty comments on the lack of journals in specific researchers’ fields and the problems of cancellations due to budget shortages. Also noted, however, were such common comments as these: “Access to journals is confusing” and “Browsing facilities need improvement.” Self concluded that searching and access are major problems and noted that “there are continuing efforts to improve the search interfaces.” (Self, 2008)

User experiences with online catalogs

One outcome of such surveys has been a growing awareness that the online public catalog no longer meets needs. Originally a tool that surprised and delighted users, Fast and Campbell now describe it as “closed,” “rigid,” and “intricate” (Fast and Campbell, 2004). One approach to this issue is to enhance the catalog. North Carolina State University contracted with Endeca in early 2006 for this purpose. According to Antelman et al., the product provides “relevance-ranked results, new browse capabilities, improved subject access” (Antelman et al., 2006). Of importance, however, is that the librarians planned five assessment measures as part of implementation design: changes in circulation patterns, path analysis, use of refinements, sideways searching, and objective and subjective measurements of quality search results. Librarians also conducted usability testing with ten undergraduate students to search both the old and new catalogs. They measured task success, duration, and difficulty, but not satisfaction, which do not correlate with success (Fast and Campbell, 2004; Nielsen and Baker, 1987). Students take less time to complete tasks, found it easier to use the catalog, and the relevance of their results improved. There was a continuing problem in that students confused “keyword anywhere” and “keyword in subject” searching. Students also knew that dimensions could be used to narrow results, but only three actually used them, illustrating another common problem of not using the full capacity of a tool. In the end, while there was improvement, Antelman et al. acknowledged that more work was needed. They also noted that the catalog represented only a small portion of the information world available to users, meaning that a great deal of effort is going into a tool that only represents a small portion of the information the library offers.

This raises another, more radical perspective. Eden bluntly states that the catalog’s days are over because libraries cannot continue to fund something that today’s users are not accessing. Funding
for higher education will continue to dwindle; yet “a library spends roughly 60-70% of its budget on personnel salaries and benefits in technical services, OCLC fees, and vendor OPAC fees in order to maintain a standardized, cross-referenced database that only 10% of our customers are using.” (Eden, 2008) He urges librarians to move away from “data perfection,” stating that “good enough is just fine for today’s users” and references the Library of Congress’ (LC) shift towards mass digitization and away from the type of bibliographic control it has provided in the past (LC stopped tracing series, for example). He concludes that the University of California, where he works, has an opportunity to transform technical services through their new catalog interface that uses WorldCat Local.

The California State University system is also leveraging OCLC’s WorldCat to create a union catalog for the 23 campuses in the system; however, there are problems. At California State University, East Bay, again due to budget shortages, we did not renew our OCLC subscription for 2009-2010 and will not for 2010-2011. Other campuses are considering a similar move. As our collections budget has been slashed, the number of new books is so few that the cataloging cost per item is unacceptable. This means no updating of additions, deletions, changes, and holdings. At first, this may not be particularly noticeable, but if this continues, the impact will grow and the union catalog will cease to be a fully union catalog. Yet another system is breaking down or, at least, fragmenting, hastened by failing budgets.

User experiences with federated searching

Driven by the “one-stop shopping” aspect of search engines such as Google, federated searching is another library effort to compete. As with other developments, there are different viewpoints. In one sense, many libraries experience a form of federated searching if they offer users a single platform for their databases. At California State University, East Bay, we use EBSCO for the majority of our databases and users can search across them through the platform’s capabilities. There are, however, still a couple of databases we must offer through a different platform. Within that cross searching, however, it is still possible to know the database for each result and feel anchored to the source.

True federated searching, however, crosses everything you embed in the system – the catalog, databases, web sites, etc. The platforms libraries choose are generally commercial and the nature of competition in a business with tight margins of profit ensures that product improvements are timely, but federated searching can be considered more broadly than that. Linoski and Walczyk consider Google Scholar to be a “federated search-like tool,” also WorldCat. Google Scholar simply offers a list of results, but WorldCat has “refine search,” “plug-ins for Facebook and Firefox, allowing users to connect to resources through a friend’s profile, or search for items directly from a web browser search bar” (Linoski and Walczyk, 2008). Commercial products now offer many features, such as limiters, simple and advanced search, clustering, visual search interface, faceted results, and RSS feeds/search alerts. The user experience with these products is therefore blending with their web experience. As a result, they do not always know what they are really searching or where the results list of the full text resides, but they can log on and know what to do.

This lack of user awareness, however, has resulted in concern among some librarians. Rethlefsen argues that there is no one-stop solution for quality research, stating, “research requires time, discipline, critical thinking, and analysis,” that “no single technique or tool is ever appropriate for conducting research,” and that “Google-like relevancy is the end goal of quick information searches but not necessarily the end goal of research. Research requires more than relevancy. There are also currency, authority, and serendipity to consider” (Rethlefsen, 2008). With federated search, the unique features of individual tools, such as the catalog or a particular database or its platform, are sacrificed for a common, across-the-board search. For the bulk of our users, however, “good enough” may meet the needs, which then makes Eden’s issue about the cost of cataloging applicable here: can we afford it? At the moment, California State University, East Bay tries to blend federated search with traditional tools, offering access to federated search, the catalog, and individual databases from the front page of our web site.

Taking it one step further, Turner suggests that in ten years, “federated search – or search of any kind for that matter – won’t exist” (Turner, 2009). He argues that we only search because we do not have the information we need readily available, but digitally stored information will continue to increase, we will outsource the mapping of our data to “data locator” companies, and every “federated” search will be behind the scenes. Searching will be part of other routine functions, initiated automatically based on what the user has been doing, such as his keystrokes or his historical data. There will be an interactive dialog box where the system poses questions, the user answers, and the systems searches.

User experiences with link resolvers

Link resolvers are important cross-content tools. They offer links from one information source to another. Users can click on the screen button affiliated with a citation and be taken to a list of places where the full text is available or to a connection to interlibrary loan, if the full text is not available in that particular library. Wakimoto et al. conducted a “three-fold study – online survey, focus group interviews, and sample testing analysis – to examine library end-user and librarian expectations and experiences using SFX,” the link resolver from Ex Libris, which is deployed throughout the California State University system. The study was conducted at the Northridge and San Marcos campuses (Wakimoto et al., 2006).

The survey was designed to explore user expectations. The most common expectation was to find full text every time. Negative comments dealt with “complexity, technical problems, or confusion.” Positive comments “focused on the time saving and/or efficient nature of the service.” Focus groups were conducted with librarians, not users. Librarians were positive, but their biggest complaint was about accuracy. They also thought that students needed instruction on how to
use the product, meaning that it was not fully intuitive. Interestingly, both major problems – the desire for more full text and the issue of accuracy – are not product problems, but library problems, either with collections (usually budget-related) or with human input errors. The key to the end user experience, however, was that expectations were greater than reality when it came to accessing full text.

Innovation and new ways of thinking

Eden is not the first person to suggest throwing out the catalog, but he may be getting closer to being the last. Commercial databases now incorporate web sites into their content. Platform providers include RSS feeds, visual displays of results, tagging, citation, email, individual user storage options, and searching across databases if they are part of the platform. There is federated searching, there are link resolvers, and there are new ideas and developments every few months, just in time for the next major library conference. Digitization is proceeding at an ever-increasing rate, making more content available, either at no cost (the open access model) or for a fee, which libraries may or may not be able to afford. Libraries contract for these tools, but they are behind in many ways.

Search engines, for example, offer multilingual searching at various levels – interface language, language limit, machine translation, and translated search, and the service is free, although Notess states that it “takes some search flexibility and a heavy dose of skepticism about the accuracy of the translations.” (Notess, 2008) We can also choose to read Wikipedia in a multiple of languages. There are some libraries exploring this option, such as the Orange County Public Library in Orlando, Florida, which has created MARC records in Spanish and English for their Live Homework Help site. Multiple language offerings are not a feature regularly available in catalogs in the USA or, yet, in database platforms, although I suspect this enhancement will come faster in the commercial products than in our own creations.

Weinberger speaks in praise of miscellany and disorder (Weinberger, 2007). In his investigation of Wikipedia, he used, as an example, the article on the elephant. He contacted Brion Vibber, the chief technical officer at Wikipedia, via “chat” and asked him where the text information for the article was stored. Here’s the response:

<brion> god only knows.
<brion> On the disk somewheres [sic]

How appalled would you be at such a response from a librarian? Yet, Weinberger suggests that the “gap between how we access information and how the computer accesses it is at the heart of the revolution in knowledge.” (Harner et al., 2004) He lists four important new strategic principles that are breaking the links between how we organize physical objects and ideas:

1. Filter on the way out, not on the way in. The “peer review” is now moved from before to after publication. This permits abundance, but requires each reader to filter or evaluate.
2. Put each leaf on as many branches as possible. The more tags you give it, the more access is possible.
3. Everything is metadata and everything can be a label. This gives power to miscellany because everything is connected and, therefore, everything is metadata.
4. Give up control. The owners of information no longer control how it is organized. Users order it as they see fit.

It is this last principle that is so difficult for librarians, which is ironic, as we have been organizing others’ information for centuries. When it comes to users, however, we are beginning, slowly, to let them in, but we will need to step up the pace or plan to be constantly behind.

How we work

Users know what they want and I suspect so do we, at least in a general sense. The problem is that we get bogged down in our own processes and existing order. In all these endeavors, it has been interesting to look at the positions held by those who work on them. Our traditional lines of public and technical services are often still on the organization chart, but there is more of a tendency to involve a wider spectrum of librarians. At North Carolina State University, there was an Information Technology Advisory Committee and that group appointed a seven-member representative team to oversee the implementation (Antelman et al., 2006). A University of California project team involved representatives from around the University system (13 campuses) and also from different areas of the library, including research and collections. It takes large projects, however, before this happens.

There are some examples in daily work, but they are still sufficiently unique to be worthy of articles in the literature. In 2004, in South Carolina, there was a process to cross-train public services librarians to work in the technical services area, which the author noted was counter to the usual cross-training efforts, which are oriented to bringing technical services staff into public services (Fain et al., 2004). That same year, there were two articles that addressed dual assignments in technical and public services. The first addressed technical services librarians in the public arena (Chambers et al., 2004) and the second addressed public services librarians in technical services (Harner et al., 2004). Harper, in 2006, posited that collaboration among public service, collection development, and technical services was essential to the development of successful digital libraries, while noting that “there has been a long-standing belief in the field of librarianship that there are two distinct branches to the profession: technical services and public services” (Harper, 2006).

What keeps us clinging to our traditional way of working? A search of the business literature revealed an interesting article in the area of accounting and control systems. Markus and Pfeffer suggested that resistance and system failure are common and posed three hypotheses to explain this. For ease of implementation, systems need to be “consistent with … other sources of power in their implications for the distribution of power,” “the dominant organizational culture and paradigm in their implications for values and beliefs,” and “shared judgments about technical certainty and goal congruence” (Markus and Pfeffer, 1983). They argue that process-based strategies...
are ineffective in dealing with these conditions, and power structures and organizational paradigms must be factored into implementation. As libraries are largely about process, perhaps recognizing the existence of the power structures and organizational paradigms in our operations will help us to overcome the tendency to fall back into our divisive organizational structures.

I suggested that to understand fully why the Gale Literary Databases were little used in my library, we needed a collaborative effort of discipline and library faculty to work on it. Not only do we need to cross-pollinate within the library, we need to find ways to cross-pollinate with those beyond our walls. We have learned to do this with technology specialists over our IT issues and with discipline faculty over our collections, but we cling to our catalog and other tools, and we believe there is a “right” way to organize and manage information.

I expect we will carry on, modifying what we have, evolving to a new order, but what I would most like us to do is let it go. If we let users engage with our catalog, tagging, commenting, annotating, they will become more interested in libraries and in using information we provide. This could be our great opportunity. Let us embrace it.

REFERENCES


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