» “A library is not a luxury but one of the necessities of life.” –HENRY WARD BEECHER

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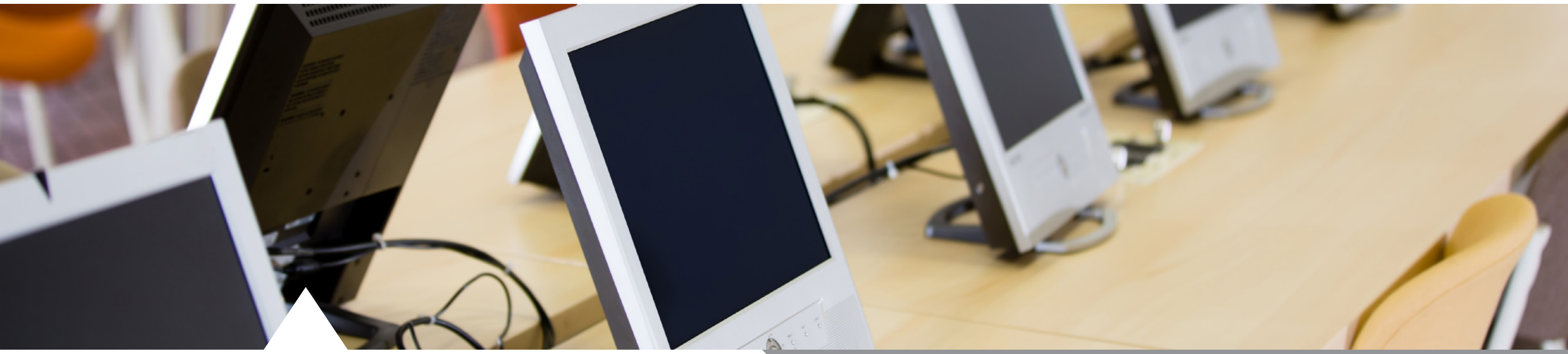

Issue 36 // February 15, 2017

Interlibrary Loan of Special Collections Materials

» An Overview and Case Study

BY BLYNNE OLIVIERI AND ANGELA M. MEHAFFEY

When the Annie Belle Weaver Special Collections, in partnership with the Interlibrary Loan department at the University of West Georgia’s Irvine Sullivan Ingram Library, embarked on loaning original materials to other libraries, we did so with a lack of consensus from the special collections world at large, about whether lending special collections materials was a good practice or not, what to lend, and to whom to lend.

The only consensus about loaning special collections materials is that there is no consensus, to rephrase the finding of the 2010 OCLC Sharing Special Collections Working Group survey.[1] That survey, along with another conducted by OCLC in the same year, provided statistics on the number of institutions who were or were not interlibrary loaning special collections materials. The 2010 OCLC Sharing Special Collections Working Group survey found that “57.4% of respondents will lend physical items from their special collections within a consortium, while another 10.3% will lend even beyond their favored group.” In *Taking Our Pulse: The OCLC Research Survey of Special Collections and Archives,* 33 percent of respondents checked “no” to this question: “Do you permit interlibrary loan of original special collections materials?”[2] Data from both surveys align to indicate that roughly 67 percent of special collections may be lending original sources.[3]

Since 2010, an increasing number of librarians have called for action on expanded resource sharing of special collections materials. Christian Dupont, now Associate University Librarian for Special Collections at Boston College, particularly advocated for changes to the special collections profession in balancing issues of preservation versus access and trust versus risk.[4]

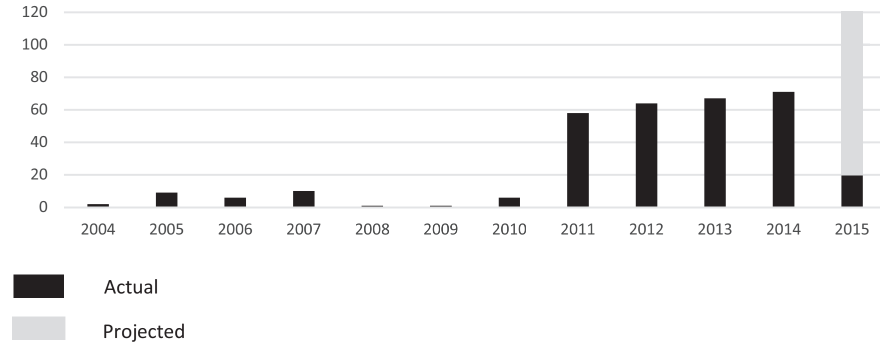

FIGURE 1. Requests for loan of Special Collections materials, 2004–June 2015

The benefits of interlibrary loan of special collections materials were also noted in the 2013 *Research Library Issues,* "Special Issue on Mainstreaming Special Collections," in which Lisa Carter framed the activity as "operationally integrated" within the function of academic libraries. Carter called for various library units to work together toward enhancing access to special collections materials, which, she asserted, builds trust and creates efficiencies and thus benefits patrons and the library as a whole.[5]

Library and archival literature historically has largely dodged the topic of loaning original special collections materials. Dennis Massie, in the 2013 OCLC report, asserted, "It remains among the most divisive issues in the field of archives and special collections, perhaps the one most likely to bring out equal parts raw emotion and well-reasoned professional opinion."[6] Mary Jo Pugh, in a Society of American Archivists publication in the Archival Fundamentals Series, stated, "Loans are the exception in archives and manuscript repositories, not the rule."[7] Risk is the number one answer for not engaging in interlibrary loan of special collections materials, according to Massie's OCLC report. In the special collections profession, it is noted that security and preservation of materials is a balancing act with patron access.[8] There is a risk of letting special collections materials outside our institutional walls; but, in certain circumstances, like ours at the University of West Georgia, the benefits outweigh the risks. This article provides an overview of loaning materials from special collections to other libraries; documents the University of West Georgia's first year of this practice, including the factors that led to implementation, as well as the policies, procedures, and assessment measures that were put into place to ensure viability; and suggests considerations for the future.

INTERLIBRARY LOAN IN THE CONTEXT OF RESOURCE SHARING

Loaning original special collections materials is one of the many activities that falls under the umbrella of resource sharing. Resource sharing encompasses interlibrary loan (delivery of both original and digital content), scan-on-demand services, user-initiated copy and scan activities in reading rooms, reproduction (traditional copying) services, and more.[9] Some, like Wake Forest University's Z. Smith Reynolds Special Collections and the Special Collections Research Center at the University of Chicago Library, have created scan workflows directly in their interlibrary loan software to deliver digitized content directly to patrons.[10] Other scanning programs include user-driven digitization in the reading room, like that of San Diego State University.[11] Other institutions digitize materials based on patron requests and place the files with metadata in their content management system or digital repository to reach a broader audience.[12] Digitization is an alternative method of sharing resources that alleviates institutional concerns about potential loss of the physical item or damage during transit.[13] However, there are times when the loan of original materials makes more sense for patrons. Some of these scenarios include: reaching an audience that does not have Internet connectivity, reaching an audience that may not have computer fluency, and serving patrons who seek information beyond the text and are looking at the materiality of the item. It is important to clearly differentiate the lending of original materials from the provision of surrogates to patrons through various methods because the processes, policies, risks, people involved, and how well the outcome satisfies a patron's needs can vary significantly.

PARAMETERS FOR LOANING SPECIAL COLLECTIONS MATERIALS

What types of materials are lent is a crucial question. In the *Taking Our Pulse* survey, 38 percent of respondents indicated that printed volumes are loaned and 18 percent of respondents loaned "other formats."[14] With the breadth of formats contained in special collections—from microfilm reels to original letters, and from medieval manuscript leaves to modern artists' books—the size, shape, weight, material components, and fragility of special collections holdings are critical factors in the decision-making process of physical and digital resource sharing. Furthermore, when considering loaning of original archival collections, there are multiple risks including theft, physical vulnerability, and loss of control over materials that could contain restricted content. The theft question is exacerbated due to lack of item counts in many archival collections (there are container counts, but that is in contrast to bound volumes, which as single items are easily countable). To reprocess collections to obtain folder-level item counts or to create item-level lists would be to return to the pre-MPLP *(More Product, Less Process)* era.[15]

Often the physical contents of an archival collection contain various formats and are housed in a variety of boxes, oversize folders, and tubes. Some collections contain oversize materials, like artworks, which are stored in oversize folders within flat file drawers or are individually wrapped in acid-free paper and tied with string. Whole archival collections can be physically awkward, even necessitating various trucking methods for transporting them to in-house patrons. Moreover, the financial investment in archival supplies by institutions is significant, and the integrity of the archival housing may be compromised during shipment. Finally, the packing and shipping costs of a near-infinite variety of housings becomes burdensome when considering a wholesale interlibrary loan of an entire collection. Selection criteria by material type or size may help to alleviate this problem; however, a short list of suitable materials may diminish the research value to the off-site patron who might otherwise benefit from an archival collection in its totality.

Content is another question, as many minimally processed collections, university archives as an example, may not have been systematically reviewed for Social Security numbers, student information protected under the Family Educational Rights and Privacy Act (FERPA), medical information protected under the Health Insurance Portability and Accountability Act (HIPAA) or privileged information. Many university archives, due to the volume of materials transferred to special collections, are reviewed for restrictions by a curator on site just before serving the materials to patrons. The high level of contact between researchers and special collections staff in the reading room allows for the chance that patrons might bring an item containing restricted content to the staff's attention. Reticence in moving forward to serve off-site patrons can also be based on potential legal and other ramifications. This may be overcautious, and perhaps interlibrary loan materials could be accompanied by an accompanying sensitive-materials statement; but the December 2014 incident at the University of Oregon, in which confidential electronic files were released and two staff members are no longer working in special collections, does cause one pause.[16] Additionally, reviewing the contents of each container is a bigger time investment than reviewing a single item for suitability. With the complex issues of archival collections, it simply becomes more difficult to make a blanket statement: "Yes, we loan original archival materials."

The realm of institutions to whom original materials will be lent is another question. The potential damage and theft risks in loaning original materials is, for some institutions, mitigated by the mandate, desire, or comfort level with sharing among consortial partners. The University of California System, as an example, lends original special collections materials within their consortia.[17]

INCREASING ACCESS TO UWG'S SPECIAL COLLECTIONS

The mission of the Annie Belle Weaver Special Collections at the University of West Georgia (hereafter, "UWG") is like those of many other academic special collections: to collect, preserve, and make publicly accessible print and archival materials for the purposes of teaching, learning, and research. In 2013, Special Collections began a program to broaden public discovery of, and access to, the primary sources in its holdings. This program included implementation of Encoded Archival Description (EAD) finding aids online, accelerated digitization of high-research-value items (largely grant-funded work in which digitization took place off-site and content is hosted off-site at the Digital Library of Georgia), and an investigation into other resource-sharing methods, including interlibrary loan.

There were specific aspects of our library's situation that made loaning original special collections materials a potential choice: 1) our resource-sharing capacity, which at UWG was minimized by a lack of onsite robust digitization infrastructure; 2) patron demand; and 3) the nature of our print collections. Another key factor is that there was an existing culture of cooperation in Ingram Library. Special Collections and Interlibrary Loan departments worked together to develop a pilot project, make changes, and implement the program based largely on the foundation of the *ACRL/RBMS Guidelines for Interlibrary and Exhibit Loan of Special Collections Material*.[18]

In terms of resource sharing, there was a disparity in access to bound print materials between onsite patrons and off-site patrons. Onsite researchers in Special Collections could freely use books and take images of them for research purposes (the use of digital cameras is welcomed after patrons are trained in proper handling and use of book supports). In contrast, off-site patron requests for interlibrary loan, reproductions, and scans for bound materials were flatly refused: first, because of a lack of policies and procedures; and, second, because the library lacked the equipment (an overhead cradle scanner) to provide reproductions or scans of bound materials. For our institution, outright loan of bound items was easier to accomplish. There was also a disparity in access to archival materials between onsite and off-site patrons; however, we could fulfill requests for photocopies and scans for most of the materials in archival collections (with the exception of oversized, bound, or otherwise problematic materials) because the library had a flatbed copier and a flatbed scanner to do so. A portion of audio and video holdings, particularly oral history interviews, had been digitized and were available online through the Digital Library of Georgia, so access to audio and motion picture materials contained in archival collections has been more readily available.

Since 2004, the number of requests for items in Special Collections has generally risen. Requests reported in ILLiad, our request management system, were nearly exclusively for printed materials. There were only two archival lending requests recorded in ILLiad. However, the primary method of contact from borrowing institutions pertaining to archival collections' lending was by telephone call. These phone calls were not tracked, although interlibrary loan staff remember inquiries anecdotally as common, around 1–2 calls per month. All archival collection lending requests were directed to the Special Collections department, which then communicated that none of Special Collections' holdings were available for loan.

The years 2008 through 2010 saw a decrease in requests of Special Collections holdings, primarily due to the fact that Interlibrary Loan was short-staffed and went to nonlender status on occasion. A secondary factor may be that Ingram Library underwent renovation in 2010, which impacted the ability to access the physical collections; interlibrary loan requests were depressed for the library's holdings overall during this period. In the midst of the library's renovation, a major parapsychology library, the David Wayne Hooks collection (a 1,600-volume library of books published during the nineteenth and twentieth centuries, covering subjects such as life after death, extrasensory perception, out-of-body experiences, apparitions, and altered states of consciousness) was moved from circulating stacks to Special Collections. Previously, these books had been lent without restrictions, but the decision was made to move them due to the rarity of some of the titles and the significant loss rate due to theft.

The sudden increase in special collections lending requests in 2011 is directly attributable to the move of the Hooks collection to Special Collections. Lending requests remained relatively stable from 2012 to 2014, but they are increasing due to the acquisition and subsequent cataloging of the Ingo Swann library (another major parapsychology collection on paranormal and psychic phenomenon). Projections for 2015, based on data from January to June of that year, indicate that we will exceed 120 lending requests for Special Collections materials.

Our Interlibrary Loan department has been the beneficiary of generous interlibrary loan practices from other institutions, including items that are often difficult to obtain, generally due to age and rarity. Interlibrary Loan has received reproductions, including complete copies of pamphlets and out-of-print items, from other special collections, archives, and special libraries. Interlibrary Loan, however, had never received the loan of an original bound volume. While Interlibrary Loan attempted to facilitate as many requests as possible and absorb the cost, in the past, requesting patrons from UWG were referred to the other library when an item was unavailable for loan. If travel was not feasible, and copies were unavailable, the patron was unable to use the item. The Special Collections and Interlibrary Loan departments at UWG began to address this access barrier to facilitate and encourage research by loaning original special collections print materials.

The specific circumstances of Special Collections' print holdings, which date from the late sixteenth century to present, also drove the decision to implement loaning of original items. The loan of original archival materials was not deemed feasible or sustainable due to potential theft, concerns relating to the count and extent of collections, concerns about the array of container types and expense to replace, and issues of content. In the fall of 2014, a preservation assessment survey of printed materials in UWG's Special Collections, funded by a National Endowment for the Humanities grant, was completed by Etherington Conservation Services. The final preservation report noted that the majority of the printed materials were in stable condition, with approximately 16 percent of the holdings categorized as vulnerable.[19] While stable, most of the bound printed holdings were a far cry from what the industry would call "very fine." In truth, many of the books would fall into the poor to good condition category in that they have been well worn and some have been rebound in library buckram, a situation that made Special Collections even more inclined to loan because, why not let the item live out its useful life in the hands of many? Furthermore, a large swath of books in Special Collections could be categorized as "medium rare" but exist on the other side of main-stacks eligibility due to their subject matter, or most importantly in the case of Special Collections, provenance. Special Collections was willing to tolerate lending to other special collections but not willing to risk potential theft from our own library main stacks.

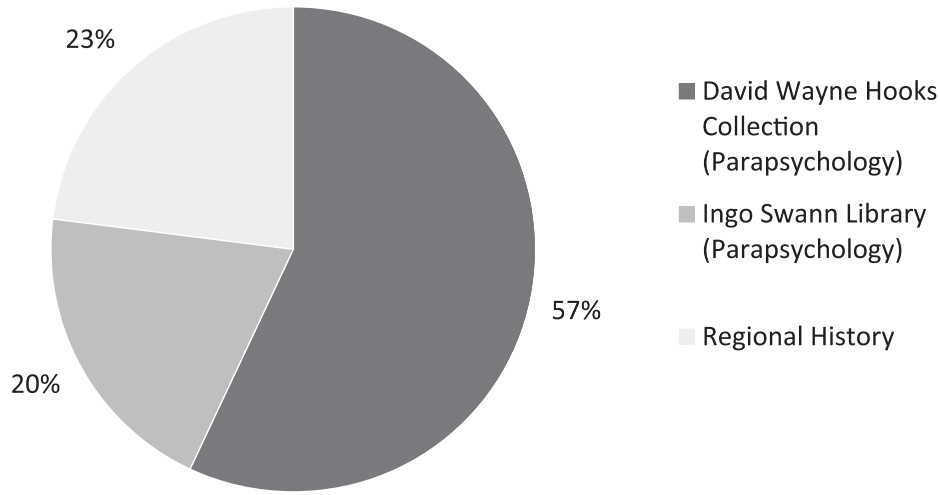

FIGURE 2. Distribution of requests by collection, July 2014–June 2015

It was also the subject strengths of the print collections, particularly in parapsychology, that made interlibrary loan a high reward situation. Many of the titles in this subject area are scarce and there has been increasing demand by onsite patrons for these titles, as well as from off-site patrons. One of the most requested areas of interlibrary loan for all of our library's holdings is in the field of psychology. Essentially, many of the books were in decent enough condition to travel, and these unique titles could potentially be very useful to scholars.

One other influential factor in being willing to consider loaning of special collections materials was that the principal investigator observed resource-sharing activities while at the University of Washington Libraries' Special Collections from 2009 to 2012, which included interlibrary loan of microfilm, scan and deliver, and Special Collections serving as a reading room for borrowed rare materials from other institutions. The process at the University of Washington Libraries was efficient and had evident benefits for users of the materials.[20]

In the course of considering the lending of original materials, UWG investigated the potential of a consortial partnership within the University System of Georgia, of which it is a part. The Manager of UWG's Interlibrary Loan department queried, via e-mail, nine universities in Georgia about their special collections lending policies and procedures to probe the possibilities for consortial lending. The universities included the seven institutions in the "research and comprehensive" tiers (one of which had two separate libraries, each with respective special collections units) and one state university that offers a graduate program in archival studies, all of which are part of the University System of Georgia. A large private university in Atlanta was also queried. Seven libraries, representing six institutions, responded to the query. Five respondents reported that their special collections departments do not lend items through interlibrary loan; instead, patrons are directed to contact special collections to arrange for an in-house use appointment or to obtain reproductions. Two respondents stated that, while they do not have written policies and procedures, they do informally lend special collections holdings on a case-by-case basis and use their ILL department to facilitate shipping. The results of this informal survey indicated that a consortial interlibrary loan arrangement for special collections materials was not yet feasible in the University System of Georgia.

UWG'S PILOT PROJECT AND IMPLEMENTATION

In July 2014, a member of UWG's art department asked to borrow a limited-edition book, held by another institution's special collections, for her research. In this instance, Special Collections served as a reading room for an item that required supervised in-library use only. This request, and subsequent successful fulfillment, coincided with the investigation of loaning of special collections materials. At that point, the Special Collections and Interlibrary Loan departments sought administrative approval from both the Library Dean and from the Head of Access Services, both of whom responded enthusiastically to the idea, and the pilot project began.

From July through October 2014, the pilot project for interlibrary loan, limited to select printed materials, was initiated with the purpose of enhancing access, supporting research, and promoting awareness of materials in the Annie Belle Special Collections. It was decided at the beginning that it was unsustainable for Special Collections to be the sole mediator for all resource sharing. Thus, this was an entirely cooperative venture between the two departments: Interlibrary Loan would handle the business end of the transactions, and Special Collections would conduct reference interviews for requesting patrons as needed, evaluate requested items for suitability, and serve patrons borrowed materials.

While the pilot was underway, the Head of Special Collections began finalizing policies and procedures in close communication with the Interlibrary Loan department. The policies and procedures were largely adapted from the *ACRL/RBMS Guidelines for Interlibrary and Exhibition Loan of Special Collections Materials,* as the document describes very specific aspects to consider including handling, loan periods, and requirements of borrowing institutions, and more.[21] Additionally, documentation from the University of California Libraries Resource Sharing Committee, dating from 2003 to a recent April 2013 procedures list, were also very helpful.[22] The resulting guidelines were an eight-page document with two separate pages detailing the workflows for lending and for borrowing.[23]

After the final draft of the "Interlibrary Loan Policies and Procedures for Special Collections Materials" was completed in November 2014, an Interlibrary Loan staff member devised a workflow for such requests. This involved creating a custom conditional message in ILLiad, an e-mail template detailing the terms and conditions for a loan, and an e-mail template to be sent to Special Collections, all of which would be sent through ILLiad's e-mail interface (this attaches copies of all e-mails to a specific request in the database). When a borrowing request is received for an item in Special Collections, the Interlibrary Loan lending assistant responds with a conditional message on OCLC, indicating that the item is located in Special Collections. A detailed e-mail is sent to the borrowing institution's interlibrary loan contact with the details of the lending terms: the item is for special collections reading room use only, no renewals, no reproductions on a flatbed scanner or copier, and no labels. The item is to be insured for $500 on return. If the borrowing library can meet those terms and responds "yes" through OCLC and a return e-mail, the request is forwarded via e-mail to the Head of Special Collections, who makes a determination about the item's suitability for copying or lending and details any additional lending requirements or restrictions. Suitability criteria are based on an item's condition, rarity, and value, as well as other potential factors. Special Collections completes a brief suitability form, and images are taken of the item.

If Special Collections agrees to a loan, the item is brought to the Interlibrary Loan office (materials are always passed hand-to-hand) and secured in a locked cabinet in the Interlibrary Loan office until it is sent out. Interlibrary Loan staff (not student assistants) package the item for shipment. A book band is attached that includes information on all lending conditions. When the item is returned, Interlibrary Loan keeps it in a locked cabinet until its return to, or retrieval by, Special Collections.

During the pilot project, 31 special-collections requests were received; and, after full implementation of the program, an additional 60 requests were received. The majority of the requests have been for items in the Hooks collection, the Ingo

Swann library, and the regional West Georgiana collection.

Many of the requests have been from public libraries for items that have additional lending libraries in the OCLC system. Since Ingram Library's Interlibrary Loan department is a free lender, our symbol is often chosen before others when a borrowing library creates a "string" of available lenders.

In the total requests from July 2014 to June 2015, all of which were for items that met Special Collections' suitability criteria, all but three libraries refused our loan offer. The libraries cited several reasons: an inability to provide a reading room setting, the patron's refusal to accept a loan of an item that cannot leave the library, or the availability of the item elsewhere. In March of 2015, the first printed item was loaned—a book from the Hooks collection—to an academic library. The process, from the receipt of the borrowing request to shipping to the lending library, took 2 days.

During the course of the pilot project, statistics and information about policies and procedures were shared informally with library staff and faculty. The keenest interest in the project's progress came from the Technical Services department, which is responsible for cataloging all Special Collections materials. In particular, it was satisfying to both the Head of Special Collections and the Senior Cataloger that five interlibrary loan requests for scarce parapsychology titles held in the Ingo Swann library came in nearly as soon as the titles were cataloged. When interlibrary loan of Special Collections materials was fully implemented, it was advertised through all-faculty, all-staff, and library staff e-mail announcements. The Manager of Interlibrary Loan shared the announcement in the *Georgia Library Quarterly,* and the Head of Special Collections shared the news in academic faculty meetings. Our policies were also added to the OCLC Policies Directory, which facilitates information sharing regarding lending and borrowing, and provided information for the "non-circulating items/collections" section. A statement in the *Special Collections/Interlibrary Loan Pilot Project Final Report and Recommendations* (University of California, 2003) on patron impact particularly resonated with our experience: "The growing numbers of requests placed by users, despite little or no publicity, makes it clear that users want access to the material."[24] Further publicity is planned for the annual new faculty orientation, on the library website, and in promotional literature about Interlibrary Loan and Special Collections with the hope of increasing onsite faculty and student requests for special collections materials held elsewhere.

CONSIDERATIONS

With the success of interlibrary loan of special collections materials in the first year, UWG remains committed to lowering boundaries around special collections and to continue enhancing patron access to the unique materials in Special Collections. The culture of Ingram Library, the collegiality and collaboration across departments, was already in place. Furthermore, our collaborative work has been nurtured by the Dean of Libraries through positive accolades, promotion of the program to deans across campus, and financial support to cover packing supplies, shipping costs, and fees associated with both lending and borrowing.

The number of fulfilled requests for both borrowing and lending is a critical set of data in assessing the program, along with the associated costs, so that the cost-benefit ratio for interlibrary loaning of special collections materials can be analyzed on an annual basis. At this point, the UWG Library has financial tolerance for the associated costs of interlibrary loaning materials and a commitment to engage in this activity.

This initiative has had many positive results for the Interlibrary Loan department as an increase in lending allows us to maintain net lender status, contributes to OCLC lending credits, and facilitates the growth of resource sharing. In fact, work on this initiative led the department to reconsider use of the microform collection, and some of those items are now available for loan.

There are two factors that were found to be outside the control of UWG: the number of incoming requests and the number of requests that are ultimately cancelled by the borrowing institution. As the number of interlibrary loan requests is far larger than the number fulfilled, UWG will be looking at the request data in terms of institutional type, reasons for cancellations by the borrowing institution, the types of materials requested (printed materials versus archival materials), and the number of denials based upon the suitability criteria. Data generated by UWG as a borrowing institution will also be examined, including: annual numbers for requests and fulfillment, institutional types of lenders, types of materials lent, and patron profile (faculty/staff or student). Lending measures are also assessed upon the return of an item including: insurance, packing, and condition of materials upon their return as compared to the condition when sent.

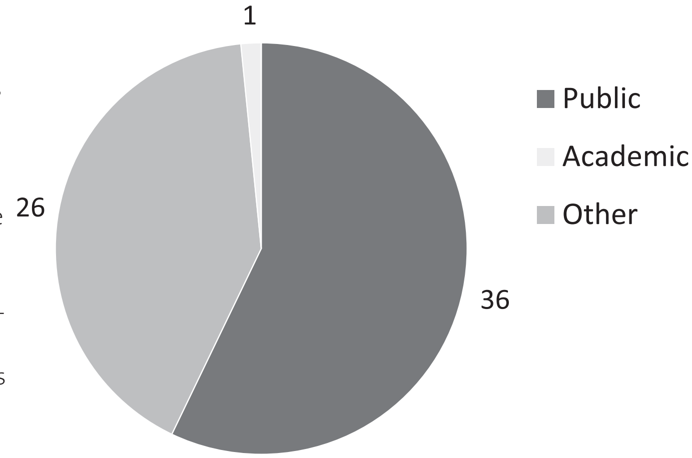

FIGURE 3. Distribution of requests by type of institution, July 2014–June 2015

With 62 cancellations of requests by borrowing institutions, UWG's Interlibrary Loan observed that OCLC WorldCat and OCLC WorldShare do not provide item-level information that would indicate that holdings might be in special collections. The process of requesting items, particularly books, is a shot in the dark, and interlibrary loan staff do not have the time to navigate to the catalog of the holding library to look at more specific location information. Only the date or a title of a work may indicate rarity to a borrowing institution. Thus, the tide of requests from borrowing institutions is likely to continue unabated, as they are unaware at the point of the initial request that the item may have lending terms and conditions.

One procedural aspect that was corrected after the pilot project, to mitigate the above-identified problem, was the workflow timing pertaining to borrowing institutions' agreement to conditions. Special Collections had been pulling materials, reviewing them for suitability, and then—once the answer was "yes"—only then learning that the borrowing institution cancelled their request due to not having a special collections reading room. To correct this, a default e-mail is sent out to borrowing institutions just after the request is placed. The e-mail states that the borrowing library must meet certain conditions if UWG decides to lend. When the borrowing library affirms that they will meet the conditions, then the request is forwarded to Special Collections.

An additional note is that reviewing items for suitability for loan and completing the documentation is time consuming. Staffing to pull the items for review is critical. If requests increase over the years, it would be helpful to designate responsibility to one librarian in Special Collections to review items for lending suitability and transport them between the Interlibrary Loan and Special Collections departments.

Special collections repositories around the world are different from each other in terms of mission, audience, capacity, and the nature of their collections. Not all would have the interest, the ability, or the suitability of materials to engage in interlibrary loan of original materials. The particular circumstances at UWG—lack of digitization capacity for bound materials, patron demand for our distinctive print collections, resources to engage in interlibrary loan, and the physical stability of the majority of our printed holdings—set the stage for our interlibrary loan of original special collections materials program.

In conclusion, the implementation of interlibrary loan of printed materials has been a success in that the UWG Library has taken a major step for the benefit of off-site

researchers by enhancing access to unique holdings. What roles will interlibrary loan and special collections play in the future? With the coming (not anytime soon, but still coming) ubiquity of digital access to books and other information sources, it is perhaps interlibrary loan's role to focus more on delivery of unique resources. Similarly, special collections will likely continue the trajectory of broadening public access to scarce materials. In this process we are likely to see more fluid boundaries in the work that special collections do in relation to the people we serve. ■

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FOOTNOTES

1. Dennis Massie, *Tiers for Fears: Sensible, Streamlined Sharing of Special Collections* (Dublin, Ohio: OCLC Research, 2013), 18, available online at **www.oclc.org/content/dam/research/publications/library/2013/2013-03.pdf** [accessed 27 March 2015]. The exact statement read: "In other words, the survey showed us what we suspected already: that there is currently no consensus on any aspect of sharing special collections."
2. Jackie M. Dooley and Katherine Luce, *Taking Our Pulse: The OCLC Research Survey of Special Collections and Archives* (Dublin, Ohio: OCLC Research, 2010), 11, available online at **www.oclc.org/research/publications/library/2010/2010-11.pdf** [accessed 27 March 2015].
3. Inclusion of the possible response, "Yes, but only reproductions/copies," to which 44 percent of respondents answered affirmatively in the *Taking Our Pulse* survey may have diluted the accuracy of the results around the loaning of original materials. See the *Taking Our Pulse* survey question number 30 on page 123 and figure 1.11 for responses on page 40.
4. Most recently, see Christian Dupont, "The Future Meets the Past: Collaborative Resource Sharing Workflows for Special Collections Materials" presentation, "The Future of Resource Sharing" conference organized by OCLC and LYRASIS, Macon, Georgia, May 17, 2013, available online at **www.academia.edu/3538149/The_Future_Meets_the_Past_Collaborative_Resource_Sharing_Workflows_for_Special_Collections_Materials** [accessed 31 March 2015].
5. Lisa Carter, "Special at the Core: Aligning, Integrating, and Mainstreaming Special Collections in the Research Library," *Research Library Issues* 283 (2013): 3, available online at **http://publications.arl.org/rli283** [accessed 31 March 2015].
6. Massie, *Tiers for Fears,* 11.
7. Mary Jo Pugh, *Providing Reference Services for Archives & Manuscripts* (Chicago: Society of American Archivists, 2005), 242.
8. See Sidney E. Berger, *Rare Books and Special Collections* (Chicago: Neal-Schuman, An imprint of the American Library Association, 2014), 40–42. See also the Association of College and Research Libraries, ACRL/RBMS Guidelines Regarding Security and Theft in Special Collections available online at **www.ala.org/acrl/standards/security_theft**, section 6 "The Researcher" [accessed 27 March 2015].
9. See 2011 Rare Books and Manuscripts (RBMS) Preconference seminar artifacts, "Yes, We Scan! Innovative Approaches to User-initiated Digitization," available online at **http://rbms.info/conferences/2011docs/** [accessed 18 May 2015].
10. Anna Dulin and Ellen Makaravage, "Preserving and Sharing: Bridging the Gap Between ILL and Special Collections," presentation at the ILLiad International Conference, March 2012 [accessed 18 May 2015]. Another example is at the University of Chicago. See Julia Gardner, "License to ILL: Partnering with InterLibrary Loan to Fulfill Special Collections Requests," seminar presentation at the RBMS Conference, June 22, 2011, available online at **http://rbms.info/conferences2/preconfdocs/2011/SeminarBGardner.pdf** [accessed 18 May 2015].
11. See Anne Bahde, "You're Putting What in My Reading Room?!!?" seminar presentation at the RBMS Conference, June 22, 2011, available online at **http://rbms.info/conferences2/preconfdocs/2011/SeminarBBahde.pdf** [accessed 19 May 2015].
12. See Jennifer Schaffner, Francine Snyder, and Shannon Supple, *Scan and Deliver: Managing User-initiated Digitization in Special Collections and Archives* (Dublin, Ohio: OCLC Research, 2011), available online at **www.oclc.org/research/publications/library/2011/2011-05.pdf** [accessed 20 May 2015]. For another example, see Kristine J. Shrauger and Lee Dotson, "Scan by Numbers: Interlibrary Loan Lending Statistics Shape Digital Initiative," *Journal of Interlibrary Loan, Document Delivery & Electronic Reserves* 20, no. 3 (2010): 135–48.
13. For discussion on this topic, see Shrauger and Dotson, "Scan by Numbers."
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The Child-Free Factor and Other Fringe Benefits » Moving Beyond Natural Targets

BY TATIANA WEINSTEIN

It would be shocking to propose removing a significant percentage of the expected entries from the library newsletter and decisively replacing that content with news and resources targeted at single adults. When is the last time you visited a public library's website or social media page where most of the photo stream simply featured thirty-somethings? Fifty-somethings?

The public library should be a place of learning, exploration, and enjoyment for children. The library should also offer parents essential resources and tools to successfully raise children. We do provide these services, and we do it very well—and absolutely should continue to do so. But we too often exclusively brand ourselves as a resource for families. In addition to visual promotions, much of our narrative is focused on families with children, from newsletter articles to local paper write-ups to board meeting talking points. Who could blame us? Those images tug at the heartstrings, and stories of kids creating a craft at a program will appeal to any mom or dad. But, in promoting this impression more than others, public libraries are, to our detriment, alienating a rising population of potential users. It's time to modify our marketing perspectives.

When we advertise ourselves chiefly as a place for families with children, we inadvertently set up a model where the library not only is less appealing to child-free people, but doesn't even register as a destination space for them. Why would one decide to venture to a place where they haven't been invited?

In other words, we are routinely preaching to the choir and we need to do a little more marketing outside the orthodox box. The American Library Association states in one of its "Core Values of Librarianship" that "[t]he publicly supported library provides free and equal access to information for all people of the community the library serves."[1] This basic principle of providing for *all* inherently includes advocacy of library services to the public. We have the democratic responsibility to spread our message to all. This includes nontraditional users.

But the nontraditional is becoming more and more common in our society as a whole. In her 2013 *Time* cover article "The Childfree Life," Lauren Sandler cites a 2010 Pew Research report showing that being child-free has risen across all racial and ethnic groups, adding up to about one in five American women who are child-free today compared to one in ten in the 1970s. Before the recession hit in 2008, the proportion of women ages forty to forty-four who had never given birth grew by 80 percent since 1976, from 10 to 18 percent.[2]

Sandler further discusses the reasons couples have for not becoming parents, the increasing impetus to not reproduce, and the stigma attached to those who choose not to have children. Laura Carroll, author of *The Baby Matrix* (2012) and *Families of Two* (2000), is another writer who has devoted her career to exploring, documenting, and supporting the child-free life and revealing the political and economic impact of "pro-natalist" leanings. **Her website** is one example of hundreds of blogs and websites dedicated to child-free living. Karen Malone Wright, founder and executive editor of ***The NotMom***, coordinated the first NotMom Summit in 2015 in Ohio.

Adults without children are a growing demographic, and we have a duty to advocate for and unabashedly serve this population. We belong to a largely kid-centric society, where suggesting that children should not have the entire focus is, to many, fundamentally distasteful. It's a touchy subject for any conversation, let alone one about the public library. But we need to have this dialogue in regard to expanding the way we publicize ourselves. It's about *reach*. It suggests a promotional paradigm shift. And again, this proposed shift neither discounts nor disparages how we currently serve youth, nor is it about subtracting youth services from our current programming. It's about looking at and branding ourselves a little differently, with a more balanced eye towards nuanced societal changes.

The public library user experience is changing along with society. More patrons are using the library as a space for collaboration, higher education, artistic creation, and technological exploration. This new library model makes child-free people prime candidates for library cards. Inviting this population across our thresholds is not only smart, it is also our duty.

Underutilized resources and services are common challenges for many public libraries. We've all experienced the "Oh my goodness, I never knew you guys had this, you've just saved my life!" reaction from a patron. But is that because we've been systematically marketing to a specific demographic? I believe if we switch up our scheme just a bit, we'll see a larger return in terms of awareness and new users. The increasing awareness of child-free living, as shown in part by its appearance on the cover of *Time,* should at least open our eyes to this growing populace and encourage us to explore going beyond our natural marketing tendencies. It's about moving beyond our promotional norms, not our operational norms.

Some libraries are supplementing the natural targets of families with children by programming for singles in their community. Oak Park (IL) Public Library has had successful speed dating programs at their facility. Assistant Manager of Adult/Teen Services Alex Skinner has hosted two speed-dating events in the past year: one program targeting twenty- to thirty-somethings and the other targeting the forty-plus crowd. When asked why it's important for libraries to appeal to single people, Skinner said, "We want them to know that public libraries are for them too. Yes, we are for families and for academic interests, but we are also a place to socialize, meet people and have fun." Skinner also mentioned wanting to implement a "*Newlywed [Game]*–type game . . . trying to reach the same goal; targeting adults without kids."[3] A participating single person or newlywed couple may already have children, of course, but the *intention* of these types of programs is to attract the child-free to walk through the door, learn about the library, and see that it's a welcoming place for them, too.

If speed-dating sounds a little too out-of-the-box for your library, you might try initiating a series of craft or DIY programs targeted specifically at adults. When most people hear or read the word *craft* in relation to a public library, they typically think glue sticks, glitter, and (yes) children.

"Crafting is both the predecessor, the companion, and the successor to makerspaces," said Xavier Duran, the Lisle (IL) Library District's (LLD) adult programming coordinator. "When one thinks of makerspaces, often times [one pictures] an image of a space dominated by 3D printers, rows of high performing, Adobe Creative Suite computers, and other machinery that inspire both awe and a bit of fear. However, at root, a makerspace is any inviting space for DIY that inspires collaboration among peers of *any* social status. What's more . . . adult craft/DIY programs allow adults to *rediscover* the library, a place they have commonly associated with families with children and rarely with single adults. It goes without saying that these DIY spaces and libraries make a lovely partnership, libraries being the democratic modus operandi for individuals to curate their curiosities, and then immediately apply their findings by themselves or, best, in a group that shares that same curiosity."[4]

LLD seeks to expand what patrons think of when they see a craft program on the event calendar. The library has introduced programs directed at adult crafters and for those adults who would like to explore DIY for the first time, from creating terrariums to artful journal making. This library also hosts six (yes, six!) monthly adult discussion groups—five book groups and one film club. These groups are all staff-driven and allow adults an opportunity to meet and engage with other film and book lovers. A healthy and steady adult programming lineup is key in providing an attractive place for adults in the community. Of course, trying to expand reach is not just about programming. The library also must commit to branding itself as a welcoming place for all audiences. Exploring what your library already does and says and then digging a bit deeper and seeing the deficits is, indeed, a thoughtful task. Are all of your Facebook posts (or newsletters, brochures, webpage features, etc.) geared towards a specific familial demographic? When your library has the opportunity to be featured in your local newspaper, does the library target nontraditional audiences? Bringing in new users requires a revamp of the library's "invitation," including verbal, physical, and digital or electronic solicitations. Remember, child-free numbers have risen. These people are out there—is your library providing an invite?

We cannot forget just how important words are, especially when we speak as field professionals. At a recent library conference, I looked for presentations that might address child-free users. I came up empty. Of course I could not attend all the programs, but even in the "Elusive Non- User" presentation I hoped to hear something about targeting users who are not parents. Alas, what I *did* hear was, "Parents are the important target." It was said as if there was no other target worth mentioning. Now, it's agreed that parents are an important demographic, but they are not the only significant target,

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especially when discussing "elusive non-users." I think it's something we forget because many of us have families with children and it has been our tradition to market to the familiar. In another presentation regarding space in libraries, I heard the routine phrase, "Parents and kids are our bread and butter." Now, there is more than one variety of bread out there. We shouldn't bank on one demographic to nourish. Public libraries have religiously relied on the bread-and-butter model, but with changing domestic standards, such as increasing child-free family numbers, we should consider devoting ourselves to other belief systems. It's the only way we can compete in a world where the unacquainted question the validity of a public library in a tech-rich and precarious economy.

We must remember to speak beyond the conventional when we talk with our public, at conferences, to our boards, and among ourselves. Narratives matter when you are trying to go beyond the conventional. Looking beyond mainstream domestic standards is a smart way to remain relevant among those who may view public libraries as irrelevant in this day and age. We know we aren't irrelevant. We have something for everyone, but how will the general public learn this if we cannot step outside of a predictable promotional paradigm? This moving–beyond–convention scheme applies when libraries want to appeal to any new or growing community group, be they seniors, an ethnic group, the LGBTQ community, or ESL/English Language Development individuals.

The child-free among us are a growing group that should not be overlooked when we write about, program, or speak about public library services. One in five of us does not have children—that's 20 percent of the population. What does 20 percent look like and mean?

- 5 percent: African-American population in Springfield, IL (2010 US Census)[5]
- 19 percent: American households that owe student debt (2010 Pew Research Center)[6]
- 20 percent: Americans who do not identify with any religion (2012 Pew Research Center)[7]
- 20 percent: Americans who lack access to a smartphone or a broadband Internet connection (2015 Pew Research Center)[8]

From a public library perspective, ignoring one-fifth of your population is just plain illogical. Twenty percent is a significant piece of that potential-patron pie. Continually branding ourselves to one familial demographic limits our reach and segregates our diverse and numerous offerings. As an institution, the public library is ever-evolving with technology and innovation. It's about time that our dated marketing efforts catch up with our high-tech endeavors.

I have focused on child-free individuals for this specific piece, but all that I have suggested is relevant for any peripheral population within your particular locality. We must advertise differently. This isn't just about outreach it's about overall reach, invitation, and inclusion. Research your unique community and discover another slice of that pie. Actively invite the "unconventional" to your library using innovative marketing and programming, and you might just open some new eyes to a valuable library resource, service or destination place—in addition to increasing your patronage. This is our democratic obligation. Let's extend our reach. We have more potential.

NOTABLE NON-PARENTS

- Margaret Wise Brown, author (*The Runaway Bunny, Goodnight Moon,* and more)
- Julia Child, chef
- Theodor Seuss Geisel, aka Dr. Seuss, author
- Terry Gross, National Public Radio host
- Lorraine Hansberry, author (*Raisin in the Sun* and more)
- Katharine Hepburn, actress
- Zora Neale Hurston, author (*Their Eyes Were Watching God* and more)
- Harper Lee, author (*To Kill a Mockingbird*)
- Georgia O'Keefe, artist
- Rosa Parks, civil rights icon
- Beatrix Potter, author (*The Tale of Peter Rabbit, The Tale of Jemima Puddle-Duck,* and more)
- Condoleezza Rice, former U.S. Secretary of State and educator
- Diane Sawyer, journalist
- Maurice Sendak, author (*Where the Wild Things Are* and more)
- Gloria Steinem, activist and author
- Betty White, actress
- Oprah Winfrey, media phenomenon

This article was first published in Public Libraries Online, Volume 55, No. 4. July/August 2016. Public Library Association. ■

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FOOTNOTES:

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3 Alex Skinner, telephone interview with author, March 2016.
4 Xavier Duran, in-person interview with author, December 2015.
5 United States Census Bureau, "Quick Facts: Springfield City, Illinois," accessed July 6, 2016.
6 Richard Fry, "A Record One-in-Five Households Now Owe Student Loan Debt," Pew Research Center: Social and Demographic Trends, September 26, 2012.
7 Cary Funk and Greg Smith, "'Nones' on the Rise: One-in-Five Adults Have No Religious Affiliation," Pew Research Center: The Pew Forum on Religion & Public Life, October 9, 2012.
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Don't Use a Hammer When You Need a Screwdriver

» How to use the right tools to create assessment that matters

BY DOMINIQUE TURNBOW AND ANNIE ZEIDMAN-KARPINSKI

Imagine: you have been asked to teach a one-shot library workshop in a credit course. (N.B.: For the purposes of this article, we will refer to time spent with learners as "workshops." They could be a stand-alone session, multi-part sessions or one part of an ongoing credit class.) You are unlikely to have access to the student work after the workshop is over, but you would like to know how well the workshop went and what students learned. What would you do? Many of us will use some kind of assessment tool and will compare the answers against our stated learning outcomes for the workshop.

The tools we use to determine if we've been successful, done a "good job," and if the students have learned something useful are numerous. The list includes surveys; pre- and post-tests; the "one-minute paper" (Cross, 1998; Grassian, 2001); student reflections; worksheets; "fist-to-five" or "give me five" (Fisher, 2007); short questions and answers; analysis of student bibliographies; and more. These forms of assessment are popular, they are quick, and we use them because we hope they prove that we did a good job and that the students are better prepared to complete their assignment after seeing us than they were before our session. While all of these tools are used with the purest of hearts and the noblest of intentions, we want to be clear about what they can realistically tell us regarding what actually happened during our instruction session. We believe that meaningful assessment of student learning, the kind that shows changes in information-seeking behavior, is nearly impossible to do in a one-shot workshop. We cannot teach every skill a student needs in one session, or to expect to quantify that the session changed how students do their research. Instead, we believe we should focus our efforts on evaluating what is possible in a single workshop.

This article provides a framework to help you assess your one-shot instruction sessions. First, we will explain the ABCD model for writing learning outcomes (LOs). If each of your LOs incorporates most of the ABCD elements, you will find that the model will not only guide what you teach in your instruction sessions, but that you will have a clear roadmap for the questions that you will want to ask your students at the end of your session.

Once you have developed clear outcomes that incorporate the elements described in the ABCD Model, then you must consider how best to determine that you and your students have met those outcomes. We suggest employing the four-part Kirkpatrick Model to guide these assessment decisions. Although the Kirkpatrick model was developed and widely used in private industry for decades, it is applicable to library instruction because it helps clarify what can be evaluated and assessed given the time and resources at your disposal.

We argue that it is impossible for instructors to change students' research behavior after one interaction with them. You will learn more about what your students learned, and what they thought about the class, if you use the instructional design models presented here. It is important to have reasonable expectations of what you can evaluate or assess, and then to focus on developing methods that provide that data. Ultimately, we hope this article will help you create assessment that matters by helping you choose the right tools to provide specific feedback to help you improve your practice.

ABCD MODEL

As instruction librarians, we know that our instruction sessions should be guided by learning outcomes. Learning Outcomes (LOs) are statements written by the instructor that describe what learners should be able to do as a result of the instruction. LOs can guide your workshop design to help focus on specific behaviors and/or skills that you have determined are important for students to demonstrate as a result of the instruction. By taking time to consider the LOs for a workshop, you will reflect on the most important behaviors and/or skills necessary to fulfill the instructional goal and you will be less likely to try to overwhelm students with extraneous information for a single session. Many educators rely on Bloom's Taxonomy to create their LOs. Developed in 1956 (Bloom & Krathwohl, 1956) and revised in 2001 (Anderson, et al., 2001), Bloom's Taxonomy is used "to categorize intellectual skills and behavior important to learning" (Coffey, n.d.). The revised Bloom's Taxonomy provides six categories of outcomes: remember, understand, apply, analyze, collaborate and create. Each level has verbs associated with it that describe the cognitive process used by a learner. For example, the "remember" category might include verbs like *recall, define, list,* etc. while the "create" category includes verbs like *design, develop, investigate,* etc. The goal is to get learners to apply the cognitive processes in the highest category possible, i.e. analyze, collaborate or create. However, a learner will likely need to "remember" facts and "understand concepts" before they can achieve the higher order learning. Many educators use the verbs suggested in Bloom's taxonomy when writing their outcomes.

» **Next, we need to address the question, "What do learners need to demonstrate to show they've achieved the outcome?" In other words, what do you want your learners to be able to do when they leave your workshop? As mentioned previously, Bloom's Taxonomy offers vocabulary that can be used to describe optimal student behavior as a result of achieving the LO and begin to assess student learning.**

The Anderson and Krathwohl (2001) update is widely used and is an excellent resource for the appropriate verbs to use in writing your own learning outcomes, depending on the cognitive process you hope to have the learners attain. There are also concise expansions to the updated taxonomy widely available online.

While including the observable behavior and associated verbs and the cognitive scaffolding that is suggested by using Bloom's Taxonomy are all important aspects of writing a complete outcome, there is still more that LOs can do. They can also be written to guide evaluation or assessment decisions. Many instructional designers and educators have adopted the ABCD Model to make them measurable as well. In this model, each outcome is "naming the Audience of learners . . . specifies the Behavior or capability to be demonstrated and the Conditions under which the behavior or capability will be observed . . . [and] the Degree to which the new skill must be mastered" (Heinich, Molenda, & Russell, 1989, p. 36). Addressing each element in this model provides a map of how you intend to teach and evaluate or assess each outcome. We describe each of ABCD Model elements in detail below.

AUDIENCE

This part of the model asks the question, "Who are the learners?" The answer can be as broad as "learners" or "students," or it may describe the audience more specifically, for example, "undergraduate students" or "microbiology graduate students." To make the outcome most useful, the audience description should accurately describe the majority of learners.

BEHAVIOR

Next, we need to address the question, "What do learners need to demonstrate to show they've achieved the outcome?" In other words, what do you want your learners to be able to do when they leave your workshop? As mentioned previously, Bloom's Taxonomy offers vocabulary that can be used to describe optimal student behavior as a result of achieving the LO and begin to assess student learning. The key here is that the behavior needs to be observable so that it can be measurable. You can't assess what you can't see. For example, instead of writing a LO that says students will "understand" a concept, ask yourself what understanding looks like, and use that word instead. It could be the ability to use a particular feature in a database or describe how truncation works. In this case, we would replace understand with "use" or "describe." If you'd like to measure this, consider collecting student work (or request to see a sample of the end product) so that you can see how well your students achieved the outcome.

CONDITION

The condition statement is likely the most unfamiliar part of the ABCD model for most librarians. The question to answer here is "Under what conditions do learners need to perform the behavior?" Another way to think about it is to consider it the control statement. An example of a condition statement could be: "…given a list of article databases with descriptions…" A key factor is that the condition specifies that the learners will have a list of article databases with descriptions. If the statement omitted "with descriptions," then the behavior to "identify relevant databases" would imply that learners would need to figure out a way to know how databases were relevant. The current wording specifies that you need to assess the behavior of students identifying a relevant database for his/her topic given a list of databases with descriptions. A thoughtful description of the condition will guide you in how to teach the behavior and assess it.

DEGREE

Finally, we should ask ourselves, "to what degree do learners need to perform the behavior." This part of the model is most applicable when you are assessing learners formally or if you have access to a work product. A degree statement specifies which percentage of the learners should achieve the outcome in order for you to know that the material has been learned by them. Because most librarians don't have access to student work or other formal assessments after a workshop, many LOs are likely to omit the degree statement. However, if you are teaching a term-long course or see the same students multiple times in a term, you should consider a degree statement since you will be able to follow up with the learners.

Here is an example of an ABCD outcome: "Given a research question and a Wikipedia article about the topic of the question, learners will be able to generate a list of at least three keywords or phrases for each concept represented in the question."

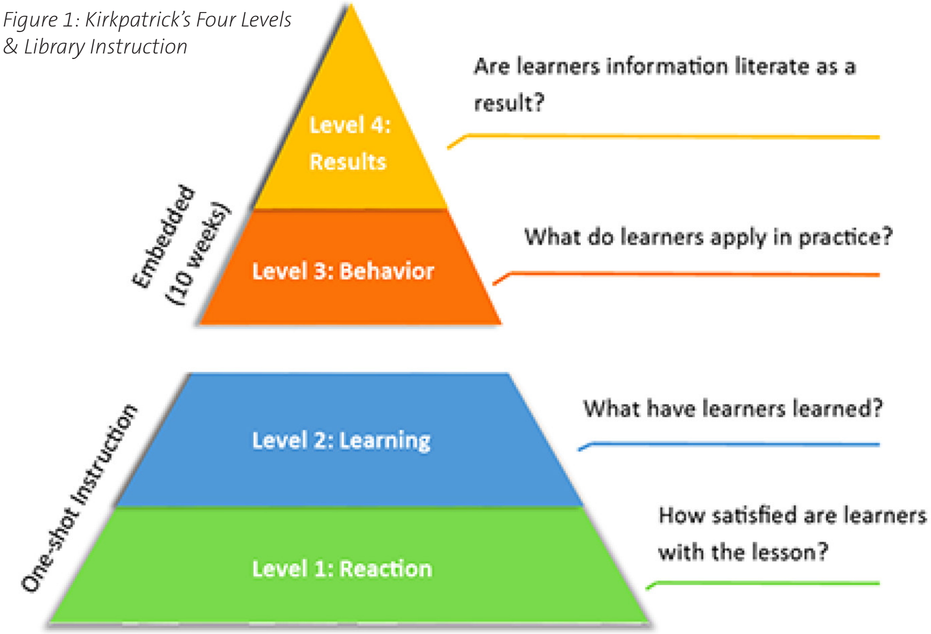
The audience is *learners*, the behavior is *generate a list* the condition is *given a research question and a Wikipedia article about it, and degree is at least three keywords or phrases*. The condition in this outcome states what learners are given. For example, if the condition statement was more general: "Given a topic, learners will be able to…." instead of enumerating the specific tools used: "Given a research question and a Wikipedia article about the topic of the question…", you would also need to change the way you assess this outcome. If learners just have the topic, you are saying that they can have any research question and use any sources they'd like to generate their list of keywords. This may be fine; however, it will be more difficult to assess whether or not learners achieve this outcome because you won't know which sources they consulted. When your condition specifies the source (in this case Wikipedia), you are both guiding and/or prompting them about where they are looking for keywords and are better able to assess if learners have achieved the outcome.

KIRKPATRICK'S 4 LEVEL EVALUATION MODEL

Next, we will discuss how you can use your expanded ABCD outcomes with the Kirkpatrick 4 Level Evaluation Model to improve your assessments. We will use the interaction of these models to argue that what you can reasonably measure depends on how much time you have with the students and how extensive your interactions are with the class. By using Kirkpatrick's levels with the ABCD outcomes, you can verify that your LOs correspond to the appropriate subject matter to cover in the time you are allotted. The four levels of evaluation will help you examine where your learning outcomes fall with the model. Once you know the Kirkpatrick Level for your outcome, we offer suggestions for the types of assessments you should be doing with outcomes at that level.

The Kirkpatrick Model is widely used in many industries for assessment and evaluation of training. This model uses four levels of evaluation developed in 1954 by Donald L. Kirkpatrick as a result of his dissertation in philosophy (Kirkpatrick, 1954). The robustness of his framework has been demonstrated by its use in fields as wide ranging as "business, government, military, and industry" (Watkins, et al., 1998, p. 90). While this model is not widely used in library instruction, it is beginning to be recognized as a useful tool for evaluation (Kaplowitz, 2014). We will explain here how to implement it in information literacy and instruction. Throughout their 55-year history, the descriptions of the four levels have been updated to reflect current evaluation concerns; however, the original four levels remain the same and are still relevant. (Kirkpatrick Partners, n.d.). For this paper, we are using the following definitions. Level 1 corresponds with satisfaction of the students, Level 2 with what the students learned, Level 3 what the students applied in practice and Level 4 are the students now information literate as a result. The sections below describe each of the four levels and provide examples of well-written and incomplete (i.e. non-example) learning outcomes for each level. The image below illustrates Kirkpatrick's 4 Levels, with the question for each level, as well as when for what types of instruction it is recommended (Turnbow & Roth, 2014).

Figure 1: Kirkpatrick's Four Levels & Library Instruction



LEVEL 1: HOW SATISFIED ARE YOUR LEARNERS?

Level 1 is concerned with learner reaction. Level 1 assessment allows instructors to ask and get meaningful responses about what the learner thought of the format, if they liked the instructor, the classroom set-up, etc. Instruction around library anxiety and students' confidence in using library resources can also be evaluated here. Examples of common Level 1 assessment include end of class evaluations where we solicit feedback from our learners.

Table 1: Examples of Level 1 Assessment

A. Level 1 Example	B. Level 1 Non-Example
After attending a library workshop, 90% of students will feel more confident than they did prior to attending the workshop because they know where to get help with their research.	Students will get help from the librarian.

The reasons that A is well-written include:

- There is a specific condition statement, "after attending a library workshop," whereas B does not.
- Asking learners to rate their confidence (A) is a measurable behavior as opposed to "students will get help" (B).
- A includes a degree statement, "90% of students". This is your established benchmark. If fewer than 90% of students do not feel more confident that they know where to get help as a result of your workshop, then you did not achieve your outcome. (Remember, this is your benchmark, so make it whatever feels right to you. If a smaller percentage seems reasonable, then use that.)

End-of-class evaluations or feedback forms are effective ways to measure your success with these kinds of topics. Will Thalheimer (2016) is a well-regarded expert on this type of evaluation, called "smile sheets," which he describes as "a set of questions provided to learners after training – or a portion of training – asking for learner's perceptions of the value of the training" (p. 5). You can use a paper or an online evaluation to quickly solicit Level 1 feedback, which focuses on learner satisfaction. A simple format is to have two or three clearly labeled replies (yes, no and in some cases include acceptable, but not great) and space for comment. Examples of Level 1 questions include:

- The presentation was clear and understandable.
- I enjoyed the library workshop.
- The instructor was engaging.
- The classroom set-up and technology

facilitated my learning experience.
- I am confident that I know where I can get help with my research.

Appendix A includes an example of how you could do Level 1 assessment in a library workshop with these questions. (Rob- Can we have links to the three Appendices?)

Many educators and librarians are familiar with Likert Scales, which are questions asking the responder to use a rating for their answer, usually on of scale of 1 to 5 or 1 to 10. Thalheimer (2016) observes that while popular, Likert Scales are problematic as assessment tools for several reasons. One reason is that if you're using a five-point scale (the wording may change, but for the sake of this example consider: 1=very bad, 2=bad, 3=neutral, 4=good, 5=excellent), it's almost impossible to understand the difference between each person's rationale for choosing between 1 and 2 or 4 and 5. More significantly, the kinds of questions you should ask for Level 1 assessment has more to do with satisfaction, which can and should be a direct question. Finally, depending on which tool you use for these questions, the mechanics of the layout may make your student responses confusing. As of this writing, the popular, free Google Forms doesn't allow you to label each point on a Likert Scale. Using a five point Likert Scale on a Google Form led to a colleague to wondering why half of his students seemed to understand a point that he had them practice in multiple ways and the other half disturbingly fuzzy on it. It turns out many of the students just got confused about which choice was which. If you must use a Likert Scale, consider using software such as Qualtrics that allows you to label each point. If not, consider using pull down menus, or better yet, radio buttons, which allow you to set up replies with clear labels. We will explain about how to use your questions and the possible answers to get more specific information about what your students have learned in the next section.

LEVEL 2: WHAT HAVE STUDENTS LEARNED?

Level 2 is where you assess for learning. This level is concerned with the knowledge and skills learners have acquired as a result of your workshop. Many of your learning outcomes are likely to fall in this level. The most widely used way to assess for knowledge and skills at the end of a one-shot workshop might be a pre- and post-test, but we think that other options, detailed below, are more instructive. A well-written outcome will guide you in designing your formative or summative assessment. Kaplowitz describes formative assessment as learning activities that you do during your instruction and can be used as mini-assessments (2014). Summative assessments are usually administered after instruction and are meant to "measure the overall effectiveness of instruction once it has been completed" (Kaplowitz, 2014, p. 123). Examples C, D and E all demonstrate how you can write a Level 2 outcome for a one-shot library workshop.

Table 2: Examples of Level 2 Assessment:

C. Level 2 Example	D. Level 2 Non-Example
Given an overview of six search strategies that one can use to modify a search (i.e. Boolean, limits, abstract, database subject and keywords, bibliography/cited references, times cited references, and related records), students will be able to use at least three of them to modify a search in a database of their choice for their topic.	Understand how to use Boolean terms, subject headings, MeSH terms and peer-reviewed journals for advanced searching.

C is a better Level 2 outcome because:
- C includes a condition statement: "Given an overview six search strategies that one can use to modify a search (i.e. Boolean, limits, abstract, database subject and keywords, bibliography/cited references, times cited references, and related records)." This condition clearly states what learners will be taught. They will be provided with a demonstration of the stated search strategies. Example D does not give insight into what instruction will be given in order to achieve the learning outcome.
- The behavior that students will need to demonstrate as observable is C. We can observe students *using* search strategies; we cannot observe them *understanding* search strategies. Given the circumstances of the one-shot (i.e. very limited time with the students and no access to student work after the session), we cannot reasonably expect to be able to make this outcome measureable, but at least we can observe the behavior during the workshop (see sample in class activity below).
- Outcome C specifies that students need only use *at least three* of the six strategies demonstrated. This statement clarifies the degree to which the students need to achieve the outcome.
- While both C and D lack degree statements, it is okay for this type of outcome that may be assessed in different ways (described below). If you wanted to include a degree here, you could and just know that achievement would be based on a sample of student work. Alternatively, Example E demonstrates how to rewrite the outcome to include a degree statement and different assessment.

A sample in class activity (i.e. formative assessment), as illustrated in Appendix B, could include a worksheet where students are asked to search a database (assigned or chosen by them) and use three of the six search techniques demonstrated. They are asked to note which technique they used and whether or not they thought it was useful. These worksheets can be collected or turned in to the instructor. If they are turned in to the instructor, you can usually get a sampling of them at the end of the term that you can use to assess the knowledge and skills the students gained as a result of the workshop.

Another way to assess student learning summatively is by having them turn in a search log in which they name the search strategy they used and why they used it. You could require them to use a few of the strategies demonstrated since not all of them will be applicable. If it is a one-shot during a term long class, ask students to turn in search logs to the course instructor and then see if you can review them. The benefit to this second strategy is that your assessment allows students the time to practice using the new knowledge and skills. As such, it is more reflective of actual learning than an immediate assessment.

There are times when you may not be able to provide an in-class activity as described above and illustrated in Appendix B. In these situations, you can still use smile sheets as a way to do Level 2 assessment. The key here is to make sure your questions are focused on performance, not just feedback (Thalheimer, 2016). Example E below is an example of how you could rewrite the outcome in C to address a performance-based smile sheet.

Table 3: Example E

E. Level 2 Example
After attending the library workshop, 80% of students will indicate that they are able to use the search strategies taught (i.e. Boolean, limits, abstract, database subject and keywords, bibliography/cited references, times cited references, and related records), with **more practice** or at an **adequate** or **proficient** level.

An example of an assessment for this question might look like this:

> As a result of this workshop, **are you able to use** the search strategies (e.g. Boolean, limits, abstract, database subject and keywords, bibliography/cited references, times cited references, and related records) taught to search a database for your topic?
>
> A. I am NOT ABLE TO USE the search strategies taught in a database for my topic.
> B. I have general awareness of the search strategies taught, but I will need MORE GUIDANCE to use them to search a database for my topic.
> C. I am able to use the search strategies taught, but I will need MORE PRACTICE to use them well to search a database for my topic.
> D. I am able to use some or all of the search strategies ADEQUATELY to search a database for my topic.
> E. I am able to use some or all of the search strategies at a PROFICIENT level to search a database for my topic.

The answer choices that learners select for this question are focused on their impression of their ability as a result of your workshop. Our outcome is written to say that if 80% of learners indicate options C, D, or E, then our instruction has been successful. Appendix C includes our reasoning for this and additional guidance on how you might interpret your results from a question like this.

A well-written outcome will guide you in designing your formative and/or summative assessment. It will also help illuminate how you could teach the content students will need to demonstrate the knowledge and skills achieved.

LEVEL 3: WHAT DO LEARNERS APPLY IN PRACTICE?

Kirkpatrick's Level 3 focuses on learner behavior. What do learners apply in practice? It is one thing to learn, but what most instructors are concerned with is whether learners are changing their behavior as a result of instruction. Students may have learned and even practiced truncation in your workshop, but are they actually using it when it's appropriate to do so in their searches outside of the workshop?

In our experience, most instructors want to be, and think they are, doing Level 3 assessment. We argue that it is difficult, if not impossible, to do Level 3 assessment in a one-shot workshop. Changes in research behavior take time and practice. While a one-shot might be well taught, we maintain that it is unlikely to be sufficient for changes of this kind. Example F provides an example of a Level 3 outcome.

Table 4: Example F

F. Level 3 Example
Given an overview six search strategies that one can use to modify a search (i.e. Boolean, limits, abstract, database subject and keywords, bibliography/cited references, times cited references, and related records), students will use appropriate ones for their topic as determined by a librarian reviewing their search log.

What makes F slightly different from a Level 2 outcome (C) is that while the behavior is the same, what is being assessed has changed. Instead of asking the participants to fill out a handout or complete an exercise as a measure of success, in these cases an expert is reviewing a search log. It's significant to note that this outcome focuses on what students are doing on their own and outside of class. We are measuring change in research behavior: are students making the decision to use the preferred behavior (i.e. using truncation)?

While Level 3 might not be attainable in a one-shot workshop, it should be considered if you are teaching a term-long course or have multiple contacts with the learners throughout the same term or program. Contact with them over time allows you to create assessment activities that can reinforce desired skills and measure behavior change.

LEVEL 4: ARE LEARNERS INFORMATION LITERATE AS A RESULT OF INSTRUCTION?

Level 4 is all about results and return on investment. In our experience, most instruction programs want to know if the learners who took our classes and workshops were more information literate as a result of our instruction. If we had confirmation that this was the case, we'd be able to make a solid argument that the instruction program and our efforts are producing a solid return on our investment of time, energy and resources.

While we want to know this and we want to confirm our effectiveness with this kind of assessment, we argue that it can't be done at the end of a one-shot workshop. Both the Level 3 and Level 4 assessments are better suited for term-long courses or those deeply embedded in their departments and helping with developing curriculum. A comprehensive assessment might administer a post graduation information literacy skills test, survey and/or focus group. While this may not be realistic for all institutions, there are projects that are striving for Level 4 assessment across our field.

We think that the depth and scope of the Carleton College "Information Literacy in Student Writing" project is a wonderful application of Level 4 assessment for an information literacy program. The project uses a rubric to evaluate multiple sophomore writing samples selected at random for evidence of attribution, communication and evaluation of sources (Jastram, et al., 2014). It is a process that allows the instruction librarians to consider students' habits of mind in an authentic learning environment. Based on their findings, the program can shape the instruction topics and targets the classes that may benefit from additional information literacy instruction.

Another example of Level 4 assessment is the work from Project Information Literacy (PIL), done with the University of Washington's iSchool, which coordinates large-scale data samples of students at different campuses across the U.S. looking at their information seeking behavior (Head, n.d.). For example, PIL looked at recent graduates and their employers to compile findings that revealed some significant differences between what employers expected recent college graduates to know and how they conducted their research. The new employees were surprised to find that the pace, amount of ambiguity and lack of direction in their workplaces was different than what they expected to find. (Head, 2013). These findings have clear implications for what information literacy programs could teach students while they are still in school, but they would have been unlikely to have surfaced in any of the summative or formative evaluations done during a single class or during a credit course.

» **Ultimately, this will allow you to collect meaningful data that will improve your practice and show your value.**

CONCLUSION: USE THE RIGHT TOOLS FOR THE JOB

We have outlined how to combine a number of instructional design approaches and tools not typically used in library instruction and recommend that you deploy them to rethink how you structure, evaluate and assess your one-shot instruction. The ABCD Model and Kirkpatrick 4 Level Evaluation Model provide frameworks for you to improve your learning outcomes. We have also provided examples of how you can evaluate and/or assess the outcomes using various tools including "smile sheets" and in-class worksheets. Armed with this knowledge, we urge you to stop trying to do everything in an instruction interaction. We all know that assessment is important, but we really need to be doing the level of assessment that matches our learning outcomes and the constraints of the format. When teaching a one-shot workshop, you shouldn't expect to do Level 3 assessment effectively. Instead, focus on creating solid in-class activities and performance-based "smile sheets" that will provide the learning you can measure with a Level 1 or 2 assessment. You can use student work samples completed during the workshop (even if it is after the term is over) to gauge progress toward Level 3. For many instruction librarians, it is also unrealistic to expect to assess every student; just focus on getting a sample. We are confident that the sample is an excellent way to show your value and to figure out ways to improve your instruction, if that's appropriate. Remember that learning is a process and takes time, especially when it comes to the research concepts and skills that librarians are teaching students. It is unlikely that you will achieve Level 3 assessment unless you are deeply embedded in a department, helping with curriculum/course design, or are teaching a term-long course. If Level 4 assessment is what you think (or have been told) is the most important part of your instruction program then design a study that can accomplish that goal. In our opinion, that it can't be done in a one-shot instruction session doesn't mean you failed as an instructor. While you're waiting to conduct those big studies, we encourage you to concentrate your efforts on getting the data you need to support and improve your instruction. If you follow the models we explained in this article, you will be poised to write solid learning outcomes aligned with realistic evaluations and be prepared to assess them using the right tools. Ultimately, this will allow you to collect meaningful data that will improve your practice and show your value. ■

Appendix A: Example of Level 1 assessment. (end of workshop survey)
Appendix B: Example of Level 2 assessment (in class worksheet)
Appendix C: Example of Level 3 assessment (end of workshop assessment)

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Rethinking the Library Services Platform

» "Interoperability ... More Myth than Reality"

BY KEN CHAD

Surveying the library system landscape over a decade ago Andrew Pace (at the time Head, Information Technology, North Carolina State University Libraries and currently Executive Director, Networked Library Services at OCLC) wrote: "Managing library automation is now far more complex than the traditional maintenance of an integrated *library+ system." He added: "Many expect that new modules will communicate with old ones, products from different vendors will work together, and a suite of existing standards will make distributed systems seem transparently whole."[1] However, he was disillusioned and went on to say: "Today interoperability in library automation is more myth than reality."

The picture is only a little different in 2016. While a new generation of library services platforms (LSPs) has emerged there remains a very significant lack of interoperability between the various components that make up the library technology 'ecosystem.' As libraries struggle with the need to manage a diverse and growing range of print and digital materials, so the library systems environment gets increasingly complex.

Trying to deliver those resources in a convenient and coherent way to users requires interdependent, seamless systems. LSPs have integrated print and electronic resource management but this ignores the bigger picture. University libraries may manage Institutional repositories, archives and special collections and are moving into new areas such as research data management and even publishing.

It seems unlikely any one LSP could swallow up all these activities into a single solution. Instead we will need much improved interoperability between a wide range of applications from a variety of sources.

For librarians, the time, effort and cost entailed in integrating mission-critical library technology solutions is frustrating. By the same token, university management may wonder why they are 'paying twice' for student record and finance system functions to be duplicated in the library system. There are interoperability initiatives. For example the NISO-led Open Discovery Initiative (ODI)[2] "aims at defining standards and/or best practices for the new generation of library discovery services." Another standards body, BIC, has produced the Library Communications Framework (LCF) – "a set of library interoperability standards which defines a framework for the communication of data between self-service and other library terminal applications to and from library management systems."[3]

Technologies such as web services and service orientated architecture (SOA) can certainly facilitate better interoperability, but much still remains to be done before we achieve the goal described by Carl Grant, President at CARE Affiliates and Executive Advisor to the Dean of Libraries at Virginia Tech University, to "cleanly integrate the best solutions together."[4]

THE NATURE OF SOFTWARE PLATFORMS

So, although we talk of library services *platforms*, libraries and library system vendors have not yet fully realized a platform-based, interoperable library ecosystem. The classic example of a software platform is the Windows operating system. Microsoft produces some of the most widely used Windows software applications (Word, etc.) but most Windows software applications are not produced by Microsoft. We don't expect to buy Word and then have to integrate it ourselves with Windows or the Mac OS. That's already been taken care of. Microsoft gives developers from other, sometimes competing, companies the tools and services to develop applications using the Windows platform. Indeed, using developer networks and other enticements it actively encourages third party companies to use its platform. Why? The more Windows applications there are the more valuable the Windows platform becomes. So Microsoft extends these services even to competitors. Apple makes applications such as QuickTime and iTunes available on Windows and Microsoft makes applications such as Word available on the Apple OS.

This approach to a platform is more than just a question of technology. In his book *Invisible Engines,*[5] an analysis of how software platforms drive innovation and transform industries, David Evans explains: "Such software platforms are at the heart of economies or ecosystems that consist of mutually dependent communities of businesses and consumers that have a symbiotic relationship with the platform." The platform approach is therefore transformative and potentially challenging to many long-established industries.

Think of the transformative platform effect of the Apple and Android ecosystem of apps. Could such an approach do the same for libraries? It's still early days for LSPs but, to date, they have largely continued the route taken by their library management system/integrated library system predecessors. They offer APIs for finance, student record and self service systems but we don't see library system vendors developing applications on competitors' platforms. When will we see ProQuest provide developer support for EBSCO applications on the ProQuest platform and vice versa?

There have been some modest steps to encourage third party developments. Both the OCLC WorldShare and ExLibris Alma platforms have established developer networks[6] but they remain small and unattractive to third party developers, so have gained little traction. But a little history provides perspective and maybe even encouragement. Innovative Interfaces is so named because back in the late 1970s it made use of the OCLC platform (though not a term used at the time) to develop an application that enabled OCLC records to be integrated, without rekeying, into a local (CLSI) circulation system. The Innovative 'OCLC interface' was a core offering in their solution and remained so for a generation. This was a mutually-beneficial, commensal relationship that benefited libraries, Innovative Interfaces, OCLC and, ultimately of course, library users.

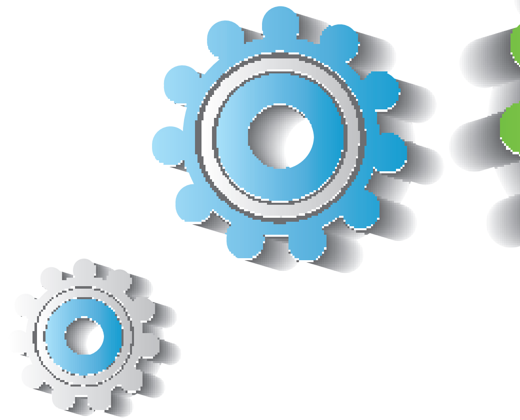
A FOCUS ON THE LIBRARY USER – THE CUSTOMER

In the wider world the pressure to be increasingly 'customer-driven' or 'consumer-focused' seems almost universal and relentless. "Consumerization" has taken on a specific meaning in the context of information technology – the growing tendency for new technology "to emerge first in the consumer market and then spread into business and government organizations."[7] The consumer market is seen as the primary driver of information technology innovation but it wasn't always so. Information technology typically focused first on the 'back end' tasks and then evolved to meet consumer needs. A good example is banking systems. Library systems also evolved in this way with the public-facing catalogue or "OPAC" arriving relatively late as a module.

Perhaps the nearest we have come to a significant level of interoperability between systems from competing library system vendors is discovery services. It is not uncommon to see libraries using a resource discovery service from one vendor with a back end resource management system from another. However, Marshall Breeding noted in 2012 that this trend could be starting to reverse. "As the back end modernizes and becomes more comprehensive itself, and has more hooks into the remote resources, it reintroduces the opportunity to integrate discovery and back end automation."[8] To date, customers moving to the Alma LSP have had to use Primo as their discovery service though the University of Sussex has worked to integrate the VuFind open source discovery service.[9] As ExLibris gets absorbed into the ProQuest family we will see increasing integration with ProQuest products – but will integration extend to competitors or other third parties?

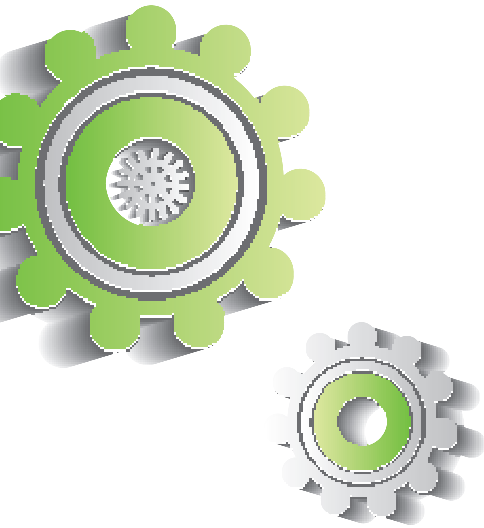
DEFINING THE LSP FROM THE LIBRARY USER PERSPECTIVE

One of the defining characteristics of a LSP[10] has been fully integrated resource management for print and electronic materials, or what consultant Marshall Breeding describes as: "*A+ more inclusive platform designed to handle all the different forms of content."[11] So ProQuest (pre acquisition of ExLibris) and EBSCO have been deemed not to have a 'proper' LSP because they didn't offer print resource management capabilities. This is a very 'back end' view. Prioritizing the library customer perspective might change how we think about LSPs. If a student or researcher uses a discovery services like Summon or EBSCO Discovery Service (EDS) they will typically be able to find print materials and electronic resources integrated into the



same user interface. They are not really concerned about how that is achieved. After all, libraries are a means to an end and success ought to be measured in terms of the best possible customer experience and outcomes. Academic libraries routinely survey their users and in the UK pay close attention to how students rate library services in the annual National Student Survey (NSS). These results factor in to how universities are ranked.

Print circulation remains for most libraries an important function. From the user perspective, especially in the UK, that means using a RFID-based self-service circulation kiosk. These solutions are taking on some of the characteristics of the 'stand alone' circulation systems of the past and embody a lot of functionality that we normally think the preserve of a LMS/ILS circulation module. The cataloguing module is often seen as the heart of the LMS/ILS, but almost no libraries catalogue journal articles and many have outsourced the cataloguing of books to providers such as Dawson or YPB Library Services, that deliver 'shelf ready books.'[12] Although this is an over-simplification, it does suggest that the LMS/ILS tail still wags the library platform dog. Print management is certainly important but most money is spent on electronic resources. According to Carl Grant, the development of LSPs has been hampered because: "Existing ILS products, while containing limitations in serving today's digital environment, represent hundreds of person-years of development, testing, and documentation. You simply can't replicate all this functionality in a new software architecture in a short period of time, even with agile development techniques." But maybe that is the wrong way to look at it. A new user-focused perspective on the LSP might help redefine and simplify



the elements of print resource management (broadly the functionality of a conventional LMS/ILS) and lead to some helpful innovations. Platforms are often characterized as doing the 'heavy lifting.' Developers use a platform to simplify and speed up the creation of an application because the platform deals with much of the hard work. An open library platform that meets the criterion of being "at the heart of economies or ecosystems that consist of mutually dependent communities of businesses and consumers"[13] will do some valuable heavy lifting for vendor and other development partners. ProQuest and EBSCO have vast repositories of metadata and content and provide services that might replace the conventional acquisitions module of a LMS/ILS. OCLC has a global repository of catalogue metadata which it has enriched in a number of ways, including using linked data. Why duplicate that in a catalogue module? This means rethinking library system modules as platform 'services', a trend which is being accelerated by the move to the cloud.

THE IMPACT OF THE CLOUD

The cloud is another of the key attributes that distinguishes a LSP from a LMS/ILS. A conventional LMS/ILS may be installed in hundreds of libraries in multiple versions, on a variety of hardware using different operating systems. Each new release must be tested with all these variables and then implemented in each separate library system. This is time-consuming and takes up significant vendor and customer resources. It also militates against interoperability. Brian Gammage, Chief Market Technologist at VMware warns: "Most investment...is consumed in updating hardware and operating systems – by the need to replace end-of-life assets, rather than embracing new capabilities that deliver productivity or revenue benefits. The money is spent to stand still, not to move forward, so end-user computing is seen as a cost of doing business."[14]

Cloud computing could help break this paradigm. LSP customers are 'tenants' on the same single system, so integration with another application needs to be done only once. Enterprise Resource Planning (ERP) systems such as SAP and Oracle are seizing this opportunity and both companies are investing heavily in their cloud platforms. Of course they had 'certified partners' before the cloud existed, but cloud computing presents new opportunities to grow partnerships more easily and offer Independent Software Vendors (ISVs) tools, training and support to develop their applications using the SAP or ORACLE platforms. As discussed above, we haven't yet seen the same kind of pace of development with library platforms. One reason may be scale – LMS/ILS businesses are small compared to giants like SAP and ORACLE.

SIZE MATTERS

We often think of library system companies such as ExLibris, SirsiDynix and Innovative Interfaces as large companies but ESBCO and ProQuest are much larger. ProQuest was acquired in 2007 by Cambridge Information Group and its 2014 annual revenue of around $500m is roughly the same as Marshall Breeding's estimate for the entire (US) library systems market. ProQuest is roughly five times larger than ExLibris, which is one of the largest library system vendors. And, of course, compared to the largest library company of them all – Google[15] they are minnows.

It may be that we need much bigger companies to realize the full potential of a library services platform. It looks likely that the largest library technology companies like EBSCO, ProQuest and OCLC will continue to grow and acquire or develop new assets. They will want to integrate those assets into a coherent offering to libraries. One way to do that is to create a cloud platform to embrace them. It makes sense to start with assets owned by the company, to deliver efficiencies and reduce costs. OCLC did this with the UK-specific Inter Library Loan (ILL) solution that was based on a product from a company (Fretwell Downing) it had previously taken over. That solution is now based on the OCLC WorldShare platform. Once the platform approach has embraced the products and services owned by the vendor the next step is, of course, to open up the platform to ISVs. This has already happened in the ERP market. Gartner, an information technology market research and advisory firm, argues that as ERP products move to the cloud it encourages a process of deconstruction. An ERP system doesn't solve all problems any more than the LMS/ILS does. The monolithic ERP is losing relevancy. The existence of disillusioned users is one of the core drivers in this change to what Garter characterizes as the 'postmodern' ERP.[16] ORACLE is no longer a single product suite but sits in the cloud alongside interoperable applications from ISVs. In summary, Gartner's analysis is that the ERP suite is being deconstructed and the result will be a more loosely coupled ERP environment with much of the functionality sourced as cloud services or via business process outsourcers. Will we see the same trend in library technology?

A ROLE FOR OPEN SOURCE?

Open source is generally taken to imply a more open, interoperable architecture to facilitate a diverse and loosely coupled community of developers working together. But too often, open source and proprietary systems are seen as being in conflict.

A more interoperable approach could enable open source solutions to better flourish together with proprietary solutions – and an extended library platform would be a way to do that. We have seen some progress with open source discovery systems such as VuFind and Blacklight being integrated with proprietary LMSs. Up to now, though, these integrations have taken place on an ad hoc basis, library by library, rather than as part of an overarching shared platform. There are signs that this might change. For example, EBSCO has funded development of the open source Koha library system which it offers as a plug-in within its app and cloud services.[17] It has also become a development partner in the Kuali OLE project.

However, open source library systems have tended to be conservative in terms of their approach to functionality. For example Koha is a recognizable LMS/ILS rather than a LSP. Newer open source solutions such as Kuali OLE and Tind have been transformative in terms of their open source/community business model rather than in terms of functionality. In that regard they mimic many existing proprietary approaches. A librarian reviewing the Kuali solution commented that while the community develop-

» A more open library technology ecosystem would eliminate the restrictions of a closed and monolithic suite of services from a single vendor.

ment model of OLE is a key selling point, the librarians helping to develop the software are not thinking radically and the outcome has been a traditional, conservative LMS/ ILS. Kuali hit the problem that Carl Grant described earlier: OLE had to catch up with "hundreds of person-years of development, testing, and documentation." These initiatives have discovered that: "You simply can't replicate all this functionality in a new software architecture in a short period of time, even with agile development techniques." Size matters here too. An open source operating system like Linux can command a far bigger community than a relatively niche library system.

Is it possible to approach the problem in a different way? Suppose an open source component were developed, maybe taking advantage of the BIC LCF framework, to integrate RFID self service solutions with a re-imagined LSP. Other services could be integrated in a similar way. For example, YBP Library Services "provides book acquisitions and collection development services to academic libraries." Coutts Information Services and Dawson also provide a wide range of library services including the management of acquisitions and cataloguing. The components of an LSP are already in place and open source could be one way to integrate them. In this way the notion of a single 'complete' library system becomes redundant.

OPPORTUNITIES AND BARRIERS TO AN INTEROPERABLE LIBRARY TECHNOLOGY ECOSYSTEM

Interoperability standards

Simple, effective interoperability standards could be achieved if libraries and vendors worked together better – and sector bodies could be playing a larger and more determined role. In 2013 the Jisc LMS Change project report noted: "The failure of the library community to better contribute to the development of modern web-centric library interoperability standards has hampered the evolution of an open 'loosely coupled' library systems environment."[18]

Organizational change from vendors

It is a platform-based ecosystem model that will be the "next generation" in library automation Creating a technology platform to enable the diversity of vendor-owned assets to work together as part of a single shared platform is only part to the process of change. The technology barriers between applications are also reflected in organizational silos and it can take some time before these are broken down. A company may buy a competitor or a company it views as having an attractive offering. Technical synergies may already exist but it still takes time for one organization to 'digest' another and offering developer, technical and training support to ISVs can be seen as a distraction. Consequently, the development of a genuine platform approach is delayed or thwarted.

CONCLUSION: A NEXT GENERATION PLATFORM FOR LIBRARY SERVICES

No single vendor will be able to develop all the applications necessary to meet the technology requirements of a complex library – and librarians like to see choice in the market. A more open library technology ecosystem would eliminate the restrictions of a closed and monolithic suite of services from a single vendor. However: "Offering tools such as application programming interfaces (APIs) and software development kits (SDKs) only gets you halfway there. You have to create incentives for prospective partners to extend your platform and build different planks for your mutual benefit."[19] This is the key element missing from the current library system market. Solutions are moving to the cloud but aren't yet really platforms. It is a platform-based ecosystem model that will be the "next generation" in library automation. The promise for libraries is a more flexible and cost effective solution and for users a much improved user experience. ■

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FOOTNOTES:

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