

If You Build It....Will They Come? Depends!  
Patrons and the OPAC

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November 5, 2006

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### Introduction

A school library media specialist for many years and an electronic research center specialist for the last two years, I have observed many “train-wrecks” in searching the online public access catalog (OPAC). I have missed quite a few, too, of patrons who just walked away not asking for help. These ‘train wrecks” can be attributed to poor catalog design, inadequate education of the patron, and failure of the collection to provide materials needed by the user. We want to eliminate all possible barriers between the user and the information needed, create the desire to seek the OPAC for its richness of resources, and to educate our patrons in the use of the OPAC as a powerful tool for learning. Vendors have often designed online bibliographic databases for librarians, not for patrons.

### Making the Catalog More User-Friendly

No fancy interfaces, servers, or online content additions will supplant the need for complete and accurate cataloging. If a material in the collection has not had adequate access points assigned to it or if the record itself is fraught with errors, it is not likely to get the usage it deserves. Nicholson Baker points out that not to design an effective system is a kind of “incidental book burning” (Yee, 1998). Beyond the titan task of correct data entry, there are interface, search, and features issues to examine to maximize a patron’s experience with the OPAC and make it more fun to access.

Our patrons have had some training in online resources by using Google and other popular search engines. Google’s simple interface with its single search box is easy to learn and use well. The complicated part of Google, behind the search screen, is not seen by the user. Simplicity, on the face, is desirable. That interface must also look good in all browsers, avoid technical

jargon (for example, “Full Record”), and minimize scrolling (Maxymuk, 2006). Mousing itself is not a problem with most users, but search results that continue past one screen are not sought by users. To keep the results list as short as need be, the content of a brief display can be enhanced and the user is less often compelled to choose a full record, reducing the number of screens accessed and their complexity (Thomas, 2001). Some patrons like to customize a screen to reflect their interests and personality with display screen options and search customization. Patrons of the [Kanawha County Public Library](#) (Charleston, W. Va.) may customize their catalog to track favorite authors and be notified when the acquisition of new materials fits a personal profile (Wilson, 2004).

The patrons I work with are always in a hurry. They will spend more time learning to use their cell phones than they will the intricacies of the OPAC. In a 1998 study at Oakland University, it was found that multiple keyword search boxes and subject and author hyperlinks were irrelevant to users’ searches (Lombardo, 2000). If users really want just the one search box like Google, search processes will have to more powerful than they are now. An Endeca-powered online catalog can use the entire record, using information in subject headings and classification numbers to aid in topical searching. Spell-checking would be a friendly feature to add. The “Did you mean...?” response needs to be based on the library’s holdings not just a dictionary (Antelman, Lynema, & Pace, 2006). All possible spellings of foreign work should be incorporated in the spell checker as well (Yee, 1998). Patrons get very confused with truncation/stemming and wildcards, and more natural language approaches along with controlled vocabulary would aid patrons (Wallace, 1993). In fact, the users at the library at [North Carolina State University](#) can browse the shelves with no search terms necessary at all (Orphan, 2006).

The difficulty in searching by subject is a problem of first and second generations of online catalogs. My patrons often make mistakes by confusing a name as a subject rather than as an author and vice versa. Novice users could use support with a fill-in form because they might not even know to reverse the names in a search (Yee, 1998). These users also need clear examples provided in the search area for correct word order or syntax without having to scroll or click somewhere else (Turner, 2002). University students do not often use Boolean operators and if they do, it is usually AND (Dinet, Favart, & Passerault, 2004). More instructions about the results expected by using Boolean operators should be available on the search screen if we expect users to understand the concepts. A clear example of this is found at the [University of Vermont](#).

Patrons are surprised to find that online catalogs do not necessarily return items ranked in order of relevance. A study at Pennsylvania State University found that users were surprised that library catalogs do not necessarily act like web search engines returning the results in relevancy order (Novotny & Cahoy, 2006). However, some products, like ExLibris' *Primo*, are doing just that (Breeding, 2006). When items are not found, more help can be offered in terms of vocabulary to broaden the search. If the user's search retrieves just one work (various editions, for example, with one main entry), the best display would be a summary screen of the records retrieved with groupings of editions, collections that the work appears in, works about the work, and works related to the work (Yee, 1998). If the user receives too many items in the returns list he/she becomes disinterested and does not pursue "below the fold." Persistence in scanning the results fell off noticeably when the list has over thirty items as was tested at the University of Colorado library (Wallace, 1993).

With the graying of America and the sensitivity to differently-abled patrons, the catalog should be designed to consider the needs of all patrons. According to a Pew Internet and Ameri-

can Life Project report, 12% of internet users have some kind of disability (Peters & Bell, 2006). The online catalog should conform to the accessibility standards as drawn by the Web Accessibility Initiative of the World Wide Web Consortium. These standards include avoiding acronyms that when read by screen readers are very confusing to the listener. Security time-outs often are not taken into account for patrons who need more time in a given session (Van Bodengraven & Pollitt, 2003).

Patrons are clamoring for more features all the while asserting that they want simplicity. The social aspect and interactivity of the catalog must be enhanced. Virtual reference can be included on catalog pages. The library can start building loyalty by branding all the pages as their own and using that logo on everything to make the catalog more like a “place” to visit (McCubbin, 2005). Some catalogs are making multiple access points throughout the catalog link to the same destination by appealing to different kinds of users with lingo and graphics. For example, one link may be in teen vernacular, another more pedestrian. Pop-ups that change daily or some rotational material to make the content look fresh every day is more inviting (Wilson, 2004).

Giving the patron control of sorting, marking, and emailing results is a way to customize the catalog. Some like to sort by “most popular” as a way of connecting to classmates’ or community members’ tastes (Antelman, Lynema, & Pace, 2006). Links like “More like this” or “People who liked this also liked this...” (à la amazon.com) can be added. A common feature now is to be able to submit purchase recommendations, ILL requests and status from the catalog, and monitor the patron record data – with e-commerce features to pay overdues! Some catalogs allow patrons to view images and download multimedia and integrate references found in the catalog with personal documentation software, like *Endnote* (Babu, 2000). Patrons using Innovative In-

terfaces' Millennium system can now view streaming video movie trailers of videos and DVDs through the online catalog.

Content enrichment data like cover art, tables of contents, summaries, annotations, excerpts, author notes, series information, and full-text reviews can be added to the catalog (Wilson, 2004). The expectations of users to see this kind of data has been created by experience with Google Book Search. The Library of Congress' BEAT project has experimented with adding table of contents data to records and has found that twice as many relevant items for social sciences and three times as many items for humanities were retrieved when the database was enhanced with tables of contents. There was also a remarkable 45% increase in the circulation of books with tables of contents in their records (Byrum & Williamson, 2006). There is also much debate about adding website URLs to the catalog database. While some librarians advocate adding journal article indexes, web search engines, and selective web directories like the *Librarians' Index to the Internet* to the catalog, other writers are wondering about the workload of selecting and maintaining these links (Tennant, 2003). The aforementioned library of [Kanawha County, West Virginia](#) uses Sirsi's *Bistro* product for their OPAC to search catalogued web links (Hughes, 2001). An award-winning site to show some of these content enrichment features is the public library at [Westerville, Ohio](#). In their OPAC, there is a scoping feature by types of material and segments of the population. The catalog is unified by an over-all design, features metafind searches of multiple resources at once, and includes a brief citation browse display for quick access. Loads of cover art spruce up the return list and if a cover is not available, a whimsical "The Dog Ate the Cover" icon fills the spot. (Rogers, 2003)

### Enticing Patrons To Use the OPAC

Kim Guenther wrote in the February 2000 issue of *Computers in Libraries* “Build it right, and they will come...back!” (Baruth, 2000). We have a lot of work ahead of us to convince patrons that our databases hold richer and more varied resources than those on the internet. A 2002 OCLC white paper decries that only 30% of college students turn to library websites when searching for scholarly information sources and only 2% begin their searches at library sites (OCLC Online Computer Library Center, 2002). An earlier study found that 30 to 45 % of all searches which start in the online catalog, regardless of the type of search, end with browsing the library shelves anyway. There was even some experimentation with making an interface look like a book shelf so that users would relate more completely with objects they are familiar with. This type of graphical interface lightened the “cognitive load” of searching and allowed the user to concentrate on the search strategy itself (Beheshti, 1996). It will remain to be seen what kind of “virtual reality” catalogs may be developed in the future.

The fun factor can't be underestimated in this era of video gaming and instant messaging. The word cloud in *AquaBrowser* by BVMediaLab Solutions is an engaging and interactive graphical interface that represents words in an animation. The screen is divided into three sections to represent three functions of a search: Search is the result list by relevancy, Discover is the visual word cloud area, and Refine offers additional suggestions for the search and other customizable options (Kaizer, 2005). Try it at [Queens Library!](#) You will want to spend some time there as you experiment with the relationships of the terms you input. With my undergraduate students, this type of interface would help them with synonym generation and also give them a “big picture” of a topic and its related terms.

The [Hennepin County Library](#) outside of Minneapolis is an excellent example of a site that can serve as a portal-a one stop shopping-for a library. It features consistent branding, RSS feeds, IM for library questions, and blogs for current content. The site renews content daily and the energy of the site is appealing.

Mounting exhibits and special collections is another way to get patrons to use the catalog. [The Memory Project](#) of the Library of Congress is a striking example of offering a collection online. The [University of Pennsylvania](#) has a list of digitized collections available as does the [University of Virginia](#), with a previously undiscovered poem by Robert Frost (Curtis, 2002). Our own library is unveiling the Charlie Johnson Collection next month of forest ecology slides, research papers, and photographs. Many such digitized projects are being mounted in libraries and touted in OPACs.

Patrons beyond your primary service constituency can benefit from your catalog if you augment it with reference databases that are free. *ERIC*, *Carl UnCover*, *Agricola*, and *Medline* are good places to start (Curtis, 2002). Marketing these services helps build community support of your library. When you redesign the online catalog, bring that event to the community to help celebrate. Baylor University sponsored a funeral for their old catalog and then when the new one was launched they sponsored a christening event (Goolsby, 2000).

Our library supports half of the student body through distance education courses. It is important that the library brochures are in the orientation packets, that visits to remote education centers be made, and personalization of service be established for the distance students. Since these students rate reliability of the library services as their highest expectation, every effort must be made to minimize system downtime and maintenance must be scheduled at low usage time periods. Staff working with distance students, who initiate most of your “point of need” transac-

tions, must be proficient at troubleshooting by phone or email (Cooper, R., Dempsey, Menon, & Millson-Martula, 1998). Of course, marketing the catalog is a highlight of freshman and transfer student orientation. Public libraries can coordinate with their Chamber of Commerce to stuff a brochure in newcomer and visitor packets.

The [Harris County \(Texas\) Public Library](#) markets their catalog with their very own toolbar for internet browsers. It includes the catalog, web search engines for Google and Amazon.com, the patron record for renewals, new books and DVDs, kids and teen sites, and book reviews for reading and writing. Again, content that is customizable and fresh is the ticket to getting more traffic through your catalog.

#### Providing User Training for the OPAC

Understanding the nature and habits of the patrons you serve is important when strategizing about training. No person is an empty vessel. They come to the library with a wide range of experience in online searching, a variety of educational attainments, and personality traits that may or may not serve them well in the search process. In studying students using the OPAC, a key difference between experienced users and novices was that searchers with more experience examined their search result list more thoroughly to puzzle out factors in search failures (Novotny & Cahoy, 2006). Novices did not examine how and where they went wrong (Novotny & Cahoy, 2006). Trial and error was the most frequent procedure used in the actual learning of the OPAC (Sewell, 1986). Undergraduates are so fearless that they click around the page, rather than think their way through a search strategy (Novotny & Cahoy, 2006). It was also discovered that users rely heavily on defaults in search boxes which speaks to initial design of the interface (Cooper, M. D., 2001).

Training can come to users in many venues, ranging from individual coaching to large group bibliographic instruction. A medical library study in Baltimore found that one-on-one teaching was the most popular arrangement for students (Sewell, 1986). A previous study at the University of Toronto found that 59.3% of their test users wanted librarian help as their first strategy, 54.7% wanted help sheets, with online help trailing at 29.7% (Mendelsohn, 1994). Training is most effective when it is not a one-shot exposure to particular search skills and the training is tied to a content-area assignment at point-of-need (Novotny & Cahoy, 2006). I notice, in my work, students are most attentive close to deadlines! Some universities require undergraduate students to take a library course to assure multiple exposures in developing information literacy skills. Training is one matter, but practice is another. A study at Ohio State University found that students with experience and instruction had a 95% success rate in solving search strategy issues (Alzofon, 1984). Offered early in an academic career, a library research class would be a step-off point for successful location of resources during the student's tenure at the university. An Oakland University study in 1998 found that patrons having confidence as a researcher had a positive impact on their perceptions of the library (Lombardo, 2000). When it comes to enticing students to use the OPAC, we can use all the good feelings we can get!

The major steps in using the OPAC are to define the search and to then formulate the strategy for that search. These two steps are consistent while mining most online resources. It is important to teach concepts of searching rather than how to use a particular interface. Concepts will help a patron be flexible and versatile in approaching unknown sources online.

Often errors in searching center on the formulation of strategy when encountering an information problem. Transaction logs were examined at the University of Colorado for a study that found that students need more practice in reformulating their search strategies instead of try-

ing the same thing repeatedly (Wallace, 1993). It is also important to emphasize the differences between searching in an online catalog and searching on the internet and how the results can be returned differently. The richness of resources reflected in the diversity of formats found in the library collection, compared to those on the internet, should be highlighted.

Patrons will, more often than not, use a keyword search not knowing the difference in the results list compared to a subject search (Lombardo, 2000). Synonym strategy is a skill that needs much attention. A 2001 study at Pennsylvania State University revealed that users could not repair a failed search by rethinking their search terms with synonyms (Novotny & Cahoy, 2006). It is at this juncture in a search where the utility of a graphical interface can introduce a web of terms for the student to “play” with. Users have large vocabularies but ironically cannot repair with synonyms that match the controlled vocabulary of the online bibliographic database. If a user uses a natural language approach to the search there should be a mechanism in the catalog to index thesauri and classification systems for help. The Endeca-powered catalog is making a step in that direction (Antelman, Lynema, & Pace, 2006). There is also much confusion when using names as a search term. I often observe students not inverting the name to last name first. I also find that students do not distinguish the difference in using a name as a subject as opposed to the name as an author. For example, one of my students had found a book *by* Mark Twain when he was really interested in material *about* Mark Twain.

Computer usage has been rated a 10:1 ratio (speed of the fastest worker compared to the slowest) of speed performance compared to 2:1 on other work tasks (Wallace, 1993). While this generation of users is confident with their experience online, using complex systems can be daunting. Library of Congress subject headings and other controlled vocabulary is not entirely to blame. The online system itself is sometimes the largest barrier with typographical errors, ineffi-

cient use of cross-references, and poor design that returns all records to the user in the search instead of just the headings (Yee, 1998). Training users to search effectively, with appropriate precision and recall for the task at hand, would include some “tricks of the trade” to avoid common pitfalls. The New Mexico State University Library, using the Think Aloud Protocol, interviewed users about their search habits. They found that 52% of the search failures were due to lack of syntax in the search. For example, users did not use quotation marks to define a phrase and used no Boolean operators. Users used the wrong type search type (John Cheever as a title, for example) that accounted for 38% of search errors (Turner, 2002).

In addition to direct instruction there are other ways to provide support for users when searching our online catalogs. Patrons who use assistance in the form of help menus or library staff are more successful in their searches—also found in the Oakland Public Library study (Lombardo, 2000). Online help, though rarely used, should be contextual and visually appealing (Novotny & Cahoy, 2006). Some good examples of help menus are the ones found at [Round Rock Public Library](#) (TX) and [Teaneck Public Library](#) (NJ). At the University of Missouri, an analysis of transactions was conducted and it was found that researchers will work on a research problem for months before asking a librarian for help (Peters & Bell, 2006). With that research in mind, librarians need to walk around the reference and computer areas of the library. The University of Toronto’s study mentioned before, found that 46.7% of users asked for or accepted help from librarians in the terminal area. If a patron is helped at the librarian’s desk or at an information desk, it is more effective if they “drive” in a hands-on mode during their search instruction, rather than watch the librarian conduct the search (Mendelsohn, 1994).

### Conclusion

From all the readings of studies, experiments, and research results, the third-generation of online catalogs has a large burden of user expectations around its neck on the outset. Sophisticated, confident users of the internet expect that catalogs will behave as search engines do. Modern users are impatient, depend on experimentation over skill, and spend little time examining mistakes to assure success in future searching. These patrons are accustomed to commercial sites on the internet with social features, packed with fun. They demand resources that are visually stimulating and fresh. Natural language and little syntax employment are favored strategies. Content-enhanced catalogs with cover images, personal customization, and multimedia capabilities are necessary inclusions. Using graphical interfaces puts more interactivity into the search experience. In our textbook on page 160, Charles Cutter's principle "the convenience of the public" directed cataloguers to be concerned with the habits of the patrons using the system (Chan, 1994). In designing new systems and interfaces, his words still bear considerable weight today.

Marketing our catalogs has never been more important. With students rarely choosing our catalogs for resources as their first choice (and than STILL going to the shelf to browse!), we have to create catalogs that are less for librarians and more for the consumers of the information. Unifying the look and feel of the catalog through branding will solidify the presence of the catalog in patrons' minds. Using the catalog to highlight special collections and free databases will invite more users from the community into our resources. Being a reliable source of information with solid and dependable network systems and speedy delivery of online resources to distance education is extremely important. Publicly celebrating the library's catalog features in newslet-

ters, blogs, MySpace, RSS feeds and any other media stream that reaches users will get the word out that your collection has more content and is more media-rich than the internet.

With so many deficits in search skills strategies, teaching users is a one-on-one situation is highly desirable, albeit time-consuming and expensive. Being available in search terminal areas is another way to provide access to librarian expertise when users are searching. The frustrating aspect of helping users is the ones who “get away” as you never know if their search was successful. Being more of a presence in the search area may reduce these numbers. Inverting names, using Boolean logic, quotation marks, wildcards, and truncation syntax will arm the user with more skills for success. Differentiating a subject search from a keyword search is another skill to impart. Repairing strategies using synonyms needs plenty of coaching and with the help of graphical interfaces can be made easier to grasp for users. Even choosing the correct type of search will help eliminate some failed searches.

If you build the best catalog on the planet, will the patrons use it? As we have seen, it all depends on marketing, the interface’s response to the user you have in your community, and the ability of the catalog to be flexible and customizable. It depends on the attitude of the reference staff in being physically present to aid researchers. It depends on the effort made in planning instruction opportunities that are numerous and provide many activities for practice in real assignments. We should not expect that all the elements will fall into place simultaneously. Improvements can be instituted periodically and the catalog can evolve over time. The most crucial response is to start planning now. As Stewart Brand, creator of *The Whole Earth Catalog* is quoted, “Once a new technology rolls over you, if you're not part of the steamroller, you're part of the road” (ThinkExist.com, 2006).

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