СТАТИИ ОТ ЧУЖДЕСТРАННИЯ ПРОФЕСИОНАЛЕН ПЕЧАТ

User Experience for Library Users: Time for a Change *
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Abstract
The expectations and behavior of today's library users have been undergoing a major change with their widespread adoption of Web search engines and other Internet tools and services, the emergence of new players such as Google Scholar and Windows Live Academic in the scholarly information-retrieval arena, and the introduction of technologies that are Web 2.0 oriented. [1] Although users consider library resources much more trustworthy and credible than Web search engines, Internet encyclopedias, and other freely available Web services, the typical information seeker is still attracted to the ease of use that such resources provide. Recent reports, such as those prepared for the Library of Congress and the University of California Libraries, address the competition that libraries face in what used to be their exclusive domain. [2] [3] The reports also describe the vision of some libraries regarding the shift that they must make in their services to remain relevant for today's information

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seekers. Furthermore, libraries realize that good discovery tools are indeed mandatory but are not sufficient; to address users' needs adequately, the discovery process must be supplemented by accurate delivery tools and well integrated in the users' normal workflow.

This paper addresses the current trends in library systems and scholarly information retrieval and discusses the movement of vendors and libraries toward a newgeneration, user-centric library experience. The paper also suggests how a library software user interface can be incorporated into a larger context of tools and services, including social computing services, to help information seekers benefit from library resources and services as part of their overall research experience.

Where are the users, and why are they there?

In late 2005, a report published by OCLC on the perception of libraries and information resources revealed noteworthy patterns of user information-seeking behavior, patterns that have considerable implications for libraries' future directions. The report analyzes the results of a survey of more than 3,300 respondents aged 14 to 65 from Australia, Canada, India, Singapore, the United Kingdom, and the United States. A later report, focusing primarily on the perceptions of college students at the undergraduate and graduate levels, was published in April 2006. [4]

Only 2% of the undergraduate and graduate students said that they begin their search for information on a particular topic at the library's Web site, despite the fact that 61% have used the library Web site at least once and 85% rate the online library as a favorable resource. Furthermore, 77% believe that the library resources (online and physical) are trustworthy or credible, and 76% described them as accurate (only 23% described search engines as trustworthy and credible, and 24% termed such search engines accurate). Most of the students (75%) agree that librarians add value to the information search process.

When the students were asked about Internet tools and services such Web search engines, e-mail, instant messaging, online news, online bookstore, blogs, and RSS feeds, their answers indicated that many are familiar with and use most of these tools–primarily e-mail, Web search engines, and instant messaging. On the other hand, more than 50% of the students replied that they were not aware of their library's e-book collection, and only 62% were certain that their library offers online databases and e-journals. When asked which resource they turn to first when they are looking for information, 89% of the students indicated Web search engines, 2% indicated online databases, and the rest indicated other Internet tools and services.

The students surveyed by OCLC consider Web search engines faster (90%), more convenient (84%), and easier to use (87%) than the online or physical library. An examination of the increasing popularity of the new, Web 2.0-oriented tools reveals where the users are flocking–for example, in September 2005, del.icio.us announced that it was serving one million registered users, [5] triple the number of users that it served nine months earlier. [6] MySpace, with more than 100 million users and a billion entries per day, [7] was second only to Yahoo in the number of daily page views as of August 2006. [8] Services such as Flickr [9] (4.5 million registered users [10]), Facebook [11] (more than 10 million registered users [12]), Connotea, [13] and CiteULike [14] are engaging users at an increasing pace.

Librarians need to better understand what it is that pulls today's users away from the library despite the users' respect for and trust in the library's resources. This change in users' perceptions and their preference for Internet tools and services such as Web search engines, e-mail, blogs, and RSS feeds are the outcome of several factors. First, users assign great value to the ease of use, ease of access, and speed that characterize Internet tools and services. Web search engines may lack the options available through library catalogs and scholarly databases and may be less accurate, but they offer immediate satisfaction. Furthermore, some Web search engines are starting to adopt library-like tools, such as refinements offered by Google and context-sensitive reference linking offered by Google Scholar since 2005.

Another factor is the preference for integrated search environments covering a broad information spectrum (such as those offered by Web search engines) over "a fragmented set of systems to search for published information (catalogs, A&I databases, full text journal sites, institutional repositories, etc) each with very different tools for identifying and obtaining materials. For the user, these distinctions are arbitrary." [3] Although libraries address this problem by offering metasearch systems, these do not yet provide a user experience with the coverage, performance, or ease of use that the Web search engines provide.

Another aspect that plays an important role is the emphasis that the new Internet tools and services place on the user in adherence to the Web 2.0 design concepts: users are the focal point, and the services are built around them. Such user-centric design goes all the way from tailored toolbars to a "mashup" of services, in which "a website or web application seamlessly combines content from more than one source into an integrated experience." [15] Current library systems, on the other hand, still wait for the users to come to them. Libraries are only starting to explore similar directions, as demonstrated by the Talis "Mashing Up the Library" competition. [16] The Go-Go-Google-Gadget, which won first prize, demonstrated how library information can be integrated into the personalized home page offered by Google.[17]

Last but not least is cyber-interaction. The wide adoption of and participation in social computing services such as Flickr and de.licio.us indicate that users are happy to share their work with others and benefit from others' work. Many users also consider the Internet a meeting place that enables them to exchange scholarly and non-scholarly information.

What can libraries do to regain their users?

Indeed, libraries do not measure up to the prevalent Internet tools and services when it comes to speed, simplicity, and convenience. However, libraries have several important advantages that can help them create a more satisfying experience for users.

First, libraries offer quality information resources that librarians have carefully selected to meet their users' needs. Hence, the results of a search in the library's resources are most likely to match what the user is looking for. On the other hand, users trying to locate information via a Web search engine might enjoy instant gratification but might also find themselves engaged in a long and frustrating process of finding the needle in the haystack. Not only can a library designate a spectrum of appropriate scholarly information, but it can also offer slices of it to individual users on the basis of their affiliation and personal preferences. The information spectrum can include resources that the library controls, such as the catalog, local digital repositories, course management systems, and institutional Web sites; it can also include remote resources, such as abstracting and indexing databases, e-journal collections, and subject gateways. Unlike librarians, users are not aware of the differences between resources–whether a resource is locally hosted or remotely hosted, free or licensed, MARC formatted or Dublin Core formatted–so libraries should create an integrated, coherent environment that renders these distinctions invisible to the user.

Furthermore, users do not search for the sake of searching; they search to find and obtain information. An Internet search can easily lead to frustration, since the delivery is not guaranteed: physical items may be unavailable or even undeliverable because of the physical distance; online items may be inaccessible because the Web site that cites them does not provide a link to the electronic version or provides a link to a copy that is not "appropriate." [18] Libraries, on the other hand, can usually obtain a copy for the user, regardless of where it may be. Taking advantage of current technological capabilities, libraries can, and should, offer a clear statement of an item's availability and the means for the user to obtain the item. To quote from the recommendations presented in the University of California report, the future software interface for libraries should "provide an 'I-want-this' button that is present when the context warrants, with the goal of always offering a fulfillment option. No dead ends."[3]

Another important aspect of the user interaction is the integration of the research process into both the library environment and the out-of-the-library environment. While libraries can offer the means to integrate the process in both environments, the prevalent Internet tools and services may not be willing or able to integrate with the library environment. Library-controlled systems are more likely to be integrated with institutional portals, authentication and authorization frameworks, finance systems, course management systems, and institutional services, whether in a single institution or a consortium. At the same time, libraries can integrate the research process with third-party tools and services, including Internet tools such as Connotea and Facebook, and even expose the library data to external Web search engines, thus providing the data to users within other contexts.

While Internet tools and services such as Amazon present recommendation systems based on accumulated user behavior, library systems can enrich such recommendations with the number of print copies owned by the institution, the circulation rate of physical items, the number of download requests for electronic items, and other forms of input. Library systems can also use such data to effectively enhance algorithms for the relevance ranking of the search results.

The library community has accumulated a wealth of data, such as bibliographic metadata and authority files, created to describe scholarly information and provide better means for the discovery of resources. Despite Web search engines' current practice of not relying on such data when performing searches, the data can and should serve to improve the search experience. For example, a library system can use structured bibliographic metadata not only for enhancing the search process but also for enriching the relevance ranking algorithm and recommendation options. Using authority data, such systems can offer alternative searches when an initial search is not successful.

And last but not least, with their control over discovery and delivery systems, libraries can tailor the user interface to match the needs of their own users, making the research process as friendly and familiar as possible and aligning the interface more closely with other elements that brand the institution.

Current industry trends

Libraries are anxiously seeking systems and tools to address the current challenges and provide a gratifying user experience that will attract users to their collections and services. Some libraries have been focusing on improving their online public access catalog (OPAC) as much as possible given the tight integration between the OPAC and the integrated library system, while others are looking for solutions that are more comprehensive and deal with materials beyond those in their catalogs.

Vendors of current solutions that are addressing the changing user expectations can be divided into two categories: those that originated in the library market, like Ex Libris [19] and Innovative Interfaces,[20] and those, like Endeca [21] and FAST, [22] that have been successful in other environments, such as Internet shopping malls, and are eager to apply their solutions in the library domain, typically on a project-by-project basis.

Endeca is most notable in the library world for its project at North Carolina State University, where the company developed a new user experience for the university's library catalog. The new catalog was released in January 2006 and was warmly received at NCSU and applauded in the industry. However, according to Calhoun's report for the Library of Congress, "the new NCSU catalog is limited in scope to NCSU's library collections; it has not diversified its functions to cover more of the scholarly information universe. It does not merge the ILS finding function and metasearch, nor does it support a variety of metadata types. It does not interoperate with the campus learning management system or enable users to search library data directly from external search engines or portals. This is not to be critical of NCSU's highly praiseworthy achievement, but to suggest the scope of the problems that remain to be solved." [2]

The new version of OCLC's WorldCat, launched in the summer of 2006, is another attempt to address the user experience challenges within the well-defined boundaries of the catalog. Although featuring new search and navigation options such as faceted browsing,[2] the WorldCat search scope is limited to the catalogs of the member libraries and does not provide local branding or tailored services for individual libraries.

Responding to the new challenge, Ex Libris is offering the Primo® discovery and delivery solution, expected to be released in the first quarter of 2007. Unlike the development workflow that characterized library products in the past, the design of the Primo system started at the level of the user experience. User-interface architects surveyed users' needs, preferences, and behavior patters and based their initial design of the Primo software on the results of that investigation. Validated by points made in the recent library reports, correspondence in online forums such as NGC4LIB,[23] discussions with customers, and usability studies, the proposed user experience design formed the basis of the development of the product.

The Primo discovery and delivery system enables libraries to present their collections to users in a way that was not feasible previously. From the users' perspective, all library materials are accessible through a single interface, which offers fuzzy searching, "Did you mean?" suggestions, relevance ranking, and faceted browsing. Furthermore, Primo displays availability information along with the search results and provides a "Get it" service that suggests the best option for obtaining the material–be it physical or electronic and regardless of its type and location.

Multiple elements adhering to Web 2.0 concepts were incorporated into the Primo user experience, such as social computing features, including tagging, rating, and reviews that members of the institution's user community or that of other institutions can share. In addition, the Primo system enables users to move items to their other environments–for example, they can store search results in their Connotea account.

Addressing the current trends among institutions to join forces in library consortia, Primo enables institutions to define multiple views of their collections and services; each view is tailored to a subset of user groups or consortium members.

One of the challenges in the design of the Primo system was the difference between the technological capabilities available for handling local library collections, such as the library catalog, local digital repositories, and other collections that a library can harvest and control, and those available for accessing remote resources through metasearching. Primo deploys the MetaLib® metasearch engine, which provides seamless integration between local and remote resources.

Usability studies have demonstrated that users find the Primo system friendly and rewarding. Comments such as "This is so much nicer than the library catalog. Genius." [25] suggest that this new approach of leveraging information gathered by libraries and offering it to users in a way that competes with popular tools is indeed the key to success.

Conclusions

Libraries need to adapt to the changing world and accommodate the current and future information

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[2] Faceted browsing enables the user to narrow down search results; the system analyzes the result set and groups the results according to data it extracts from metadata fields such as subject, author, date range, material type, and language.
"Unlike a simple hierarchical scheme, faceted classification gives the users the ability to find items based on more than one dimension. This is becoming a popular and useful way to narrow large results sets and make the different types of metadata more easily seen and used. [24]

needs of their users. However, accepting the "good enough" approach of popular Web tools and services and giving up the quest for absolute quality, accuracy, and perfection is not an easy task for librarians. To quote the University of California report, "The famous sage Howard Cosell once said, 'What's popular isn't always right. What's right isn't always popular.' We suspect when it comes to the Internet and how it has simplified searching, what is popular is also right."[3]

The new software solutions that are now being developed for libraries focus on the discovery and delivery of relevant, top-quality resources; can be integrated in the user's environment; are designed to meet the user's expectations for a single point of discovery; provide fast, simple, and powerful searching; and encourage collaboration. With these qualities, the solutions will undoubtedly be able to bridge the gap between library offerings and user expectations. It is time for libraries to work with vendors and regain the lost users.

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