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Kinda Just Like Google: Presence and variety of search options on library homepages

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Introduction

In order to take the temperature of the academic library community with regard to external search boxes, the authors visited 111 academic ARL Library web sites on October 9th, 2007. In visiting each homepage, a record was kept detailing the presence and type of search boxes appearing at the top level. The resulting data paints an interesting portrait of diverse approaches, congruencies, and innovation. Globally this measure strikes to the core of current technological challenges with library search and web site design.

Authoring and managing a library web site has never been an easy task. The sheer amount of online information accessible through library portals coupled with the rise of Google and other large commercial search services make this task even more daunting. Patrons have come to expect simple, intuitive, and powerful interfaces that at the same time provide quick and useful information. Inherent in library web sites is a challenge to balance different interests while also trying to meet rising user expectations.

In balancing these interests, at least three discrete tensions can arise in the design of a library web site. First, library web sites are somewhat unique in the online world in that they must provide services to patrons in both a bricks and mortar and an online environment. Google, for example, is not especially worried about posting the hours that any of their data centers might be open. Second, library web sites can aspire to be both “sticky” and “transparent”. Even though the primary mission of the library is to quickly connect users with resources, there is also a competing goal to inform users about library services and to make the site marketable. Third, library web sites wrestle with the dichotomy of simple vs. complex. The range of users that library websites serve and the variety of resources they provide is vast. In the case of academic libraries the same site is meant to serve the neophyte seventeen year old as well as the seasoned researcher. While the desire to make searching easy is very tangible, the landscape is complex with a variety of disparate search targets, many of which are not directly under the library’s control.

All of these challenges are reflected in looking at the homepage for any given library. An often contentious decision point in any library web site design is the “search box”. Should there be a search box on the homepage? What should it search? How should it be emphasized? The difficulties in answering these questions can be mapped to the three dichotomies discussed above. A “search this site” option can appeal to the bricks and mortar aspect of the library for locating information such as hours, borrowing policies, and other physical services, whereas a federated or metasearch feature can obviate

the physical library altogether. Any top level search box is a seductive proposition with users who are accustomed to the magic of a Google search. A question raised in all libraries is whether our technology is good enough to be that transparent, given the variety and complexity of search options.

For the purposes of this study, only the academic ARL Library web sites were visited, excluding federal and state governmental libraries. Every effort was made to reach the library homepage and not an intermediate page of a parent institution. A search box was defined as an area in which the user could type a search term to query a specific target. The total number and type of search targets were recorded for each library. The scope of a library homepage was defined as including any content available without navigating away from the page. Thus a site employing some type of client side solution like JavaScript to present tabs for various searches was counted as having multiple search targets on the homepage. If a site contained tabs that resulted in the loading of a separate web page, the subsequent page was not counted as a separate search target available on the library homepage. While the difference in the two might seem minor in terms of click-count, the client side solution keeps the user embedded in the same context of the main library homepage. The presence of a search box in that top level space was viewed as an indicator of the library's confidence in, and value of, an external search option.

From zero to ten search targets on the homepage

Interestingly, 11.71% of the web sites visited offered no search option at all from the top level. Given the issues raised about competing goals of library web sites, it is easy to conceive that the risks of such a choice could outweigh the potential benefits. Perhaps the message in this decision is that the library search environment is simply too complicated to be consolidated at the top level of a library web site.

Almost three-quarters (71.17%) of the libraries visited offered one to four search targets. More than twenty percent (21.62%) of the libraries offered a single search target. Among the libraries with only one search target on their homepage, 15 had a search for the catalog, eight featured a “search this site” option, and one employed a federated search utility. Eleven percent of library web sites had five or six search targets, and the remaining 5% of libraries visited had seven to ten search targets. From a design standpoint, libraries tended to limit the initial appearance of search boxes to no more than two on the homepage. In order to accommodate the additional search targets, a variety of technologies were utilized, including drop down menus, radio buttons, and JavaScript-driven tabs.

Catalog rules

The online catalog remains in the center of the academic library universe as measured by the frequency of its inclusion on the homepage as an external search utility [Table 1]. Seventy-two percent (72.07%) of libraries visited featured a catalog search, and 81.63% of those libraries who had a search box at all included the catalog. In addition to the centrality of the catalog to library mission, the ease of scripting external searches into most catalog systems could also play a role in the prevalence of the catalog search option. Following the catalog at 60% of sites visited was an option to search the library web site. Almost half of the sites (10 out of 21) that offered two search options featured both the catalog and web site. When two separate search boxes were present on the homepage it was most common that the second search box was for searching the site, and it was often de-emphasized in terms of size and placement.

The “search this site” convention is seen across many types of organizational web pages, and is often helpful in locating information not easily accessible through the web site’s navigational hierarchy. What is particularly interesting is how such a search function operates on a site that is also striving to provide other types of search. For example, in viewing Amazon or Google, the search box is focused on searching products or web sites, and not the internal pages about the company. The presence of both types of search (catalog and web site) are emblematic of the tensions between both the sticky/transparent and bricks/online dichotomies discussed earlier.

Metasearching and journals

Metasearching of journal articles (27.03%) and a dedicated search for journals/ejournals (25.23%) were also popular search options found on ARL library homepages. Both of these choices are certainly indicative of the central role that journal literature has in academic libraries. They also demonstrate the challenges to clearly discriminate, for an average user, the difference in searching for journal articles as opposed to searching for journal titles. Of the 30 libraries that featured metasearch on the homepage, 12 of them also had a separate journal/ejournal search. The metasearching option for seven (6.31%) of the libraries visited also included books. While there has been a good deal of debate in the profession about metasearching (Baer, Luther, Newton, Sherlon), these results reveal that a significant percentage of the academic libraries are funneling users directly to metasearch from their homepage.

Other search targets further illustrate the challenges that face academic libraries as well as demonstrating a diversity of approaches. Fourteen libraries (12.61%) had a search box feature where the user could locate a specific database. Similar to the divide between searching for a journal and searching for journal articles, the difference between searching for a database and searching a database could easily be lost on many library users. Positioned outside of a library-centric search, thirteen libraries (11.71%) had a search box on their homepage for searching Google Scholar. Nine libraries had a search box to Google; four of these also featured Google Scholar. Rounding out the Google universe, three libraries had a search for Google Books. The other search target in the 10% range was a search of the parent institution (10 libraries, 9.09%). In some cases it appeared that the parent search box was part of an institutionally mandated web site template. Other choices for search targets on the library homepage hovered at less than 5%. These choices included specific subscription databases (5.41%), media/audiovisual subsets from the catalog (3.6%), consortial catalogs (3.6%), WorldCat (3.6%), and course reserves (3.6%). Searches for local knowledge bases, library staff directories, and digital collections were found independently on 2.7% of the sites visited. Only one library had a search from the homepage to their Institutional Repository.

Where are the IR’s and digital collections?

The low presence of search boxes on these library homepages for digital collections or Institutional Repositories (IRs) may not be as surprising as it first seems. By the very nature of these digital entities, they tend to have their own digital presence separate from the library's web presence. Users approaching digital collections often get to them from paths other than the library homepage, paths such as Google searches on specific topics or links from non-library sites. There may also be a perception, particularly with collections specifically designated as open access, as is most often the case with IRs, that they are already sufficiently accessible from Google and do not need their own

separate search. An aspect of this perception is the fact that the audience for digital objects or open access works is the whole world, not just the local user population.

Digital collections (and to a lesser extent IRs) are not necessarily solely library projects; they are often co-created with university archives or special collections departments, which may or may not be administratively connected to the library system. Thus the lack of a search target on the library homepage could simply be a reflection of their position in the hierarchical structure of the university organization. There can also be overlap with search targets already present on the homepage. The objects from digital collections and IRs could already be represented through web pages or within the library catalog. With the search presence of the catalog and website being so prevalent and prominent, then, a separate search for digital collections could be seen as redundant.

More like Google, a single federated search

Twelve (10.80%) of the library homepages visited were employing some type of “federated middleware” that returned search results without referring the user into a separate interface or application. When multiple targets were searched in this manner from a single search box, the results were often clustered by each source. These efforts appeared to be predominantly local, homegrown scripting, although one library was employing a vendor based solution. Two other libraries had links to a “coming soon” search that seemed to be along the same lines.

The average number of search targets for the federated middleware approach was 3.91, with a range from one search target to seven total targets. The types of search targets largely mirrored the targets chosen by all libraries with frequent occurrences of the library catalog, web site, and article metasearching. The two targets which were more common in this group of twelve libraries were incorporating a journal/ejournal search (75% vs. 25.23% of all libraries visited) and a local knowledge base (16.67% vs. 2.70%). Conversely these libraries were less likely to include Google options: Google Scholar (8.33% vs. 11.71%), Google (0% vs. 8.11%), Google Books (0% vs. 2.70%).

Conclusion

The diversity of search approaches on academic library web sites also raises the question of how the success of these search boxes might be evaluated. Much of the literature on searching has primarily focused on how to design a federated search box. While some usability studies (e.g. Augustine, Tallent) highlight difficulties in federated search design, few perform log analysis of the searches being entered. It would be interesting, for example, to find out how searches may differ that begin outside of the native application. All in all the future of library search may rest outside of the native interface or even the library homepage. With the emergence of new tools such as openURL resolvers, toolbar widgets, Worldcat.org, and Facebook applications, many users are connecting into the library resources without drilling down through the traditional homepage navigation.

This study does not attempt to scientifically determine the reasons behind any of the design or policy decisions for search usage on library homepages. However, in surveying current practice, the authors believe that the homepages of libraries offer some barometer of technology and search emphasis. The survey reveals a wide range of approaches, indicating that consolidating library search presents ongoing challenges. At opposite ends of the spectrum roughly ten percent of the libraries offered no

search functionality on their homepages while a parallel ten percent had allocated resources to develop technologies to create a Google-like federated search. Somewhere in the middle, the emerging prominence of some type of search option on the homepage reveals an acknowledgment of the ease of most commercial web search engines and a desire to replicate that experience in library search. As we move into the future it will be interesting to see if this variety of external library applications continues to take a more prominent and/or consolidated role in library web presence.

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Table 1.

Frequency of Search Targets

