

12-2016

Discovery Investigative Group (DIG) Report, December 2016

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DeFrain, Erica; Bernthal, Rebecca A.; Boudreau, Signe; Bolin, Mary K.; Konecky, Joan Latta; Mering, Margaret; Thoegersen, Jennifer L.; and Allison, DeeAnn, "Discovery Investigative Group (DIG) Report, December 2016" (2016). *White Papers: University of Nebraska-Lincoln Libraries*. 14.

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DIG Project Charge

This report is a response to the following charge from project sponsor DeeAnn Allison:

Develop a working definition of the purpose and scope for a discovery tool that includes a description of what it should accomplish. How will it help scholars connect with information?

The charge included a request to answer seven questions:

1. What content should be included and why?
2. What functions or search capabilities should be included?
3. What social media enhancements should be included?
4. How can it be structured to help both novice and advanced researchers?
5. Can you identify a “perfect” tool? If not, which ones are better and why?
6. Should we abandon Encore? Why or Why not?
7. What is the relation, or non-relation to Google products? Is a discovery tool just a variation of Google? Should it be?

Over the course of the Fall 2016 semester, DIG committee members, comprised of seven Libraries faculty who voluntarily participated, met frequently to discuss the charge and determine how to best answer each question. Our answers were ultimately informed through a combination of reviewing the current literature, investigating peer institutions’ search tools, soliciting feedback from our library colleagues through a library-wide survey¹, and the committee members’ own insights.

The responses to each of the following questions are a reflection of the consensus of the DIG committee members.

¹ In early October, DIG distributed a 12-item library-wide survey asking for feedback regarding Encore and discovery tools, which generated 25 staff and faculty responses from 5 departments (see responses at <https://go.unl.edu/encore>).

What is UNL Libraries' definition of a discovery tool?

At the core of this project was a desire to envision a discovery tool that supports the mission of UNL Libraries. An essential part of this process required accepting a working definition of what a discovery tool is, as there is currently no definition that has been universally accepted throughout the library world. At the beginning of our project, each DIG member provided their personal definition of a discovery tool. While each member had a unique perspective on discovery tools, common themes included: a simple search interface; the ability to find and access relevant resources regardless of format, location, or source; and an aggregation of results from various sources. Although some definitions of discovery are quite broad, such as Schonfeld's (2014), who called it "the process and infrastructure required for a user to find an appropriate item," this definition raises deep concerns over patron privacy. It was instead Breeding's (2014) more restrictive definition that we felt best reflected our own: "the tools or interfaces that a library implements to provide its patrons the ability to search its collections and gain access to materials" (p. 5).

1. What content should be included and why?

To be an *effective* "one stop search" for library resources, a discovery tool must be able to successfully incorporate content from a wide range of sources, including the library catalog, journal databases, institutional repositories, citation indexes, and multimedia collections into a meaningful and relevant unified results list. It does not appear that any current discovery tool is meeting this expectation, including our own, which received an average rating of 5.92 out of 10 when we asked our library colleagues to rate its ability to "discover" relevant information.

Due to these issues with relevance, we feel that limiting the discovery of items to what is locally held and then more easily filtering users to database content based on their search terms is the better course of action. We were particularly impressed by the portal-like approach as seen with NCSU Libraries (<http://www.lib.ncsu.edu/>) and Stanford University (<http://library.stanford.edu/>). NCSU in particular has published extensively on the creation and testing of their interface over many years, <https://www.lib.ncsu.edu/reports/quicksearch>.

2. What functions or search capabilities should be included?

There are several search capabilities that we feel need to be supported by any discovery tool. Above all else, the discovery tool should have a clean, accessible, and logical interface that is intuitive enough that a tutorial or FAQ is unnecessary even for advanced search options. Layout and design are important as it affects perceived functionality. We should have the ability to customize the interface, facets, and results, whether the system is locally developed or a vendor turnkey system. It should also be flexible enough to evolve with the changing research and discovery needs of our users.

Visual placement of functional features is critical. Features that are not obvious or are not immediately apparent to users may be underutilized. Visual cues are also important, including the use of icons, color and size for definition, and Alt text explanations of search screen

elements. There should be obvious access to help and chat options, including prominent placement of the AskUS chat tab.

For basic/default searching these features are necessary requirements for a discovery tool:

- Auto-complete suggestions / “Do you mean?” should provide extensive suggestions for alternate terms, typo corrections, misspelling alternatives, and previous searches from the search history
- Meaningful facets to increase search precision, including search by language, year, material type, genre, location, etc. This must include the ability to use more than one facet, e.g. language, year and material type. The facet searching must also allow one to select more than one element within a facet, e.g. choosing English, French and Chinese within the Language facet (filter).
- Set limits by using facets that are maintained through subsequent searches
- Exact phrase searching
- Specific Field searching - Though typically reserved as an advanced search feature, access to specific field searching from the Basic search screen would be advantageous. For example, a user should be able to perform an exact title search directly from the main page.

A discovery tool should include advanced search functionality, featuring multiple search boxes and support for complex search strategies that are highly visible and accessible from the main page. Users should not be required to execute a simple keyword search in order to gain access to the more refined advanced search options. Advanced search should support all of the basic functions, and:

- Specific field searching, including title, author, subject headings, ISBN, ISSN, call numbers, and other standard numbers
- Support for search term adjacency connectors for conditional phrase searching
- Displayed search history, allowing past search results to be incorporated into subsequent searches, saved, and shared via email or text.

3. What social media enhancements should be included?

Though many discovery tools include a variety of social media enhancements—including features such as ratings, comments, sharing, and tagging--this did not come up in discussions or readings as a major component of discovery tools (Breeding, 2014). Wells (2016) analyzed the transaction logs for Curtin University Library’s implementation of Ex Libris’ Primo discovery service and found that social media functionality was rarely used (on average 7 uses per 500,000 searches). Social media integrations are not a major area of concern for discovery service at UNL Libraries going forward.

4. How can it be structured to help both novice and advanced researchers?

Our primary assumption is that the discovery tool will most likely be used by those looking for quick and easy access to locally held materials, and guidance towards appropriate collections

based on search needs. We feel that all discovery tool users will be greatly assisted by readily informing them that the results are not comprehensive and drawn from a limited number of easily identified collections. All search results should include links to relevant resources, databases, and subject librarians, similar to what is done at NCSU Libraries.

5. Can you identify a “perfect” tool? If not, which ones are better and why?

There is broad consensus that there is no perfect tool. Both DIG and respondents to the survey indicated this overwhelmingly. Throughout the semester, we have had many conversations informed by our own experiences and the results of the survey, on something that might be better than Encore. There is a great deal of interest in both Google Scholar and in a Google-like interface, with one survey respondent citing Ciccone and Vickery’s (2015) findings that Google Scholar outperformed both [Summon and EDS] for topical searches, and did just as well for known-item searches.

The ease and intuitiveness of using Google, and the almost universal familiarity that people have with Google, were the general reason for this interest. Likewise, the potential of using Linked Data to add library resources to Google/Google Scholar makes it even more appealing. There was no particular discussion switching to products from other ILS vendors such as EBSCO or ProQuest. The reasons included the idea that those products are either no better than Encore, or that the features that might be an improvement are not compelling enough to warrant a change.

The search interface was also a major topic of discussion among DIG and survey respondents. One respondent referenced Stanford Library’s interface as an improvement over our own, stating, “[It is] not perfect, but I quite like Stanford Library’s approach (<http://library.stanford.edu>). It is not integrated, but provides a simple search box, and performs separate, segregated searches of the catalog, database list, and website.”

6. Should we abandon Encore? Why or Why not?

Again, the consensus appears to be that this is not a time when we feel strong motivation to abandon Encore in favor of another discovery tool. The reason includes the idea that no product is significantly better than Encore, as well as the fact that EBSCO and ProQuest (and probably other vendors) privilege access to their own databases and other electronic resources above access to products from other vendors. Moreover, there may be a revolution in discovery that will start to occur as the next generation catalog is introduced (a “frbr-ized” Linked Data catalog with an information architecture quite different from the present model used in library catalogs and other discovery systems). One survey respondent remarked that, “I don’t think the time and money we would invest to adopt another system would be worth it right now, because the world of discovery is in flux, and big developments are on the horizon.”

There is some interest in VuFind, however more information about how it works and the resources needed to implement and maintain it is needed. Another possibility discussed in the group was moving away from an integrated discovery tool entirely and implementing the portal-like approach as used by Stanford and NCSU, in which content is displayed in discrete content categories such as Books & Media (catalog), Journals, Articles, Databases, Websites, etc.

7. What is the relation, or non-relation to Google products? Is a discovery tool just a variation of Google? Should it be?

Web discovery tools have primarily been developed to emulate the intuitive ease of internet search tools through the use of relevance ranking and single search boxes. The Quick Search box on the UNL Libraries' homepage is visually similar to Google, and five of the respondents to the Encore survey described Encore as being "Google-like," although many respondents indicated that Encore is notably less successful in terms of relevance and accuracy. This critique extends to the literature as well, where one recent study concluded that Google Scholar outperformed both Summon and EDS on topical searches (Ciccone & Vickery, 2015). Another study concluded that Google Scholar connects researchers with resources faster and more frequently than library discovery services (Schonfeld, 2014).

Most discovery tools have attempted to provide access to a more comprehensive index of results that go well-beyond the local holdings of a particular library. Summon, Ex Libris, and EBSCO for example, all maintain enormous proprietary indexes, ensuring users are confronted with thousands, sometimes millions, of results that are not immediately accessible through local subscriptions. This can be an asset for advanced researchers who desire a more comprehensive results list than would be found through searching a limited number of disciplinary databases, but it can be equally confusing to novice researchers who have trouble evaluating a multitude of results and quickly locating locally-held items (Nichols, Billey, Spitzform, Stokes, & Tran, 2014).

One survey respondent stated that, "Yes, discovery tool is a variation of Google, but a discovery tool should be something more than Google," but unfortunately did not elaborate on what that might look like. The DIG committee ultimately determined that discovery tools should strive to reach Google's ease of use, but refrain from presenting millions of extraneous results to library users since relevance remains problematic.

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