

Discovery: It's About the End User

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The elements of discovery are all unified by one thing — the user experience. It is about the ideal blend of content and technology to optimize the value of the library collection and ensure satisfaction for each user.

First and foremost, discovery is a user experience. The user needs to be able to search the entire library collection completely and efficiently, find the most relevant (and most valuable) content quickly, and link to the full text immediately and accurately. That is the promise of discovery.

Discovery services were created to provide a single search of a library's collection (and beyond). These services should be simple, yet powerful. They should cater to all of the library's users: undergraduates, graduate students, post-graduates, staff, and faculty. A simple **Google**-like approach is important for most users and, while advanced features may not be front-and-center, the reality is that discovery needs to be a true academic research experience. This means that as we take steps forward to make a single, fast search of the library's collection, we also have to concentrate on how the library can differentiate itself from **Google**. In the end, libraries are certainly competing with **Google** for the attention of users.

What is it that separates libraries from **Google**? Three things come to mind right away:

1. **Librarians** (who, unfortunately, most end users do not interact with consistently).
2. **Valuable full text** (journals, books, etc.) that is not freely available on the Web.
3. High-quality **subject indexing** for nearly every important piece of research ever published.

If constructed properly, a discovery service should leverage that high-quality subject indexing to expose the most relevant and most valuable articles to the end user. Then it should make access to full text very quick and easy for that user (i.e., requiring as few clicks as possible, limiting the number of times the end user is dumped onto the publisher Website, having to reconstruct their query in order to search for the full text). The user must come away with the notion that the library discovery service served them well and that they had an experience that only the library could provide.

One major advantage that properly designed searchable library resources offer is the level of precision in searching — largely attributed to the intricate subject indexing available in some of the most refined indexes. And while end users may not care *how* the best results appear on the top of the list, they do care that they are precisely suited to their needs. Users don't care if they get ten results or a million results; they just want the first page of results to provide the most useful content (e.g., articles, books,

images, etc.). Therefore, if relevance and value for top results are not obvious and immediate, we may not have a second chance to impress and fulfill the expectation of the Web-savvy (and impatient) **Google** generation. This means that precision is truly critical. Thus, simplicity in searching and comprehensive coverage of materials is only as good as what we can do with it to provide the best possible results for users. In the past, we thought of subject indexing as a way to browse a given database. But the reality is that subject indexing makes keyword searching much more powerful because we can leverage the intricate work of subject experts to refine relevance ranking. Some discovery providers assert that searching full text is the best way to derive relevance ranking. But actually, while it does provide comprehensiveness, full-text searching only gets us part of the way there. It is the subject indexing that provides the relevance algorithm with what it needs to ensure that the first page of results offers the highest level of satisfaction to the end users. Therefore, ideal search results are achieved only through properly leveraging a search of both the full-text searching and detailed subject indexing. Searching anything less means providing results that won't meet user expectations. User testing shows that we have to get it right (the first time) because when users question the value of the results, they inevitably move on — typically back to their **Google** comfort zone.

If discovery is to be valuable to end users and librarians alike, it has to be clearly relevant for subject-specific research. This is accomplished first by having all of the available scholarly journals and other resources in the index. From here, it is about the ability to search this content. In order to have the best results on the top of the list, a discovery service must include a combination of full-text searching for completeness and detailed subject indexing for precision.

Every discipline has its own definitive index that is considered valuable by the subject experts in the library. Ask any psychology bibliographer the primary resource for psychological research, and they will undoubtedly tell you: "*PsycINFO*." Religion has *ATLA Religion Database*, engineering has *Inspec*, law has *HeinOnline*, music has *RILM Abstracts of Music Literature*, and so on. There is reason for this: each of these databases has the intricate, thorough indexing (as well as deep backfiles) that allows subject researchers to truly uncover the best possible articles and other materials for their searches. When these indexes are integrated with full-text searching of journals and books, as well as metadata from other resources (e.g., images, video, music scores, magazines, conference materials, etc.), the end result is revolutionary for pointing the user to the sources that are right for them.

So, once the user is presented with their ideal source (or sources), the focus must shift

to connecting that user to the full text. The perception is that link resolvers do that job just fine. Unfortunately, end users have the expectation of single click access to full text as well as 100% accuracy of linking. No link resolver provides that. In fact, even when accurate, link resolvers require multiple clicks. According to **Trainor and Price**, link resolvers just plain fail almost one third of the time.¹

The necessary solution is to strengthen linking by complementing link resolvers with direct links to full text from e-journals and databases. The discovery service vendor should offer direct links with 100% accuracy and one-click access. This is clearly what end users want!

In the end, purchasing decisions for discovery services will likely be tied to the effectiveness of those services to satisfy the needs of end users. According to **Asher, Duke, and Wilson**, there are clear differences in the search effectiveness of discovery services.²

Testing to understand user habits must be an ongoing process and a high priority for any discovery service vendor. Such user testing can provide ideas for future product enhancements. Librarians are also important in the ongoing quest to improve these services. Librarians are important liaisons between end users and vendors. Librarians have an understanding of user needs but also the need for gaining over-arching value (e.g., interoperability between discovery and other library resources). For example, a discovery vendor could have by far the best content and relevance ranking algorithm, but librarians may want to access their discovery service via another interface. Sophisticated API options and partnerships with ILS vendors offer libraries the choices they desire. The goal is to create seamless options for libraries, but making such partnerships happen is not easy given the underlying competitive stances.³ In other words, ILS vendors are likely to partner only with discovery service providers that are not direct competing with an ILS of their own.

It is necessary to watch end users and listen to librarians in order to ensure that discovery services become widely adopted. This is needed, because the battle for the attention of end users (with the likes of **Google**) is not just a library problem, it is a library vendor problem as well. The ideal discovery service can help both libraries and library vendors in that regard. 🐾

Endnotes

1. **C. Trainor and J. Price**. "Digging Into The Data: Exposing The Causes of Resolver Failure." *Library Technology Reports*. October 2010; 46(7):15-26.
2. **A. Asher, L. Duke, and S. Wilson**. "Paths of Discovery: Comparing the Search Effectiveness of EBSCO Discovery Service, Summon, Google Scholar, and Conventional Library Resources." *College & Research Libraries*. July 2013.
3. **M. Kelley**. "Coming Into Focus." *Library Journal*. October 15, 2012; 137(17):34.

