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Beyond the Single-Search Box: A New Opportunity to Scale Library Services (and promote the value of the library through discovery)

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Reflecting a moment on the June 2013 issue of *ATG*, **Mark Y. Herring's** comments regarding how libraries need to better promote their value to users seems both timely and appropriate.¹ In response to two recently released studies,² **Herring** noted that libraries are really only providing help to a small fraction of those who could really use it. If, as both of these studies report, libraries are not perceived as all that important to students and faculty, then **Herring** advocates finding new strategies since the current strategies simply don't appear to be working. The need for libraries to find new ways of communicating value and connecting with users are pressing problems. Discovery services can help tackle these challenges.

The latest iteration of discovery service is "Web-scale discovery," a service that searches across a range of pre-harvested and indexed content; this means the service creates an index of content from publishers, libraries, and other providers in advance of a search ever being conducted.³ When considering or selecting a discovery service, libraries often focus on reasons such as: "We want to provide better access to our databases," or "We need to simplify searching for undergraduates," or even "We're looking for a single search box solution." And when the **Summon** service first came to market, both libraries and vendors, too, focused on the dream of a single search box across library resources. This focus stemmed from the desire to move beyond the limitations of available technologies at the time, such as federated search and next-generation catalogs (discovery interfaces for library catalogs such as **AquaBrowser**, **Encore**, or **Primo**), as well as the very real need to provide users an intuitive starting point for research on the library's Website.

But thinking of a discovery service merely as a single search box for searching library resources or a tool that simplifies the lives of undergraduates fails to embrace the full opportunity that discovery services provide. Discovery services *should* offer libraries the opportunity to develop new strategies and service models that can help promote the value of the library. Beyond providing easier access to valuable library content via a single search box, the real promise of discovery services is their ability to leverage technology to help libraries and librarians increase the scale of their services — making it possible for libraries

to connect with more users and connect more users with relevant resources than would ever have been possible before. Through partnership with libraries, discovery services can be powerful tools that make librarians more visible and active in the research process; in turn, these services allow libraries to demonstrate and deliver the valuable services only libraries can provide.

Numerous studies⁴ over the last decade all point to the very real and serious need for academic libraries to do something to improve the library brand and promote the value of library services. Failing to do so places the library at risk for further removal from the research process, and could ultimately lead to reduced budgets and a rapid demise of the library. It's dire stuff on the surface, but the good news is that this research provides a clear enough understanding of the challenges so that strategies can be developed to address these issues. A common theme is the need for libraries to address changing user behaviors by simplifying access to information and doing whatever is necessary to ward off competition from **Google**, often the preferred starting place where users begin (and end) their research.

In short, libraries (and vendors) are challenged to meet users' expectations. And, for better or worse, it's the **Google** experience that sets the bar for how users think discovery is supposed to work.

The wide-scale adoption of Web-scale discovery tools is one way that libraries are adapting to users' expectations. Designed to provide a more "Web-like" experience for library users via a *single search box*, discovery services provide a way for libraries to address past deficiencies in user

experience — too confusing, too slow to return results, and too many search interfaces that required knowledge of controlled vocabularies and advanced search techniques — as well as other barriers to promoting the use of library resources. Discovery services are having a positive impact on libraries. Many libraries, such as **Metropolitan State University**⁵ and the **University of Michigan**⁶ are reporting significant returns on investment for their discovery services in terms of increased usage of resources. But it's important to remember that libraries have had single search boxes across library resources before — OPACs, next-generation catalogs, aggregated database platforms, federated search — many of which promised change, yet failed to stem the tide of users

turning to **Google** and other open Web search tools. So how can we be sure that today's discovery services provide better outcomes and more value to libraries than their predecessors?

There are multiple keys to success for the latest discovery services. To be sure, discovery services must be compelling starting places for research. They must also be efficient search engines offering comprehensive coverage across library resources, providing easy access to relevant results. However, discovery services must also go beyond traditional search capacities by leveraging search technologies and capabilities to support the specific missions of academic libraries. This means more than providing discovery capabilities that empower students and faculty to harness rich, academically relevant content. It also means providing the opportunity for libraries to rethink the services they provide, help connect with students and faculty in new ways, and to engage with the academic community overall so that libraries can demonstrate their value well into the future.

Meeting User Expectations

Providing a search experience that meets user expectations is critical for the success of any library discovery tool. As libraries increasingly focus on discovery, they must think about what it means to meet expectations of today's users. These users were "born digital" and have been discovering information online for all of their lives. They have been constantly refining their strategies to deal with information overload.⁷ And, as **Coll** argues, the profound impact of **Google** search (and **Google Scholar**, in particular, within research communities) makes it futile to expect users to adopt more traditional library paradigms that require users to seek help from librarians in order to be successful.⁸ To compete with **Google** in a meaningful way, libraries must adopt a strategy of imitation and address the less than optimal search experience that many users state is the defining reason they decide to forego using the library.⁹

While it is a stretch to think that library discovery services might "outgoogle" **Google** in a way that lessens users' reliance on **Google** for open Web searching, it is not unreasonable to expect discovery services to deliver parity with the **Google** user experience, as well as significant advantages when it comes to academic research. Things such as speed, simplicity, comprehensiveness, ease of use, and modern Web design do not have to be out of reach for library users.

Library discovery services do in fact offer distinct advantages for both librarians and

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academic researchers that can't be provided as easily by **Google** or even **Google Scholar**. For starters, unlike **Google**, discovery service results can be scoped to content that is specifically licensed by the library. This focus ensures that users actually have access to the full text of the content they discover. In addition, the discovery service allows libraries to brand the search service as belonging to the library so that users associate quality, authoritative content with the library (and, by extension, university) that is paying for it. It's not uncommon for users who search via **Google Scholar** to fail to realize that their library is making it possible for them access the great content discovered via the open Web. Without this connection to the library brand, the perception of the library's value versus open Web tools is further eroded. Discovery services also promote library value in ways that **Google Scholar** cannot because they are uniquely positioned to highlight a library's local collections, both print and digital, alongside articles and other content. It is this locally-curated content that is usually some of the most unique and valuable collections libraries have to offer.

Librarians have indicated that in addition to monographs, search engines should offer access to images, videos, audio files, digital objects, patents, manuscripts, encyclopedias and dictionaries, and other content types.¹⁰ This is one area where meeting user expectations may be at odds with serving academic needs. The proliferation of information resources offers a universe of seemingly limitless information, but narrowing searches to find the information that is relevant to the line of inquiry is one of the greatest challenges that students face.¹¹ In contrast to **Google Scholar**, discovery services allow users to easily refine and filter large result sets (post-search) with powerful faceting options (such as content type, subject, language) and limiters (such as peer-review, full-text availability, library locations, and subject). Results from an ongoing study by **Gilmore** and **Moyo** show that facet use is a strong indicator of user satisfaction, and that users show a strong preference for **Summon** over **Google Scholar** or the library catalog.¹²

New Service Models

In addition to providing libraries a clear win when it comes to improving user experience, discovery services can provide libraries with an opportunity to develop new approaches within reference services and library instruction. **Gray** discusses how the library's reference models changed at **Case Western Reserve University** in conjunction with the implementation of their discovery service.¹³ The discovery service enables librarians to physically venture out of the library more often to be where the majority of their users are and to spend more time building relationship with faculty. Non-librarians are able to answer more reference questions using the discovery service and increased instruction can occur when reference staff answer virtual reference questions (by allowing staff to focus on a single resource).¹⁴

A similar program at the **University of Huddersfield** inspired by **Alison Sharman** turns librarians into "Roving Librarians" — bringing the library to users by leveraging tablet computers to engage students in non-library environments (i.e., coffee shops, etc.).¹⁵ It is the library's discovery service that enables **Sharman** to connect with users on a level that makes the library more accessible than ever before. With only ten minutes needed to cover the basics of searching the **Summon** service, she can spend the rest of instruction sessions concentrating on complex concepts of information literacy such as the differences between library materials. For example, identifying content from a textbook versus a trade journal, and gaining the ability to assess the quality and reliability of information.¹⁶ The library's discovery service has helped librarians move away from teaching the mechanics of searching, and enabled them to spend more time teaching students how to use the library effectively and how to become better at searching.

The importance of improving information literacy within the context of promoting library value cannot be underestimated. Survey results suggest that more than two-thirds of students believe they are adequately prepared to conduct research for a paper.¹⁷ In other words, they feel they know how to search. Yet evidence from discovery service search logs paints a different picture. Students typically search exactly the same way as they search using open Web tools. They type a few words, receive results, then add or subtract keywords to refine their search.¹⁸ It's no wonder then that 61% of students report feeling overwhelmed by the amount of information they can surface around a research topic.¹⁹ Students need to develop critical skills to evaluate the abundance of information accessible to them. While some librarians may fear that discovery tools "dumb down" or oversimplify the research process to the point that they impede the teaching of research skills, the reality is that discovery tools that have easy-to-understand, faceted interfaces provide new opportunities to focus information evaluation from a perspective that students find accessible.²⁰ New discovery tools allow librarians to move away from teaching the procedures of finding information and focus more on developing the skills to evaluate the source and quality of information, and its relevance to a given topic.²¹

The need for new reference models and improved information literacy instruction is magnified by the fact that library users rarely seek out help from librarians. Searching on the open Web is a self-guided — rather than librarian-guided — experience. And students have carried this expectation into the library, as 80% of students rarely, if ever, ask librarians for help with their research.²² Other research puts the number of student users never seeking face-to-face help from a librarian at a modest 45%, but the same study indicates that another 35% of students only ask librarians for help once a semester or less.²³ In any case, it's clear that thousands of users who could benefit from help from librarians rarely or never interact directly with one. The consequences of this lack of connectivity between researchers and

librarians can be disastrous to the perception of the library and, more significantly, results in users who aren't finding the resources they need. If users cannot find what they are looking for, they assume the library doesn't have what they need and are likely to abandon the library for their favorite open Web tools. To deal with these circumstances **Coll** suggests that, at a time when many in the library world talk of embedded librarians in the physical sense (i.e., based within the research community), perhaps what is also needed is librarians embedded in the heart of the search experience.²⁴

Embedding librarians in the research process is precisely where discovery services can help provide libraries the opportunities to transform service models and demonstrate their value. Discovery services offer librarians multiple ways to proactively engage in a user's discovery experience. This engagement includes librarian-selected recommendations triggered by users' keywords, integrated research guides, and live chat, among other things. A discovery service can allow librarians to scale their services to interact, both directly and indirectly, with users in ways not possible through the old model of one-on-one, in-person interactions.

While students are reluctant to ask a librarian for in-person help, a recent survey found that 40% of undergraduates and 25% of graduate students would be interested in real-time online reference chat with a librarian, if it were available.²⁵ With reference chat embedded in the discovery experience, librarians can interact with users in real time when they need the help — during the research process. Beyond direct interaction with users via chat, some discovery services offer librarians an opportunity to proactively assist users by providing recommendations for library resources such as research guides, course reserves, and databases that can be triggered by a user's search terms. After reviewing anonymous search logs to find common search queries and patterns, librarians can use discovery service features to create programmatic, context-sensitive guidance that provides help without the user ever knowing they are receiving assistance from a librarian. From the user perspective it's the library tool, not **Google**, which is magically helping them accomplish their tasks. In addition, some discovery services make tools available for librarians to use their subject expertise to pre-empt searches and customize search boxes that can be embedded in research guides, course management pages, and other library portals. These custom search boxes help users to feel less overwhelmed by guiding them to a more focused result set.

A Vision for the Future

While it is not always possible to measure the impact of discovery services on promoting the value of libraries, it is clear that discovery services are allowing librarians to engage with more users. **Carrie Forbes** notes that users at the **University of Denver** spend an average of eight minutes per session when using their discovery service.²⁶ This figure is quite high when compared with other services the library provides. While this could be an indication

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that users take longer to find information they need via the discovery service, this is not corroborated by other usability studies that suggest the discovery service is easy to use, leads users to relevant content, and inspires users to use it again in the future as their starting place for research.²⁷ So what the **University of Denver** is finding is the discovery service provides an opportunity to increase engagement with users — and in turn increases the value of librarians that are impacting and engaged in the discovery tool. Think of it as a simple equation: 8 minutes of engagement with a librarian x 1,000 students = 8,000 minutes of librarian interaction with users that wasn't possible before the discovery service. And as more users become familiar with using the discovery tool, it's not a stretch to understand how it provides ways for libraries to scale services to help even more users.

As library discovery services continue to grow in popularity, those that are Software as a Service (SaaS)-based can begin to leverage volumes of data (Big Data). By analyzing the large aggregated set of anonymous data, providers can learn about how users interact with the discovery services to fuel continuous innovation. This innovation leads directly to the development of new features that further guide users and promote the value of the library. Combining data-driven analysis of user behavior with usability testing, discovery service providers can operate like other search engines by developing features and enhancements that are guaranteed to have an impact on improving the discovery experience.

Several data-driven features are in development or being refined to improve discovery services. One such development provides search suggestions based on global usage data, encouraging users to expand their queries for more topical precision. New recommendation panes and query expansion features bring user experience further in line with open Web tools. This search assistance provides topical background information for users who need additional guidance to get started with the research process or who may not always know the right keywords to use. The integration of scholar profiles into the discovery environment can help foster collaboration amongst researchers and provide librarians ways to support their institutions scholars. Other new features include expanded opportunities for librarians to provide custom recommendations to impact the discovery experience, as well as automating recommendations of library-generated research guides by matching subject specialists to topical queries and discipline-specific searches. While these types of features are not available from all discovery services, those that provide them offer libraries more opportunities to rethink services to better engage and serve users. For example, as research guides become more visible and more valuable via exposure in the discovery service, libraries may choose to invest more time in making them more topical and interactive.

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BORN AND LIVED: I was born in Bloomington, Indiana, and lived there until I completed my MLS and accepted my first professional position at **Ball State University** in the fall of 2000.

EARLY LIFE: I spent my early years living just outside of Bloomington and was active in sports and recreation. I enjoyed the small town lifestyle and was crazy about sports at **IU**. Being so close to the campus growing up I was definitely a Hoosier all the way.

PROFESSIONAL CAREER AND ACTIVITIES: I started working at the **Indiana University Libraries** while pursuing my undergraduate degree and I have been working in libraries ever since. I worked at **IU** from 1988 through 2000, then accepted my first professional position at **Ball State University**. I then moved to **Old Dominion University**, and I am now at the **University of Central Florida**. I am active in **NASIG** and **ALA** and I would not miss the **Charleston Conference**. I served as Chair of the Collection Planning Committee for the **State Universities of Florida** in 2012 and I served as co-chair of the Collection Planning Committee for the **Association of Southeastern Research Libraries** from July 2011 through June 2013. I just completed a year as **NASIG** Conference Registrar. I have enjoyed being active in the profession through regular conference membership, and collaborating on presentations and publications with many great professionals. I am fortunate to serve on library advisory boards for **Springer**, **Alibris for Libraries**, and **Sage**.

FAMILY: My wife **Amy** and I are lucky to have three wonderful children, **Jacob** (15), **Abigail** (13), and **Sarah** (11).

IN MY SPARE TIME: I enjoy camping and outdoor recreation.

PHILOSOPHY: The key to success for libraries is providing the best service to our users and teaching them about the content we offer and the best ways to find that content. We should actively serve students, faculty, and the greater community. We are most successful when we work collaboratively within our own institutions, and with our peer institutions toward the common goal of providing the best service.

MOST MEMORABLE CAREER ACHIEVEMENT: I am happy to have been selected by my peers in the state to serve first as vice chair and then chair of the Collection Planning Committee. Together we addressed several important topics and continued a tradition of cooperation that has resulted in stronger collections for each institution.

GOAL I HOPE TO ACHIEVE FIVE YEARS FROM NOW: In the next five years I will continue toward my goal of being in library administration and increasing my involvement within the profession.

HOW/WHERE DO I SEE THE INDUSTRY IN FIVE YEARS: Academic Libraries will continue to work toward taking full advantage of technology to provide content to users when and where they need it. The emphasis will be on new modes of content delivery and taking full advantage of social media to market the library to new users. Libraries will work collaboratively to address overcrowding by contributing to shared storage facilities and participating in distributed repositories. Libraries will play a key role in influencing new directions in scholarly communication and hopefully by doing so will build new networks with faculty and administrators within their own institutions. Libraries will continue to transform from buildings that house physical collections to vibrant learning centers that focus on access to information. 🐾



Conclusions

Though probably obvious, it is important to note that not all discovery services will have the same features and functionality. Each service will have different ways of helping libraries meet users' expectations, engage and connect with users, and promote the library's value. At an **ALA** session in 2012, **Cody Hanson** made the observation after three years

of investigating the challenges of discovery at his library that "the more I investigated the major discovery services the more I realized they are as different as they are similar."²⁸ **Hanson** also noted that discovery services "are really not interchangeable in terms of not only coverage, but feature sets, architecture of the systems, and even the business nature/

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goal of the vendor.”²⁹ It’s critical to understand that not all discovery services are the same no matter how much libraries might wish to think they are interchangeable. The most important question libraries need to ask themselves when considering a discovery service is: “What problem(s) are we trying to solve?” Librarians need to look at the discovery service features, functionality, and architecture. They must determine if the service really has potential to help the library change its service models and strategies to demonstrate value to the library’s users and academic community... or if the service is just another tool offering more of the same ineffectiveness as previous single search box tools.

“Web-scale” discovery services have been around for over four years now — an eternity in the lifespan of technology products. Realize for a moment that the iPad wasn’t even invented when **Summon** was introduced in 2009, and you can begin to understand how rapidly user experience expectations can change. In order for discovery services to ensure that they continuously meet users’ needs and expectations, it is not enough to simply mirror the open Web experience. A service provider must embrace the spirit of continuous innovation demonstrated by Web search engines. As on the open Web, understanding how users interact with discovery services fuels innovation that continuously leads to enhancements in user interface design and feature functionality that advance the research experience for users and librarians. Static approaches where new features come in yearly cycles or longer are not adequate to keep up with the alternatives available on the open Web. The same can be said for user interface designs rooted in previous library technologies such as OPAC and database design. Developers of search engines and other Web tools must continually reinvent themselves or else they risk losing relevance. Libraries and providers of discovery services must do the same. In partnership we can build tools that continuously meet users’ expectations while providing librarians new opportunities to showcase their value.

Discovery services can do more than simplify access to resources. Beyond the notion of a single search box they can help libraries and librarians to advance the library’s mission by enabling them to impact the research experience and guide users to better learning outcomes. Research currently underway has demonstrated a statistically significant relationship (however, not causal) across a number of universities between library resource use and student attainment.³⁰ It is exciting to think that discovery services will play a vital role in helping libraries to further support research and learning at their respective institutions.

Discovery services can drive increased usage of library resources, but more importantly they enable deeper engagement with users, free librarians and staff to perform higher-value tasks, and embed the library in the academic

life of the institution. The goal is improved research outcomes that result in improved perceptions of the library services, which leads users back to the library as their preferred starting place for research. By partnering with vendors to develop robust discovery experiences, libraries can focus on changing service

models to address the needs of their students, researchers, and faculty. Together libraries and vendors will help new generations of students discover the valuable services, knowledgeable people, and relevant content that libraries have to offer. 🐘

Endnotes

1. **Mark Y. Herring**, “Little Red Herrings — Now, Don’t Go Chasing Rabbits,” *Against the Grain* v.25#3 (2013): 75-6.
2. *Ithaca S+R US Faculty Survey 2012* and *Educause’s ECAR Study of Undergraduate Students and Information Technology*, 2012.
3. **Jason Vaughan**, “Web Scale Discovery What and Why?” *Library Technology Reports* 47.1 (2011): 6.
4. **John Law**, *Academic Libraries And The Struggle To Remain Relevant: Why Research Is Conducted Elsewhere* (2009); **Ross Housewright**, **Roger C. Schonfeld**, and **Kate Wulfson**, *Ithaca S+R US Faculty Survey 2012* (April 8, 2013); **Lynn Silipigni Connaway** and **Timothy J. Dickey**, *The Digital Information Seeker: Report of the Findings from Selected OCLC, RIN, and JISC User Behaviour Projects* (February 15, 2010); **Alison J. Head** and **Michael B. Eisenberg**, “Truth Be Told: How College Students Evaluate and Use Information in the Digital Age,” *Project Information Literacy Progress Report* (2010).
5. “Metropolitan State University Reports Significant Increases in Database Usage Since Summon was Introduced,” MnPALS News (July 8, 2013). Available at: <http://www.mnpals.org/content/metropolitan-state-university-reports-significant-increases-database-usage-summon-was-introd>.
6. “A Semester of Searches: Fall 2012,” [BLT] Blog for Library Technology by the University of Michigan Library’s Library Information Technology (December 21, 2012). Available at: http://mblog.lib.umich.edu/blt/archives/2012/12/a_semester_of_s.html.
7. **Alison J. Head**, “Project Information Literacy: What Can Be Learned about the Information-Seeking Behavior of Today’s College Students?” *Association of College and Research Libraries (ACRL) Proceedings* (2013).
- 8 & 9. **Coll, John**, “Outgoogling Google: Connecting Your Users to Content Through a Single Search,” *Special Libraries Association Annual Conference* (2013). Available at: <http://www.sla.org/wp-content/uploads/2013/07/Sun-Coll-OutgooglingGoogle.pdf>.
10. NISO/ODI Working Group, *ODI Survey Report: Reflections and Perspectives on Discovery Services* (2013).
11. **Head**, (2013).
12. **Tracy Gilmore** and **Lesley Moyo**, “Evaluating User Behaviors and Experiences: Summon Discovery Service at Virginia Tech” *ALA Annual Conference & Exhibition* (2013). Available at: <http://ala13.ala.org/node/10229>.
- 13 & 14. **Brian C. Gray**, “Relationship Building Leads to Research Success” *Serials Solutions* webinar (2013). Available at: <http://bit.ly/18zZgZv>.
15. **Alison Sharman** and **Andrew Walsh**, “Roving Librarian at a Mid-Size UK Based University,” *Library Technology Reports* 48.8 (2012): 28-34.
16. **Alison Sharman**, “Just give me 10 minutes...? Information Literacy in the Age of Web-Scale Discovery,” *Serials Solutions Webinar* (2013). Available at: <http://bit.ly/O7025I>.
17. **Allen McKiel** and **Jim Dooley**, “Changing Library Operations — Information Literacy and E-Resources: The Credo Student Survey,” *Against the Grain* v.25#2 (2013): 1-4.
18. **Andrew Nagy**, “Data Mining ‘Big Data’: A Strategy for Improving Library Discovery,” *WORDS Serials Solutions Blog*, (2013). Available at: <http://www.serialssolutions.com/words/detail/data-mining-big-data-a-strategy-for-improving-library-discovery>.
19. **McKiel** and **Dooley**, (2013).
20. **Rosalind Tedford**, “Teaching ‘Everything,’” *Serials Solutions Webinar* (2013). Available at: <http://bit.ly/13508w9>.
21. **Dianne Cmor** and **Xin Li**, “Beyond Boolean, Towards Thinking: Discovery Systems and Information Literacy,” *Proceedings of the IATUL Conference* (2012).
22. **Alison J. Head** and **Michael B. Eisenberg**, “Lessons Learned: How College Students Seek Information in the Digital Age,” *Project Information Literacy Progress Report* (2009).
23. **Cowan, Susanna M.**, *Assessment 360: Mapping Undergraduates and the Library at the University of Connecticut* (2012).
24. **Coll**, (2013).
25. **McGough, Elizabeth**, *Engaging Students Through Social Media: Survey Results and Recommendations for Academic Libraries*, (2013).
26. **Carrie Forbes**, “Making Research Less Overwhelming,” *Serials Solutions* webinar (2013). Available at: <http://bit.ly/1bZ1iRK>.
27. **Gilmore** and **Moyo**, (2013).
- 28 & 29. **Cody Hanson**, “Discovery Systems: The Promise and the Reality,” *ALA Annual Conference and Exhibition* (2012). Available at: <http://ala12.scheduler.ala.org/node/1096>.
30. **Graham Stone** and **Bryony Ramsden**, “Library Impact Data Project: Looking for the Link Between Library Usage and Student Attainment,” *College and Research Libraries* (2013).