

Discovery user research

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[Link to Google Doc](#)

GOAL

Understand the patron discovery process and what problems they encounter in the Discovery process

METHODOLOGY

I conducted remote sessions with participants using Zoom to share screens and video conference. I moderated and took notes simultaneously.

PARTICIPANTS

8 users: Librarians and faculty

Occupation	Tenure @ current position	
Music librarian	3 years	
Assistant Professor, Neurobiology	7 years	
Microbiology Researcher	10 years	
Medical School Librarian	3 years	
Medical School Librarian	1 year	
Germanic Studies Librarian	5 years	
Reference Desk Librarian - Generalist	18 years	
Reference Desk Librarian - Special Subjects	7 years	
College sophomore	2 years	

SCHEDULE

January to March 2019

SUMMARY OF KEY LEARNINGS

- Discovery of new information sources (databases, repositories, agencies, etc) is just as important as discovery of the actual materials. Inexperienced researchers don't know other sources exist, and experienced researchers have specialized searches for each database they use.
- Mismatch between catalog vocabulary and user's natural language causes frustration and reduces success of search.
- Curation is strongly desired but labor-intensive.
- Cross-reference provides much needed context but usually is not available.

KEY LEARNINGS - Specialized researchers

- Learning how to search requires years of experience and a good network.
 - Faculty spend a lot of time teaching students how to search, and students spend a lot of time learning where and how to search, either through their peers, librarians, faculty, or other sources.
 - Very experienced researchers with several years experience know where to search and how to search on each of the sites they use so they can find what they're looking for more efficiently than someone without this experience.
 - It's no secret that many searches start with Google rather than at the institution's library catalog. The natural language search and ranking algorithm make it the best place to start.
 - Provenance and credibility are of the utmost importance which can add complexity to the search.
 - Search is different for each catalog or database and can introduce unexpected moral or social biases.
- They have different needs for exploratory vs. specific search. Exploratory searches would entail searching to see if others have already published on the topic you are interested in. Specific search might include searching for a specific gene or piano composition.
- Knowledge panels as they exist today are not helpful.
 - Specialized researchers can not glean enough context from a knowledge panel to have faith in its credibility. Knowledge panels are also too generic and won't have their answers. What would be more helpful is a link to the article or source that has the answer they are looking for.
 - A panel that presents relationships, cross references, or other sources of information is strongly preferred.
- SearchWorks and other library catalog interfaces
 - Almost everyone interviewed used facets to narrow their search and found it to be a helpful way to focus their search.
 - They couldn't always tell from the listing that the item they pulled up was a book, article, or other document.

- Researchers only ventured into the physical library for old material that is not digitized.
- For these researchers, search sometimes could take years. One complaint that was surfaced was the ability to 'save' searches or build off existing searches. A point of frustration is having the same materials come up that they've already dismissed as irrelevant.
- For those in the sciences who want to publish, scooping is a concern and therefore timeliness of research and having a good understanding of what others are doing in the field are extremely important.
- Librarians are used when the researcher is stuck. They can use the librarian as someone who can strategize how to resume their search in a better direction.

KEY LEARNINGS - Inexperienced researchers

- They don't know what they don't know.
 - They don't realize that if they don't find it in their catalog, it doesn't mean it's not available at their institution. Often, they need to try a different way of searching in order to find the item. They may not know the correct vocabulary to use and therefore need to take a step back in their research to discover the correct vocabulary.
 - They are directed to librarians by their professors, and librarians will connect them with sources to search and tips for conducting the search. They'll start with the general reference desk librarian and then be routed to a special subjects librarian if they need more specialized searches.
 - They don't know facets exist or how to use them.
 - Because they are inexperienced, they don't understand that specificity matters.
 - They require greater error tolerance than SearchWorks allows them.
- They start searching on Google.
- Languages other than the ones they understand are a barrier because they don't know how to search in a different language. They also may not know the correct spelling (including diacritics), or they may not know how to search for something in a language that uses characters other than the English alphabet.
- To get inexperienced researchers heading in the right direction, librarians provide guides specific to subject or course to help them so as much research on their own before they have to seek assistance.
- Undergraduate students may take workshops on how to research and how to use the library, including an introduction to reference desk librarians. Need to do more research on how this experience could be augmented through use of linked data.

NEXT STEPS

- Interview actual undergraduate students!
- Design a few concepts that could:
 - Help researchers discover relevant sources that may have been unknown to them,
 - Provide cross references that help them understand relationships,
 - Increase error tolerance to help inexperienced researchers get on the right path,
 - Translate controlled vocabularies to natural language,
 - Replicate the peer recommendations and in-person librarian guidance in the interface to increase success of search.
- Explore what data would be required to implement these concepts