Spring 2019 Usability Test Report

Prepared by Tara Wood, May 2019

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Summary

A total of 6 people participated in usability testing at the Indian Prairie Public Library and the Eisenhower Public Library District in April 2019. Tara Wood, SWAN UX Manager, and Robin Hofstetter, SWAN eResources Consultant, prepared and conducted the tests with assistance from Molly Bitters at the Eisenhower Public Library District and Tony Lucarelli at the Indian Prairie Public Library.

Participants performed tasks in several interfaces, including their library catalog; EBSCO Discovery Service (EDS); and Article Search, the EDS integration in Enterprise.

Testing revealed that users struggle to find Article Search in the catalog and from their library websites. In addition, users expect to be able to search everything and narrow down, but library resources are very segmented and do not support this behavior.

In the short term, we recommend facilitating easier navigation between these segmented library resources through visual design changes in Enterprise; improved linking between EDS and the catalog and library website; and testing an EDS search bar embedded into the library website. In the long term, further research is needed to identify how to better integrate online resources to the library catalog. It is clear from testing that the current EDS integration is still a very separate interface that may introduce more issues than it solves. Further research is needed to find out if directly linking out to EDS would be a better user experience.

Methods

Usability testing

Usability testing is a design research method in which representative users – in this case, patrons who use the catalog – complete typical tasks. The standard number of participants for a usability test is 3-5 participants. The number of additional usability problems found testing with more than 5 participants drastically decreases. As Jacob Nielsen argues, "Elaborate usability tests are a waste of resources. The best results come from testing no more than 5 users and running as many small tests as you can afford."[1]
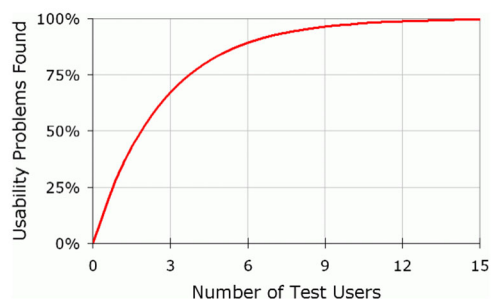
Competitive testing

Competitive testing or comparative testing evaluates the usability of your "competitor's" services and platforms. We may not see other libraries as competition, but we can use competitive testing to evaluate services from different library vendors and to learn from other libraries' platforms and services to their patrons.

Participants

We recruited 3 participants from each library through an online survey posted to those libraries' catalogs. For this test, we sought participants that had some experience using online resources from their library and would potentially have a use case that could be met through Article Search. Through a brief recruitment survey, we asked potential participants:

- Have you ever used online resources from your library? For example, to do a homework assignment, for genealogy research, or to read newspaper and journal articles.
- (If yes) What online resources did you use from the library?
- Have you ever seen this screen before? (with a screen shot of the Article Search results screen)

We selected a mix of participants who had and had not seen the Article Search interface before.

Participant	Online Resources Used	Familiar with Article Search?	Use Cases & Interests
A – Indian Prairie	Access World News, Chicago Tribune Historical Archive	No	Browses library databases for news
B – Indian Prairie	Morningstar, Ancestry.com	No	Personal research in investing and genealogy
C – Indian Prairie	Newspaper articles for historical research,	Yes	Research for a community group focused on environmental issues

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[1] Source: https://www.nngroup.com/articles/why-you-only-need-to-test-with-5-users/

	journals related to MBA program		
D – Eisenhower	EBSCO	Yes	Research for college papers
E – Eisenhower	None	No	Would be interested in knitting resources through a database like Creativebug
F – Eisenhower	Consumer Reports, Morningstar	No	Personal research in investing

Interfaces Tested

SWAN has three interfaces associated with our e-content platform. They are (1) library catalogs through Enterprise, (2) EBSCO Discovery Service, aka EDS, and (3) Article Search, which is a search through Enterprise that returns EDS results in a separate search interface/tab.

Library Catalogs

We tested with the Indian Prairie Public Library catalog and the Eisenhower Public Library catalog, both on the SirsiDynix Enterprise platform.
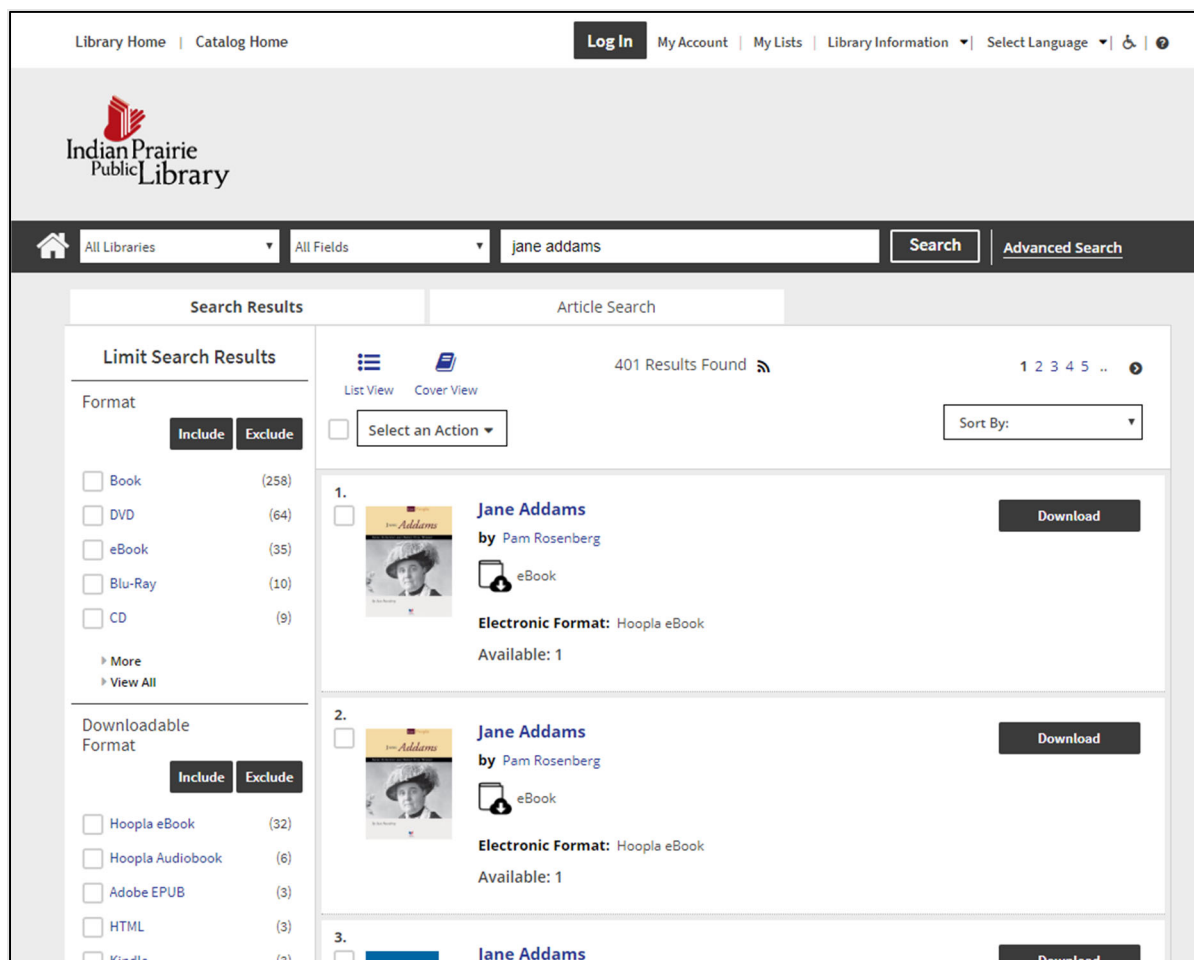

Figure 1 Indian Prairie Public Library catalog in Enterprise

EBSCO Discovery Service (EDS)

EBSCO Discovery Service provides a discovery interface to search multiple databases at once. Some databases –notably ProQuest databases – cannot be included in EDS.

Figure 2 EDS search results for Eisenhower Public Library District

Article Search

Article Search incorporates results from EDS into the Enterprise library catalog through the EDS API. Currently, Article Search is accessible by selecting "Article Search" from the search limit dropdown menu next to the search bar. Or, an "All Libraries" search will display results for Article Search in a separate tab.

Figure 3 Article Search accessed from the search limits dropdown menu in the Eisenhower Public Library District catalog

Alternate Catalog

We also tested a slightly different visual design of the current library catalogs that did not include the Article Search EDS integration, and instead linked out to the separate EDS interface.

Indian Prairie Public Library

🏠 All Libraries ▼   All Fields ▼   jane addams   **Search**

Advanced Search   **Article Search**

Limit Search Results

Format
Include Exclude

☐ Book (258)
☐ DVD (64)
☐ Blu-Ray (10)
☐ CD (9)
☐ Large Print (7)
▸ More
▸ View All

Fiction or Nonfiction
Include Exclude

☐ Fiction
☐ Nonfiction

Library
Include Exclude

☐ Indian Prairie Public ...
☐ Acorn Public Library ...
☐ Alsip-Merrionette Par...
☐ Batavia Public Librar...
☐ Bedford Park Public L...
☐ Beecher Community ...
▸ More
▸ View All

Audience
Include Exclude

☐ Adult
☐ Juvenile
☐ Teen

Publication Date
Include Exclude

Years

Any - Any

Language
Include Exclude

☰ List View   📖 Cover View   **356 Results Found for Books, eBooks & Media** 🔊   1 2 3 4 5 .. ◉

Search Articles & Databases ➜

☐ Select an Action ▼   Sort By: ▼

1.
☐
Jane Addams : a writer's life
by Joslin, Katherine, 1947-
Publication Date 2004
📖 Book

Holds: 0   Copies at All Libraries: 2
No copies at Indian Prairie Public Library District. View copies at other libraries.

Place Hold

2.
☐
Jane Addams
Series American lives (Heinemann Library (Firm))
by Raum, Elizabeth.
Publication Date 2004
📖 Book

Holds: 0   Copies at All Libraries: 5
No copies at Indian Prairie Public Library District. View copies at other libraries.

Place Hold

3.
☐
Jane Addams
Series Makers of America (Facts on File, Inc.)
by Hovde, Jane.
Publication Date 1989
📖 Book

Holds: 0   Copies at All Libraries: 2
No copies at Indian Prairie Public Library District. View copies at other libraries.

Place Hold

Looking for newspaper and journal articles?

Research Starter: Jane Addams
Teaching Peace with Jane Addams: Jump-start conversations about activism and social justice with these Jane Addams Childrens Book Award-winning titles
Secular Saint Scorned: During the Great War, progressive heroine Jane Addams stepped afoul of American sentiment

4.
☐
Jane Addams; a biography
by Linn, James Weber, 1876-1939.
Publication Date 1935
📖 Book

Holds: 0   Copies at All Libraries: 1
No copies at Indian Prairie Public Library District. View copies at other libraries.

Place Hold

Figure 4 Alternate version of the Indian Prairie Public Library catalog, with links to search results in the EDS interface

Chicago Public Library Catalog

The Chicago Public Library catalog uses the BiblioCommons BiblioCore platform. It does not offer an EDS integration, but it does offer database and online publication recommendations. We tested how this different method of integrating online resources worked for our users.
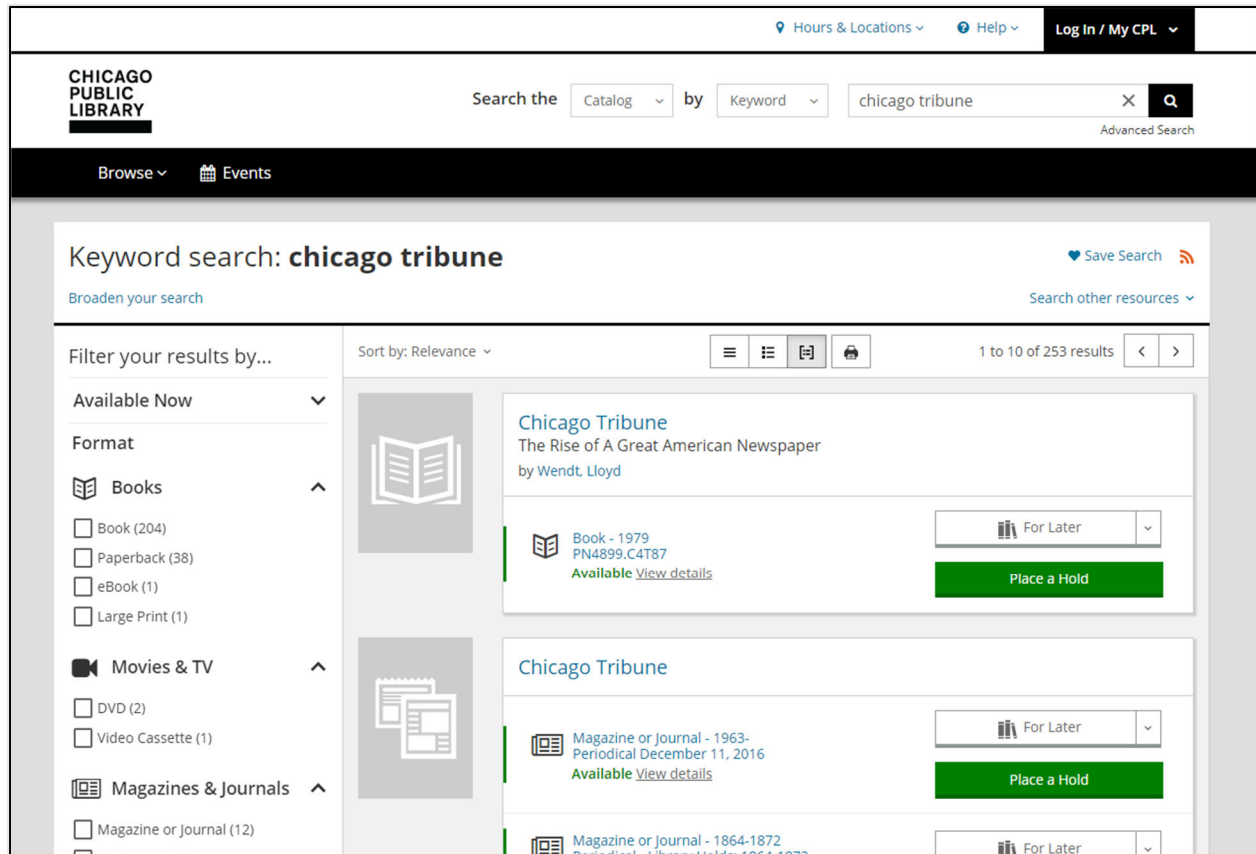
Figure 5 Search results in the Chicago Public Library catalog

Findings & Recommendations

Confusion with Separate Interfaces

Participants struggled with the separation between search results in the catalog and search results in Article Search.

5 out of 6 participants initially thought they were searching the catalog and seeing results for books and media. One participant had used Article Search extensively and was familiar with the interface. Another realized after briefly scrolling through the results that they were seeing results for "periodicals". Some of the confusion is due to the display of formats in Article Search results. Icons for formats display, but no label. Participants were looking for formats, but the icons weren't helpful. One asked, "is this a book?" referring to a "reference" format icon.

The two results screens didn't match participants' mental models of how a search works. One participant said, "I would think I could search All Libraries and fine tune from there" using the format

facets – not realizing article results were in a separate tab or screen. Another specifically noted their frustration with the separation between library resources – he wanted to search everything and narrow down, citing Amazon and Google. However, several participants also said, when asked to find online articles in the catalog, "I wouldn't expect to find that here -- this is what is in the library." They expect a search-all-and-filter search experience, but they also know the catalog doesn't deliver on that expectation.

Recommendation

In the short term, adding clear format labels would help users to clearly see the format of the results they are looking at.
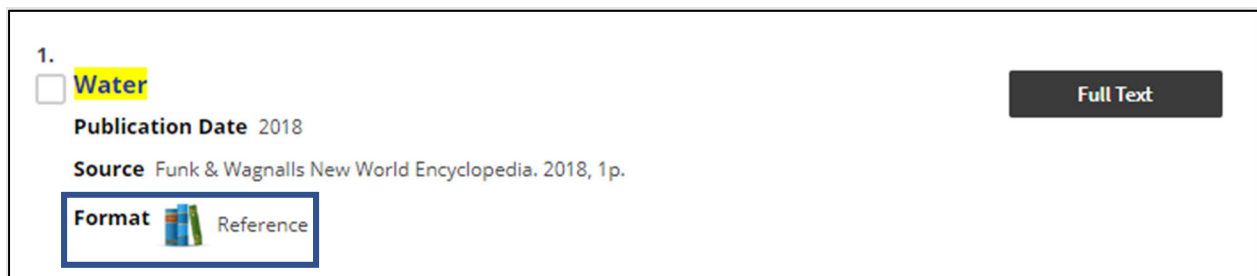
Figure 6 Proposed change to format labels in Article Search

Even if results need to be presented in separate screens for technical reasons, navigation between those screens could be improved. The current "tab" display appears on an "All Libraries" search, but using other limits, including "All Libraries (no eBooks)" and the "Article Search" limit, removes the tabs. A persistent tabbed display would provide consistent navigation between groups of results and follow web standards. In addition, persistent tabs would communicate the types of results available, helping to reshape the idea that "the catalog has this but not this."

Figure 7 Google search results in the Video tab
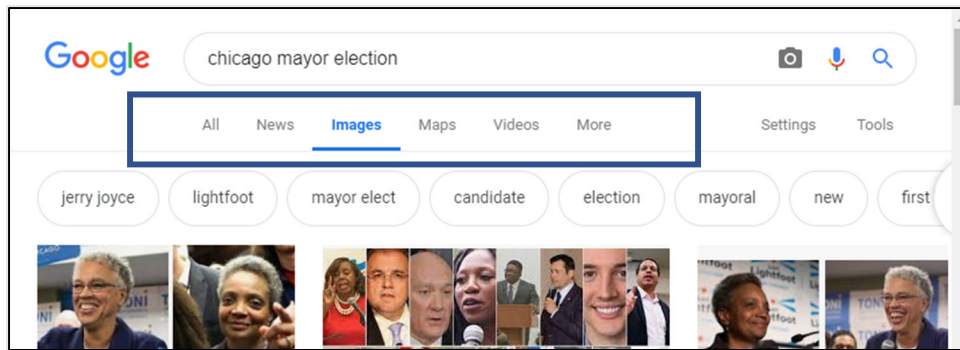
Figure 8 Google search results in the Images tab

In the long term, more research is needed to determine how to best accommodate a "search-all-and-filter" search behavior.

Difficulty Navigating to Article Results

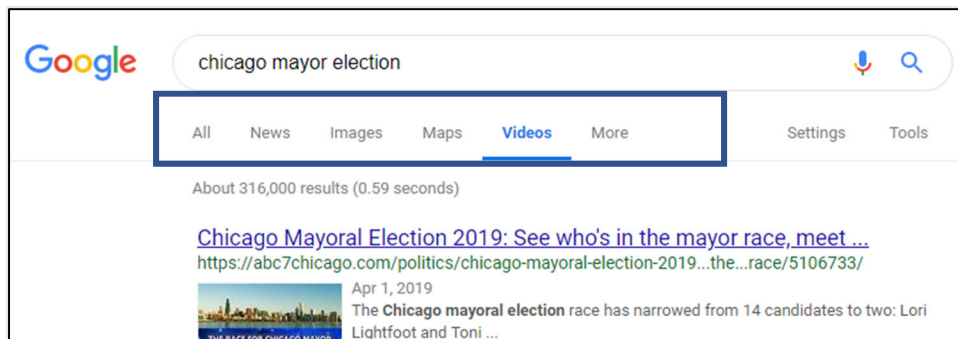Patrons were presented with Article Search at the beginning of the test, then they were asked to find it again from the library website later in the test. 4 of the 6 participants that tried to search from the library website were unable to find it.

One participant wouldn't search for articles from the library website, noting "I know when I have gone there, I will find books media." Two participants found it again after struggling for several minutes; one of these participants had used Article Search before the test, but couldn't recall how to get back to it.

Expectations for format facets

4 of the 6 participants looked in the "Format" facet of the catalog for an "Article" format limit. One patron used the "Newspapers" facet. Another limited to "Other Video". These facets return results for physical materials.

Figure 9 Format filters in search results

2 of the 6 participants tried to use Advanced Search in Enterprise to find articles and were unable to successfully find them. One limited to a format of eVideo and another limited to Newspapers, which prevented articles from being returned as those facets return results for streaming video and physical newspapers.

Figure 10 Format filters in Advanced Search

Confusion over "website" vs. "catalog"

We also tested navigating to article results from patrons' library website and the Chicago Public Library website. Several participants thought if they chose to search "website" from their library website or the Chicago Public Library website, it would return newspaper articles.

Figure 11 Website search limit in the Chicago Public Library catalog

Finding articles without the EDS integration

In a test of an alternate version of the Enterprise catalog, 5 of the 6 participants were able to navigate to article results. They were presented with three possible ways to navigate to Article Search:

- "Article Search" link below the search bar, linking to the EBSCO Discovery Service home screen

- Link below the number-of-results-found label, linking to results in EBSCO Discovery Service
- Embedded search results for articles from EDS

One participant found the embedded results, one participant found the link below the number-of-results-found label, and 3 found the link to Article Search below the search bar.
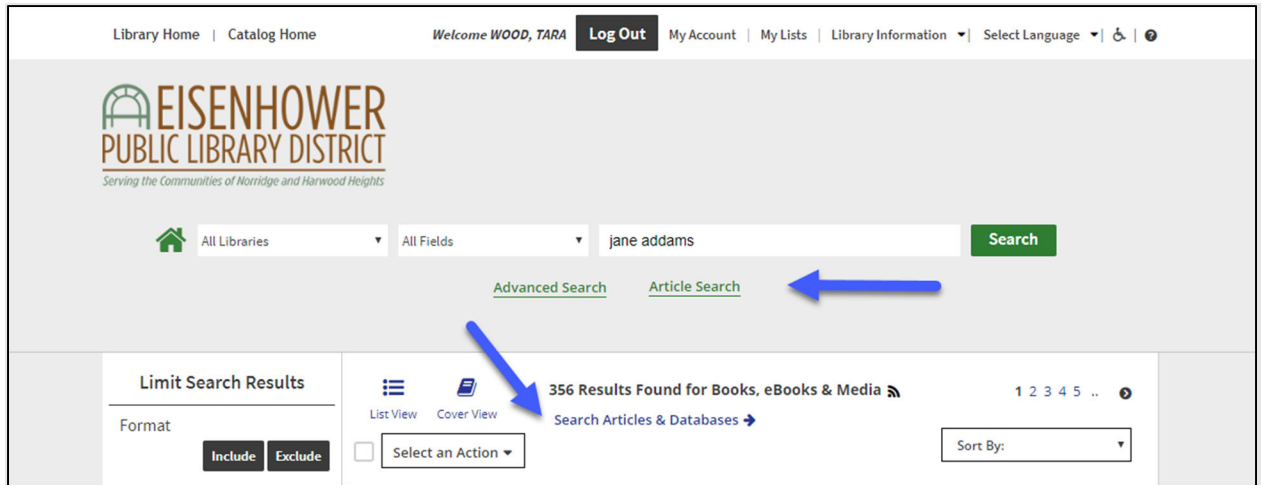

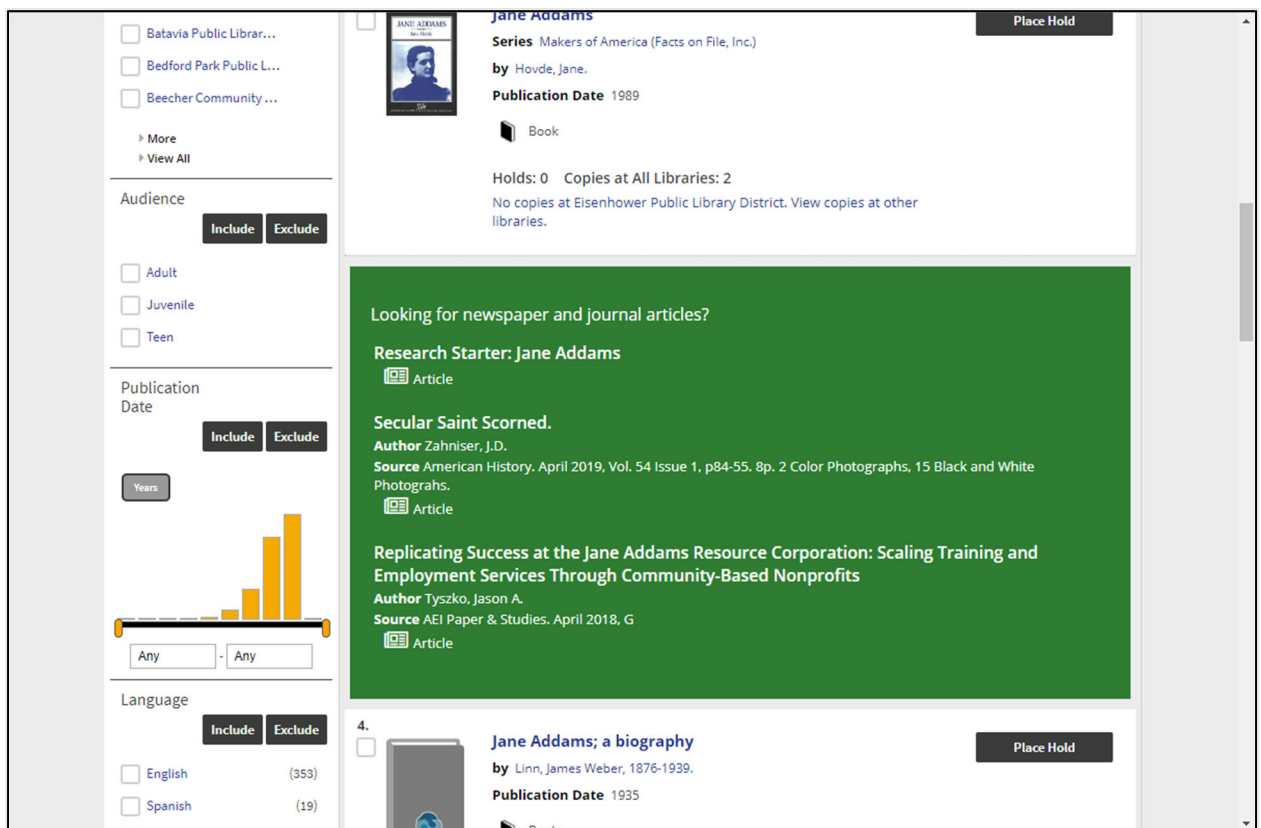*Figure 12 Alternate view of search results with links to Article Search*

Figure 13 Alternate view of the catalog with embedded article results

While participants had a higher success rate using this version of the interface, they still had to "scroll and hunt" before finding a path to article results. Several participants also looked first in the format facets in this interface.

Finding articles in the Chicago Public Library catalog

The Chicago Public Library includes embedded results for online databases and publications by title. A search for "Chicago Tribune" will return with recommendations for online resources.
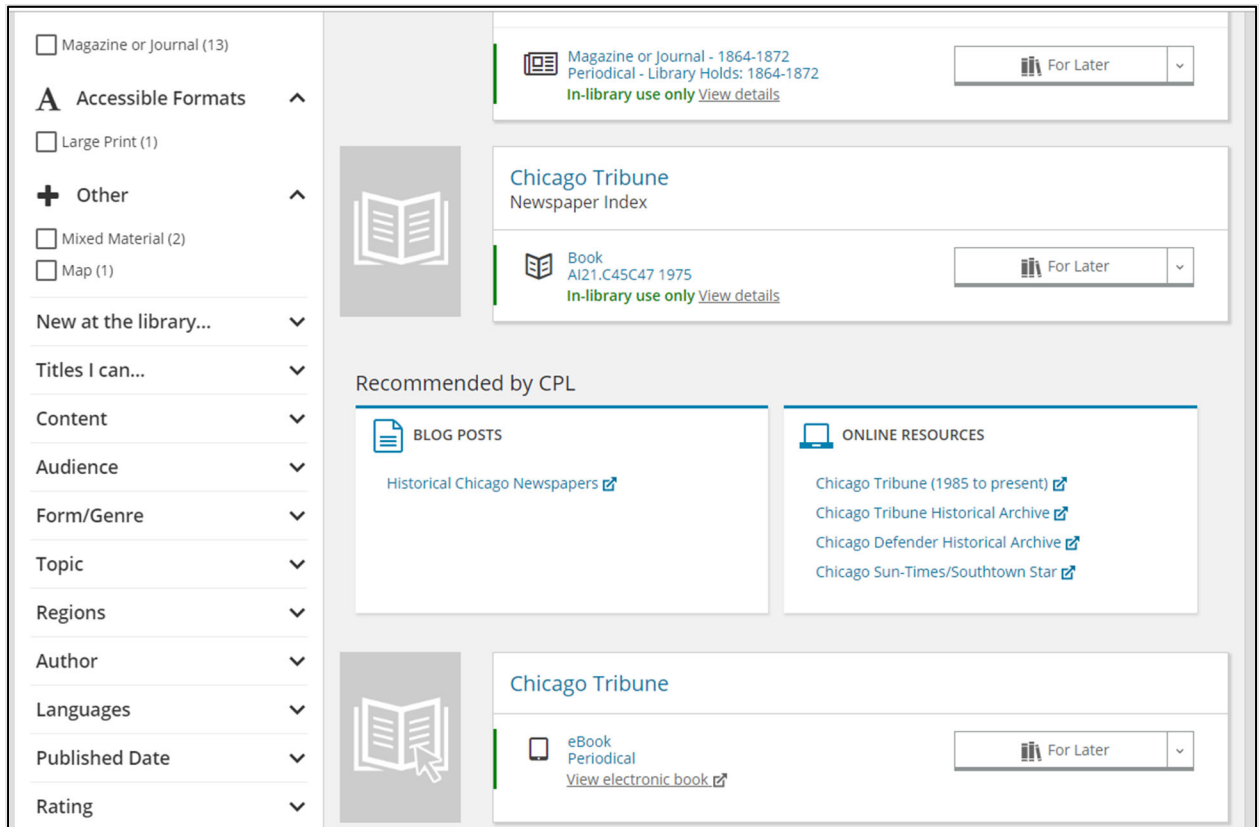
Figure 14 Online resource recommendations in Chicago Public Library

When participants were prompted to find articles from the Chicago Tribune about the recent mayoral election, all participants initially searched by topic, e.g. "Chicago mayor election" and did not return results or get a recommendation for the Chicago Tribune online.

One participant who had used EBSCO for school eventually found the link to "EBSCO Magazines and Journals". Two participants found a link from the Chicago Public Library website to "Online Resources" and found the Chicago Tribune from there. One participant tried a link to WorldCat from the "no results" page.
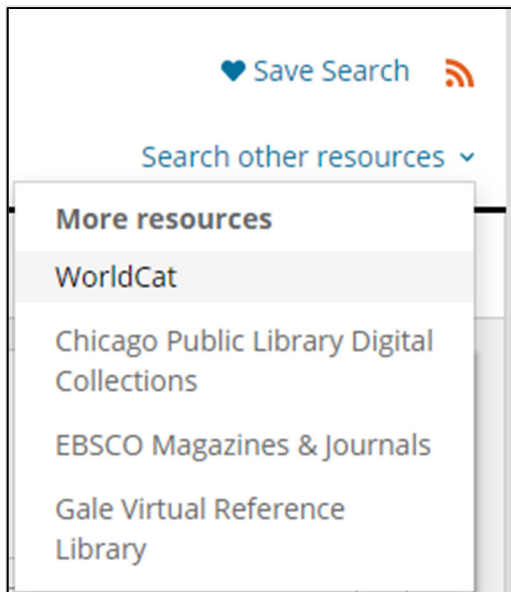
Figure 15 Link to EBSCO from the Chicago Public Library Catalog

Recommendations

Currently, searching for articles from the library website does not fit with users' mental models. This is partly because users have not been able to find online resources from the catalog in the past, and partly because it is difficult to navigate to these tools from the catalog currently.

Access to the EDS search interface from the library website would help to connect users already using databases to an alternate way to search these resources, meeting them where they are. Libraries could include Article Search as an option in their website search:

Figure 16 Mockup of the Eisenhower Public Library website, with an 'Online Resources' option in the search bar

Alternately, libraries could embed an EDS search box on their online resources and databases page:
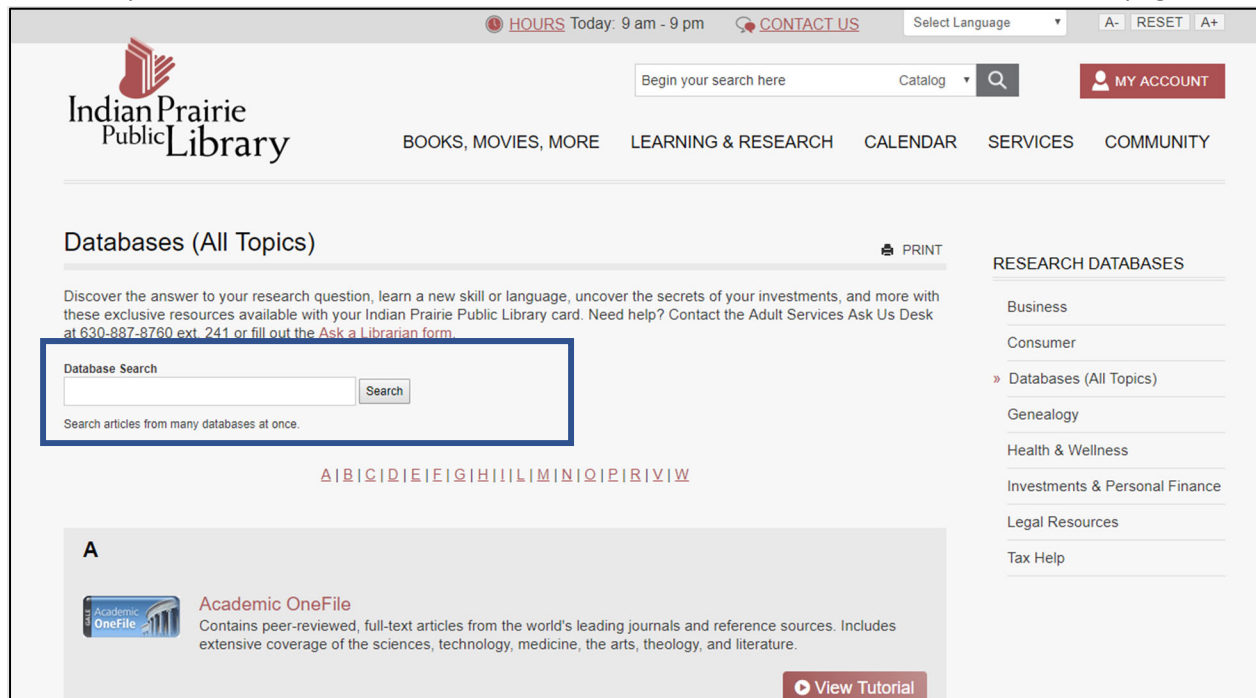
Figure 17Mockup of the Indian Prairie Public Library website, with a search bar on the Databases page

In the Enterprise catalog, a few minor layout changes could help direct potential new users to article search and over time, reshape the idea of "what I can get in the catalog."

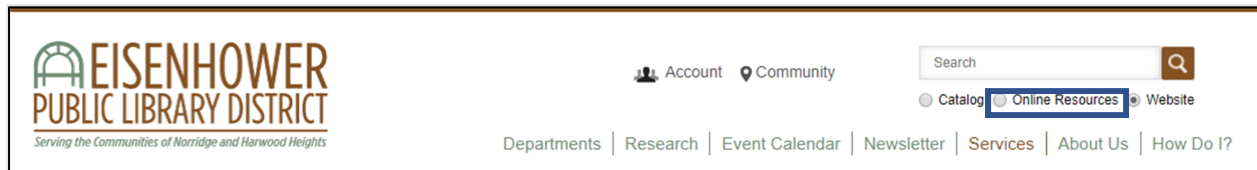Currently, the search bar receives the strongest visual priority in the interface, yet it is the easiest element for users to find. De-emphasizing the search bar in the alternate catalog display drew users' attention to even very subtle links to Article Search. Applying these visual changes to the current tabbed display of article search results, along with some label changes to clarify what each tab contains, could increase visibilty of the current EDS integration into the catalog:

Figure 18 Mockup of the Enterprise catalog, with an alternate design for the search bar and search results tabs

In addition, a link from the format facet in search results and in Advanced Search could help direct users to article results.

Additional research is needed to determine what the best label for Article Search results would be, and if the EDS integration in Enterprise, currently named Article Search, is a better user experience than linking out directly to the EDS search results interface.

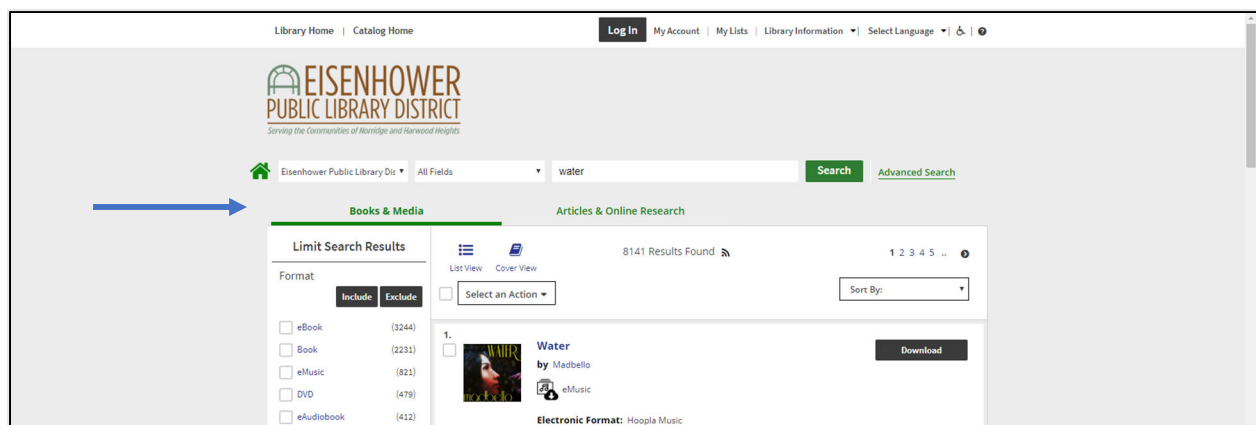If later research does determine that the Article Search EDS integration is not the best experience, these visual changes will lay the groundwork for an elegant handoff – or in other words, a noticeable and clear link – out to search results in EDS.

Issues with the EBSCO Discovery Service (EDS) "Result List" link

When a patron navigates to the EDS interface from the Article Search interface in Enterprise, the "Result List" link in EDS to return to results does not work as patrons expect. The link takes the patron to a search for the unique identifier for that article, which is usually one result, and not to the keywords they used to find results.

Figure 19 Link to Result List from EDS

Recommendation

Ideally, the "Result List" link should link to the results the user was previously browsing.

Using two possible search results interfaces complicates this simple interaction – which interface does the link go to? In addition, when a user is passed off from the Article Search integration in Enterprise to the EDS interface, their search terms aren't passed along and the "Result List" link does not link to any additional results.

Using the EDS interface without the Article Search integration would eliminate this issue.

Confusion with Logos in EBSCO Discovery Service (EDS)

Participants expected their library logo to take them to their library website. Users often use a logo link as a "reset", to clear their search and start over. Clear paths and labels back to this interface from the library website would be needed to accommodate this behavior, but participants could not return to article search results from their library websites.

Recommendation

The logo used in the upper-left of the EDS interface (1) should allow users to reset their search and start over, and (2) it should clearly communicate to the user where they will go.

The library logo tells users they will go back to their library website, so it shouldn't be used as a link to another location (e.g. the library catalog or EDS).

A logo elsewhere on the site – e.g. in the upper right, the footer—doesn't have the same "reset" connotations as a logo in the upper left. A simple solution may be to create an "Article Search" logo that can serve as the reset button in the upper-left of the screen. Library logos could appear elsewhere to provide branding and a recognizable link back to the library website. One option is in the right side of the screen.
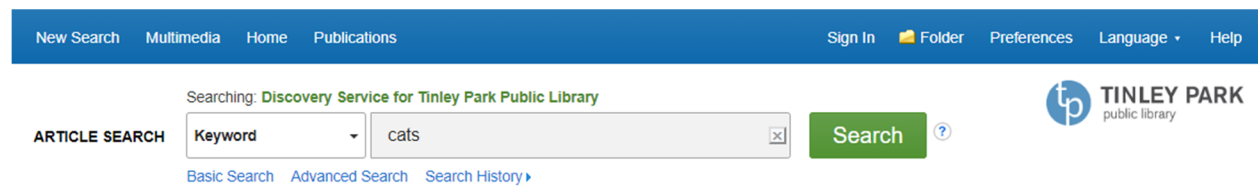
A small pilot test would be needed to ensure the new logos and layout improve navigation between the EDS interface and the library website.

Difficulty Finding Full Text Links to Gale Resources

Gale resources integrated into EBSCO Discovery Service display with a link to "View in General One File." 4 of the 6 participants that saw this link struggled to find it, though they usually clicked on it. One noted, "I can find this but I don't think other people could."
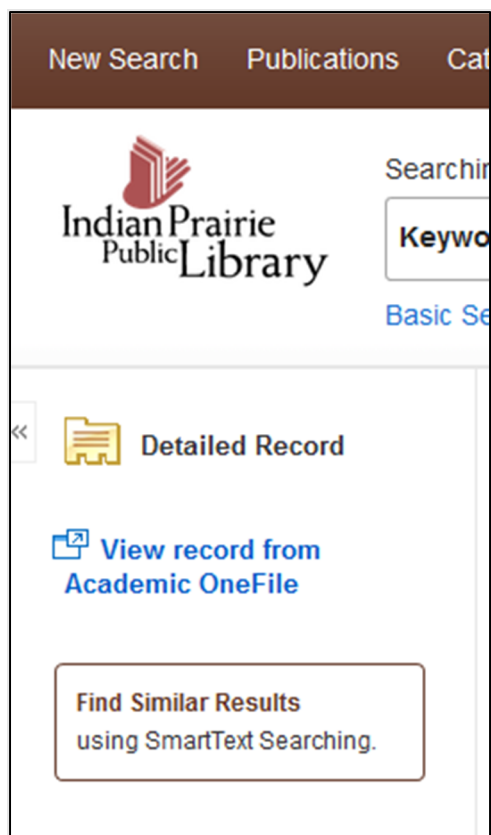
Figure 22 Links to Gale resources in EDS

Recommendation

Request that EBSCO change the label to reflect that full text is available. For example, to "Get full text from Academic OneFile".

Logging in Through OpenAthens

Several participants had seen the OpenAthens login screen before. One participant noted that the OpenAthens login screen asks for a "username" and "password," when a library barcode and PIN are the terms she usually sees in the catalog and at the library. Another participant seemed to confuse the OpenAthens login screen and the Enterprise My Account login screen.

Recommendation

Request that OpenAthens allow customization of the login screen labels, so the labels can match the library catalog login labels.

Using Limits and Facets

Almost all patrons noticed the limit for "All EDS fields" and asked, "What does EDS stand for?" and offered several theories.
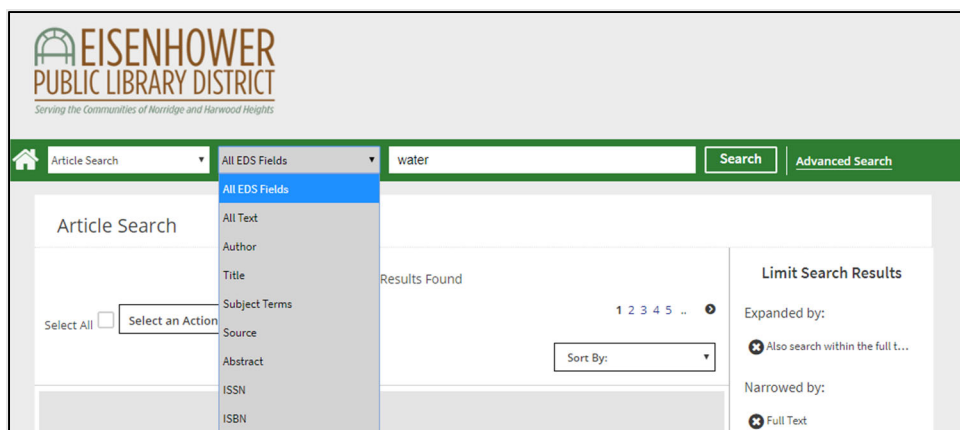
Figure 23 Field limits in Article Search

Some patrons expected that selecting an option in a dropdown menu limit would automatically apply the limit, and they did not realize their screen had not changed after selecting a limit and failing to click the "Search" button.

For example, one patron selected "Article Search" after typing in a search term into the general catalog screen and expected to see a change in results. Another selected limits from the "All EDS Fields" dropdown and expected to see a change in the results.

Participants struggled with identifying what facets were applied to their search, in both the Article Search interface and the EBSCO Discovery Service interface. They were not sure what "Available in Library Collection" meant, noting that everything in the catalog is available in the library.

Figure 24 Facets in the EDS interface and Article Search interface

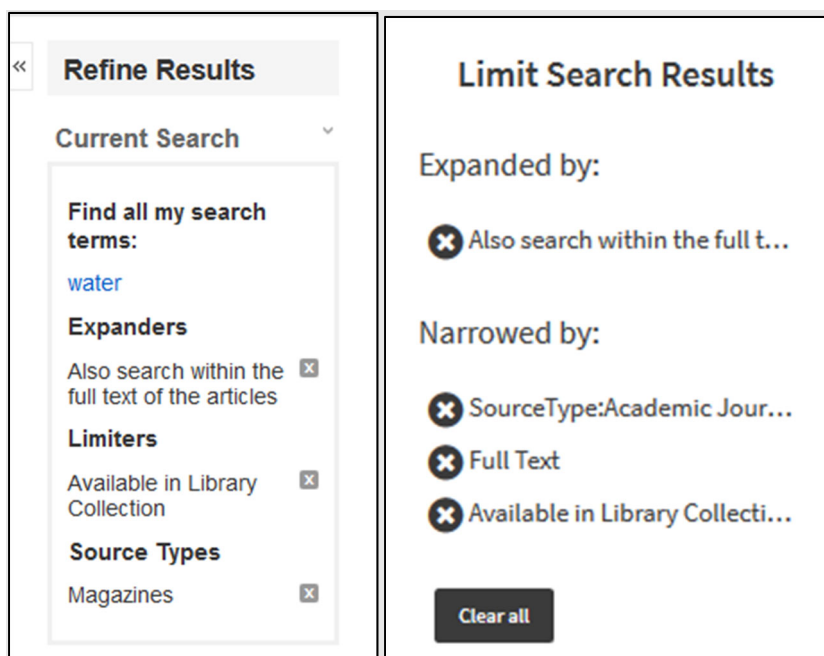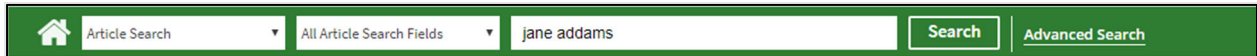One participant looked in the EDS interface for an age group facet, as the task was to find information for a 7th grader working on a homework assignment. However, there are no age facets.

Recommendations

Change the "All EDS fields" label in Enterprise to "All Article Fields"

Suggest to EBSCO that they consider age-group facets for EDS and an alternate label for "Available in Library Collection."

Facet labels in Article Search are cut off with ellipses (…), and users should be able to see the full label.

Additional Research

A/B Testing for Article Search labeling

SWAN would like to try alternate labels for the "Article Search" tab in Enterprise and track which labels increase use.

Library instruction session observations

Research success depends on a complex combination of users' information literacy, digital literacy, and the learnability of research tools. Observing library instruction sessions would provide insight into how learnable our current interfaces are within the context of the instruction and support libraries provide.

Analysis of EDS use

Over the next year, SWAN will collect usage statistics to track use of the Article Search tab and link from the format facet. In addition, we would like to pilot an embedded EDS search bar with any interested libraries and work with them to track usage.

Appendix: Usability Testing Script

Bookmarks

- A – Article Search in Enterprise
- B – EDS home page
- C—Library website
- D—Development profile in Enterprise, with direct links to EDS
- E—Chicago Public Library catalog

Introduction

- **Have laptop open to google.com**
- **Have all bookmarks ready**

Hi, _____. My name is _____, and I'm going to be walking you through this session today.

Before we begin, I have some information for you, and I'm going to read it to make sure that I cover everything.

You probably already have a good idea of why we asked you here, but let me go over it again briefly. We're asking people to use the library catalog so we can see whether it works as intended. The session should take about an hour.

The first thing I want to make clear right away is that we're testing the catalog, not you. You can't do anything wrong here. In fact, this is probably the one place today where you don't have to worry about making mistakes. There might be times during the test that something may not work and we will need to reset, and that is just the catalog and not you

As you use the catalog, I'm going to ask you as much as possible to try to think out loud: to say what you're looking at, what you're trying to do, and what you're thinking. This will be a big help to us. Also, please don't worry that you're going to hurt our feelings. We're doing this to improve the catalog, so we need to hear your honest reactions.

If you have any questions as we go along, just ask them. I may not be able to answer them right away, since we're interested in how people do when they don't have someone sitting next to them to help. But if you still have any questions when we're done I'll try to answer them then. And if you need to take a break at any point, just let me know.

With your permission, we're going to record what happens on the screen and our conversation. The recording will only be used to help us figure out how to improve the site, and it won't be seen by anyone except the people working on this project. And it helps me, because I don't have to take as many notes. If you would, I'm going to ask you to sign a simple permission form for us. It just says that we have your permission to record you, and that the recording will only be seen by the people working on the project.

- ∉ **Give participant the permission form**
- ∉ **START the SCREEN RECORDER**

Pre-Test Questions

Do you have any questions so far? OK. Before we look at the catalog, I'd like to ask you just a few questions.

- A. What do you like to use from your library? (services, types of things to borrow)
- B. What online resources do you use? How do you get to them?
- C. Tell me what these terms mean to you:
  - o Research
  - o Online Resources
  - o Research & Articles
  - o Full Text Databases
  - o Articles, Databases, & Journals

Open Bookmark A: Article Search

- D. Have you ever used something like this before? (Article Search)

a. What do you call this?
        b. What have you looked for here? (Or if never used) What would you expect you could find here?
    E. Finally, what is something you were recently trying to learn about?
       (Okay if no topics)

Testing Tasks

On Article Search Screen (Bookmark A)

1. You said you were recently trying to learn about _____. How would you find information from your library about that?

   Backup topic: Let's say you have a family member who has seasonal allergies. You want to help them find some trustworthy information about this. How would you find information from the library about that?)*

   a. Tell me about what you see? What are these results for? What do you expect you see when you click on them?
   b. Tell me about these things on the right (limits)
   c. Now go ahead and select an article to read (Log in with OpenAthens)
   d. Have you ever seen a screen like this before?

In EDS

   e. Tell me about what you are seeing.
   f. Are you able to read the whole article?
   g. How would you send this to your family member you're helping?
   h. Now how would you go back to your search results?
       i. Is this what you were expecting to see?

Open Bookmark B: EDS home screen

2. Now let's try a new search from here.
   a. Have you ever seen this before?
   b. Pretend you're helping a 7th grader with their homework assignment. They have to research Jane Addams, and they need two articles about her for their assignment. How would you find those?
   c. Tell me about the results you are seeing?
   d. The teacher said specifically you need journal articles. How would you narrow down to just journal articles?
   e. Where do you think these links go?
       i. Library logo
       ii. Library name

Open Bookmark A in a new tab

   f. Which results did you like better?

Open Bookmark C: Library website

3. Now I'd like you to show me how you would search for articles from your library home page. You can search for articles about Jane Addams again.

Open Bookmark D: Alternate catalog

4. Let's pretend you just did that same search from the library website and you ended up here.

      a. Tell me about what you see?

      b. How would you see results for articles about Jane Addams?

      c. What was easier to use? (Bookmark C or D)

In Alternate Catalog (Bookmark D)

5. From here, let's say you want to find articles about the Chicago mayor election in 2019 from this newspaper: (washington post or daily herald in arlington heights). How would you find those?

Open Bookmark E: Chicago Public Library

6. Now let's try to find articles about the Chicago mayor election in a different catalog. This time let's find articles from the Chicago Tribune.

      a. Was that easier or harder?

Wrap Up

Thanks, that was very helpful.

I have one last follow up question. If you could wave your magic wand and make the library catalog just like your favorite website, what website would it be?

- **Prompt notetaker and observer to ask any question they have**
- **Ask their questions, then ask any follow up questions you have**

Do you have any questions for me, now that we're done?

- **Give the participant the incentive**
- **STOP the SCREEN RECORDER**
- **Close the browser and clear cookies**