Aspen Search Experience Usability Testing Report
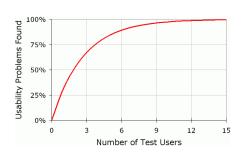
October 2020

Summary

SWAN and Elmwood Park Public Library staff conducted remote usability testing of search experience in the Aspen catalog. SWAN is working with ByWater Solutions to test the Aspen Discovery platform to identify its ability to meet our discovery needs.

3 people participated in online usability tests, each lasting about 30 minutes. Participants shared their screen and audio while the moderator walked them through a set of 6 tasks.

Methods

Remote 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."

SWAN staff recruited four participants through an online survey posted to the Elmwood Park Public Library catalog. Through a brief recruitment survey, participants were asked how often they use the library catalog, what library resources they use, and if they would be comfortable using online meeting software for the test. Respondents that were not willing to share their audio and computer screen in an online meeting were excluded from consideration. Selected participants received a $15 gift card.

Participant screening responses

Participant	How often do you use the library catalog?	What do you like to use from your library?
A	A few times a week	Y Kids and adult books, movies, video games, beyond the books collection
B	A few times a week	Media and digital books
C	Daily	I use books and ebooks to share with my students. I am the library clerk at [a school].

These usability tests were conducted remotely through the GoToMeeting platform. Participants shared their screen and their audio, and optionally video if they were comfortable. Tara Wood, User Experience Manager, moderated the tests, and Robin Hofstetter, E-Resources Consultant, and Crystal Vela, User Experience Consultant, took notes. Jason Stuhlmann, Assistant Director at the Elmwood Park Public Library, observed. Tests were scheduled for 30 to 45 minutes.

Key Findings

1. FRBRized groupings were clear and easy to navigate

Aspen uses grouped records based on the Functional Requirements for Bibliographic Records (FRBR), which combines multiple formats and editions for a work into a single record.
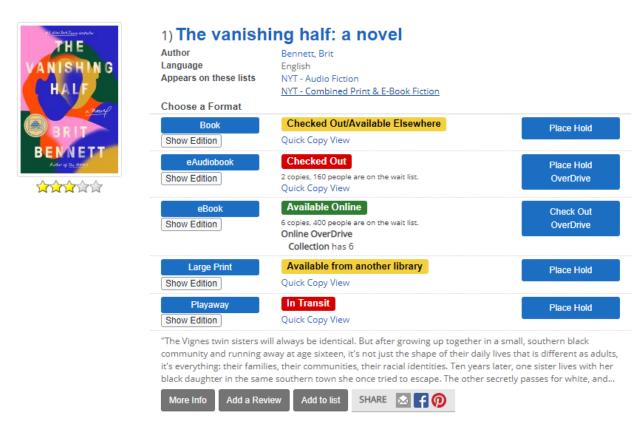

Figure 1 Grouped record result in Aspen

Though the search results display in Aspen is radically different from the current catalog, participants quickly adapted to the new display with no observable learning curve. Participants successfully identified different formats, their availability, how to place holds, and how to view the detailed information on a format. Two participants noted specifically that they liked the color-coded status labels.

2. Kindle e-books are challenging to locate

Participants were prompted to specifically find Kindle items for two reasons. One, Kindle is by far the most downloaded e-book format from the current catalog. Two, Kindle users can only download the Kindle format, so they can only access a portion of the e-books in the catalog, and previous research confirms that format is especially important for Kindle users.

In this usability test, only one participant easily found an item in a Kindle format; one never located a Kindle item; and the other eventually found a Kindle item after almost giving up. Participants expected the Kindle format to be as obvious as the other format buttons, and two expected to be able to search "kindle" in the keyword search term to produce Kindle items.

Recommendation 2a: Show Kindle or e-book formats in the search results display

We offer two possible approaches to display Kindle items in search results.

The first solution would likely be the easiest to implement with minimal impact on the current display and functionality in Aspen. Currently in the e-books result display under "Show Edition", there is a "Source" column that lists the vendor.

Check out and hold buttons already include the name of the vendor, so likely the "Source" column could be replaced without removing information for the user. This column could be replaced with download format information.
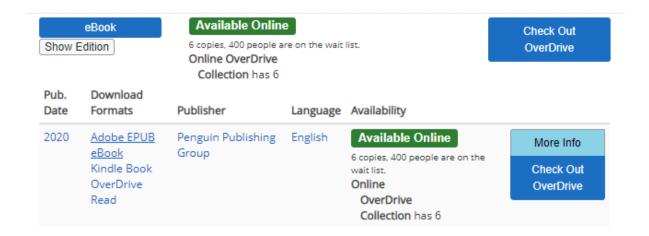
Figure 2 E-book formats in the "Show Edition" display

The second solution could be to provide a Kindle format button, as the test participants expected to see.

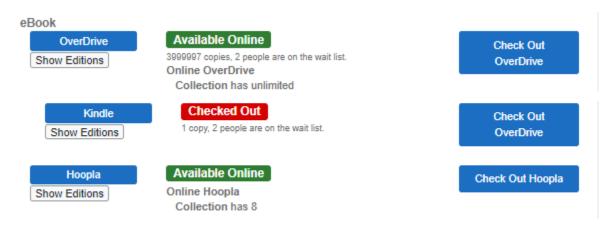*Figure 3 Kindle button just below the Overdrive results button*

However, this solution is likely much more difficult to implement and introduces some awkward information architecture challenges. E-books with Kindle formats would appear multiple times in search results, as would checkout and hold buttons for those items. In a record with many e-book editions grouped together, this could become especially unwieldy.
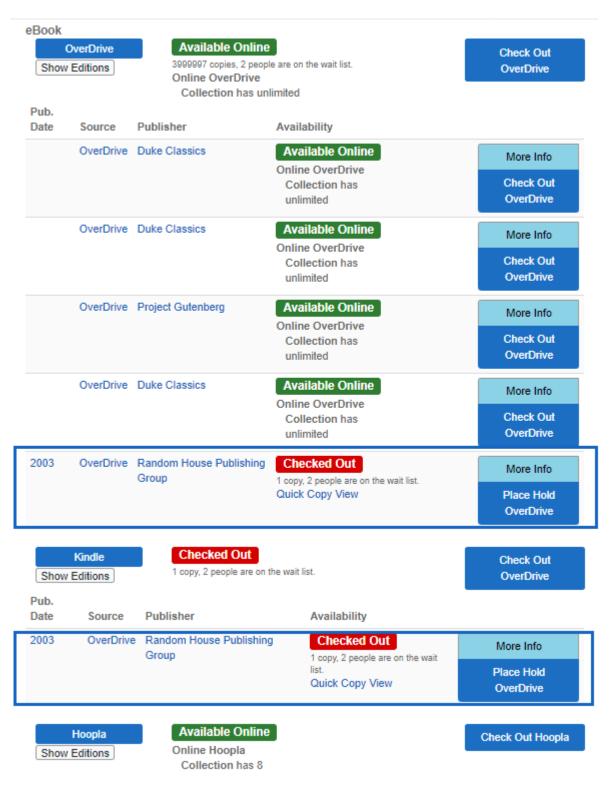
eBook

OverDrive	**Available Online**		**Check Out OverDrive**
Show Editions	3999997 copies, 2 people are on the wait list. Online OverDrive Collection has unlimited		

Pub. Date	Source	Publisher	Availability		
	OverDrive	Duke Classics	**Available Online** Online OverDrive Collection has unlimited	More Info	Check Out OverDrive
	OverDrive	Duke Classics	**Available Online** Online OverDrive Collection has unlimited	More Info	Check Out OverDrive
	OverDrive	Project Gutenberg	**Available Online** Online OverDrive Collection has unlimited	More Info	Check Out OverDrive
	OverDrive	Duke Classics	**Available Online** Online OverDrive Collection has unlimited	More Info	Check Out OverDrive
2003	OverDrive	Random House Publishing Group	**Checked Out** 1 copy, 2 people are on the wait list. Quick Copy View	More Info	Place Hold OverDrive

Kindle	**Checked Out**		**Check Out OverDrive**
Show Editions	1 copy, 2 people are on the wait list.		

Pub. Date	Source	Publisher	Availability		
2003	OverDrive	Random House Publishing Group	**Checked Out** 1 copy, 2 people are on the wait list. Quick Copy View	More Info	Place Hold OverDrive

Hoopla	**Available Online**		**Check Out Hoopla**
Show Editions	Online Hoopla Collection has 8		

Figure 4 Adding a Kindle format button would show duplicate results, hold, and checkout buttons for the same item.

Recommendation 2b: Allow patrons to search by common e-formats

If a patron could reliably search "kindle" in their search term and return results for only e-books with a Kindle copy that would not only return better search results for patrons, but it would also eliminate some of the clicking into the detail record a patron would have to do to check for Kindle copies.

Recommendation 2c: Provide an e-format facet

An e-format or download format facet would allow patrons to construct searches for their preferred format.

In addition, libraries would have more options when creating browse categories on the home page or links for websites and newsletters, for example if they wanted to promote "New Fiction for Kindle."

3. Viewing the detailed record is a last resort

Participants tended to scroll the full length of the search results page before trying the "More Info" button to view the detailed record display, which contains e-book format download options and recommendations for similar titles. Interestingly, participants used the "More Info" button and did not click on titles for items, even though that is how one would view the detailed record display in the current catalog. One participant noted they frequently use the Novelist recommendations in the current catalog, which are available through the detailed display; in Aspen, they seemed to think the search results was the detailed display and didn't think to also click on the title to get the same information. It is possible that because more information is available in the Aspen search results display – such as copy and availability information - library patrons will be less inclined to view the detailed record.

Recommendation: Monitor usage statistics for functionality found only in the detailed record

In the Aspen pilot phase, SWAN staff can monitor usage statistics for Novelist Select and Kindle format usage, both of which are accessible from the detailed record display.

It is worth noting that statistics for page views of detailed records would be difficult to accurately compare between the current catalog and Aspen. Due to record grouping, Aspen may have one grouped record pageview for multiple record pageviews in

Enterprise. In addition, viewing copies information in Enterprise requires clicking into the detailed record while Aspen does not.

4. The "Advanced Search" button was sometimes mistaken for the "Search" button

Participants B and C expected the Advanced Search button to behave differently. They entered search terms, then clicked Advanced Search expecting it to produce results using their most recently typed term. This may be because it is currently styled as a button that is larger than the "Go" button. Advanced Search is currently designed as a second step in the search. It carries over the term used in the previously submitted search, not they keyword most recently typed.

Figure 5 Advanced Search button

Recommendation: Style the "Advanced Search" as a link instead of a button

Changing the button to a link for Advanced Search would visually de-emphasize it, making the "Go" button more prominent.

Figure 6 Advanced Search displayed as a link

Recommendation: Carry over the term typed in the search box instead of the previously search term into the Advanced Search page

While changing the style of the Advanced Search link may help to solve the issue of patrons expecting the button to perform a search, using the term in the search box would save patrons a step of re-typing their term if they are confused about functionality.

Issues & Task Completion Rates

Task 1

Success Criteria: View the catalog and describe what you are seeing

Pass: N/A

All participants noted the browse categories, scrolled through the topics, and investigated the book covers displayed. Participant C specifically mentioned looking for Bluestem and Monarch winners before the test began, so they noted they were happy to see those displayed and thought that kids would like this feature.

Figure 7 Browse categories on the catalog home page

Task 2a

Success Criteria: Locate a book and accurately describe its availability

Pass: 3 out of 3

All participants easily found the title and successfully identified the availability status of different formats. Two participants noted that they liked the color-coded statuses.
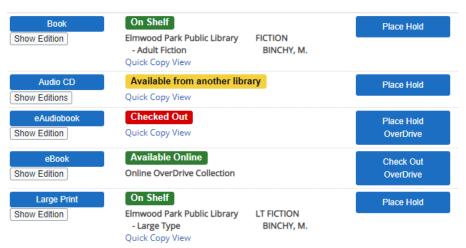

Figure 8 Color-coded statuses

Task 2b & 2c

Success Criteria: Locate a large print version of the book and use the "Quick Copy View" link or detailed record to see if there are any copies on shelf at any library

Pass: 3 out of 3

All participants found the "Quick Copy View" link. None used the detailed record to find available copies. During the test for Participant A, e-book records were not grouping properly, and e-books appeared in search results above the physical item copies. They initially clicked into the detailed record that just contained e-books, but then they realized the physical items were not in that results. They returned to results, then viewed the "Quick Copy" information for the physical items. Participant B said they thought the "quick copy" label was confusing, though they immediately found the link when asked to find copies available at any library.

Task 2d

Success Criteria: Place a hold on the large print copy

Pass: 3 out of 3

All participants immediately found the hold button for the large print copy.

Task 2e

Success Criteria: Find similar books, clicking into the detailed record to see suggested titles

Pass: 2 out of 3, 1 found recommendations later in the test

Participant B did not find the similar title recommendations in this task but located them later in the test. They first scrolled through the search results and clicked on the "suggest a purchase" link, then realizing that wouldn't provide recommendations, they clicked the "More Info" button into the detailed record but did not scroll far enough to see the recommendations. When they used the "More Info" button later in the test on Task 6, they found the recommendations.

The other two participants were initially unsure of where to find recommendations, but after not seeing recommendations in the search results, both clicked the "More Info" button in search results and scrolled to see book covers. Participant A also noticed the link to the lists the title appears in (New York Times Fiction Bestsellers).

Interestingly, none of the participants clicked on the title to view the detailed record and all used the "More Info" button.

Participant C noted that they frequently use the recommendations "on the side" referring to the Novelist Select information that appears in the detailed record in Enterprise. While in both catalogs they would need to click into the detailed record to view recommendations, in Aspen they were looking for them in the search results.

Task 3a

Success Criteria: Find books by Nora Roberts and sort them by publication date

Pass: 2 out 3

Participants A and B successfully found the "Sort by newest" option. Participant C did not notice the sort dropdown and used the Publication Date filter. Since they wanted to see the newest items first, they entered the dates 2020 to 2000. While this produced results for items from the last decade, it did not surface the newest items to the top of results.

Task 3b: Filter search results to on-shelf titles using the "Available Now" button or the "Available at Elmwood Park Public Library" facet

Pass: 3 out of 3

Participants A and B used the "Available Now" button. When interviewed, they correctly identified that this button would return results for on shelf items at all libraries. Participant C used the "Available at Elmwood Park Public Library" facet, but they noted the were not sure how to filter their results to on shelf items at all libraries. When interviewed, they believed the "Available Now" button would have the same functionality as the "Available at Elmwood Park Public Library" facet.

Task 3c: Successfully limit search results to audiobooks using either the format facet or the format category buttons above the search results

Pass: 3 out of 3

All participants used the "Audiobooks" format category button that appears above search results, and none used the format facet that appears in the left side of the screen with the other facets.

Figure 9 Format category buttons

Task 4

Success Criteria: Find the book "Soulless" using the misspelling "souless"

Pass: 3 out of 3

All 3 participants noticed that the catalog was changing their search term in the search box. Participant A quickly noticed this, and they used the search suggestions for "Soulless" that appeared when they typed in their term a second time. Participant B and C also noticed that their search term was changing, but they both tried the same search several times before eventually using the search suggestions.

None of the participants noticed the "Showing Results for.." area of the screen.
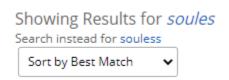
Showing Results for *soules*
Search instead for souless

Sort by Best Match

Figure 10 Spelling correction display

Task 5

Success Criteria: Locate a cookbook that can be downloaded to a Kindle device

Pass: 2 out of 3

Participant A quickly found a Kindle e-book, using a keyword search for "cookbook" limited to "Online Collection." They also used the "eBook" format category button, then clicked into an e-book format for a cookbook and found the Kindle download option.

Participant B unsuccessfully searched for a Kindle facet in the format facets in search results and in the Advanced Search options, and they also tried searching for "cookbook Kindle". They were not able to find a "Kindle" label since they never clicked into an e-book result, and they said they expect to see a "Kindle" format label in the results similar to book, e-book, large print, etc.

Participants A and C searched for "cookbooks" using a limit of "Online Collection."

Participant C eventually found the Kindle format but struggled at first. They started off with a search for "cookbooks" using a limit of "Online Collection," but they clicked "Advanced Search" instead of "Go" which did not preserve their search term. When they reset and searched again, they searched "Cookbooks for Kindle" using a limit of

"Library Catalog" which produced only one result for a Kindle Fire HD. On the third try, they searched again for "cookbooks" with a limit of "Online Collection," then clicked "eBook" and located the Kindle download option.

Task 6

Success Criteria: Locate something previously checked out from the library and correctly identify its status (on shelf, available from another library, etc.)

Pass: 2 out of 3, 1 not asked

Participant A wasn't asked this question. Participants B and C both successfully searched for the items they were looking for. Participant B searched for a movie, then found similar movie recommendations. Participant C searched for "Monarch Nominees 2021" and returned two results, though they found the full set of Monarch award winners on the home page browse categories.

Known issues

The test catalog was updated the morning of the first test, and e-records were not grouping properly with the physical items. In addition, the format category button for Audiobooks only display e-audiobooks due to errors in the settings for all three tests. Neither issue significantly affected the ability of participants to complete the tasks and both have since been resolved.

Next Steps

SWAN will provide these recommendations to ByWater Solutions and work to include them in future releases of Aspen.

SWAN will also conduct another round of usability testing that will incorporate tasks to place holds and use account management functionality, which will include additional options for similar titles and recommendations. In addition, we will test style changes for spelling suggestions and the sort-by dropdown menu.

Appendix 1: Usability Testing Script

Introduction

Hi, _____. My name is _____, and I'm going to be walking you through this session today. This is my colleague _____ and they will be taking notes.

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

We're here to test out a different version of the library catalog.

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. 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, and if you need to take a break at any point, just let me know.

If it is okay with you we'd like to record this session – it will just be audio and your screen, no video of you. That will just help us take fewer notes.

START THE SCREEN RECORDING

Pre-Test Questions
    A.   What do you like to use from your library? (services, types of things to borrow)

B. Do you use the library catalog on your phone? Or tablet?

C. What's something/the best thing you checked out recently or downloaded from the library?

Tasks

Now we are going to look at a new version of the catalog.

1) Tell me about what you are seeing: is there anything different than you are used to seeing in the catalog? *(Note what they mention)*

2) Let's say you are looking for this book: "The Vanishing Half", by Brit Bennett.

    a) Would you be able to pick this up today? *(Pass = Notice availability)*

    b) Is there a large print copy? *(Pass = Notice formats)*

    c) Is the large print copy on shelf at any library? Which one? *(Pass = Use "Quick Copy View" or check Detail display)*

    d) Can you place a hold on the large print copy? (*Pass = Find hold button)*

    e) How would you find similar books? *(Pass = View full record, find Novelist recommendations)*

3) Let's say you'd like to search for books by Nora Roberts. How would you search for those?

    a) How would you find the newest books by Nora Roberts? *(Pass = Use "sort by", "publication date" or "added in the last")*

    b) Can you just see the titles that are ready to check out today? *(Pass = Use availability facet or button)*

    c) How would you see just the audiobooks by Nora Roberts? (*Pass = Use an audiobook format facet or button)*

4) If you're looking for the book named in the chat, what do you find? (Souless)
    a) Do you see anything with that exact title? *(Pass = Notice spelling correction)*

5) You want to find some cookbooks that you can download to your Kindle e-reader. How would you do that? *(Pass = Locate a Kindle format copy, note if any facets used)*

6) Okay this is our last question. You said the last thing you checked out was_____. How would you find that in this catalog?
    a) Would you be able to pick this up today today? (*Pass = Locate the item)*

Wrap Up
Thanks, that was very helpful.

- Prompt note taker and observer to ask any questions 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?