

# Enterprise 5.0.1 Usability Testing Report

Tara Wood, December 2019

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## Summary

SWAN staff conducted onsite usability testing at Eisenhower Public Library of the new version of the Enterprise catalog, version 5.0.1. This version includes several changes, including a new responsive layout that dynamically adapts to different screen sizes to accommodate desktop and mobile devices. The purpose of this test was to assess how well patrons can use the responsive catalog on mobile devices.

4 people participated in individual usability tests, each lasting 30 minutes to an hour. Each participant brought their own devices, including a MacBook, iPhone, and Android phones. In addition, SWAN staff conducted on-the-fly testing in the lobby of Eisenhower Public Library, gathering feedback through short interactions with patrons and library staff.

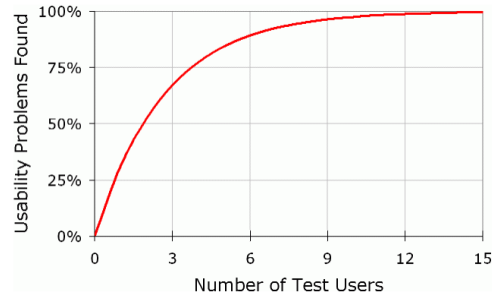
In general, all participants were able to successfully use core catalog functions, including searching, filtering results, logging into their accounts, and managing their holds and checkouts. However, usability issues with search facets and limits persist. These issues have been observed in previous tests as well. Participants expect that clicking a checkbox will auto-apply search facets, and they also expect that

search facets will persist across their search. For example, if they limit a search to “books” they don’t expect to have to reapply that filter in subsequent searches.

## Methods

### Individual 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.”<sup>1</sup>



The SWAN User Experience Manager recruited four participants through an online survey posted to the Eisenhower Public Library catalog. Through a brief recruitment survey, participants were asked what device they use and if they would be willing to bring their device to the usability test. Selected participants received a \$25 gift card.

Participant	How often do you use the library catalog?	Device(s)
A	A few times a year	MacBook, iPhone, iPad, Kindle
B	Daily	Android
C	Weekly	iPhone 7
D	Monthly	Android

Individual usability tests were scheduled for 45 minutes. The SWAN User Experience Manager moderated the tests, and the SWAN Executive Director took notes and observed the participants screens. Sessions were not recorded, as participants were using their personal devices.

### On-the-fly testing

For on-the-fly testing and feedback, the SWAN User Experience Manager and SWAN Executive director displayed the new catalog on several devices in the library lobby. Three library staff members and three patrons used the devices and offered brief feedback.

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

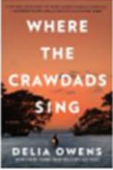
## Key Findings

### 1. New library holdings messages are clear and understandable

This version of the catalog features a redesigned display of library holdings in the search results. All participants in one-on-one testing were able to successfully skim results to find an on-shelf item.


All participants were also able to correctly describe the meaning of each status message:

- “No copies at (library)”
  - The library does not own a copy, but I can place a hold
- “All copies in use”
  - The library owns copies, but they are all checked out—I can place a hold
- “On shelf”
  - There are copies available, I can write down the call number and find it

3.  **Where the crawdads sing** Place Hold


by Owens, Delia, author. author.

**Publication Date** 2018

 Book

Holds: 749 Copies at All Libraries: 265

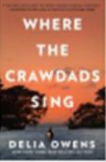

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 **On Shelf**

Call #	Location	Type
EE FIC OWENS, D.	Eisenhower Public Library District Lobby Display	Book - Special Collection 2
EE FIC OWENS, D.	Eisenhower Public Library District Lobby Display	Book - Special Collection 2

[View all copies →](#)

The previous version of the catalog listed all copies the library owns of a title, with statuses for each item.

5.   **Where the crawdads sing** **Place Hold**  
 by Owens, Delia author. author.  
**Publication Date** 2018  
 Book

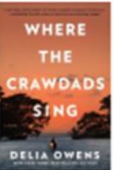
Holds: 196 Copies at All Libraries: 555


Library	Call #	Location	Type	Status
Eisenhower Public Library District	EE FIC OWENS, D.	Lobby Display	Book - Special Collection 2	Checked out - Due 12/08/2019
Eisenhower Public Library District	EE FIC OWENS, D.	Lobby Display	Book - Special Collection 2	Checked out - Due 12/15/2019
Eisenhower Public Library District	EE FIC OWENS, D.	Lobby Display	Book - Special Collection 2	Checked out - Due 12/14/2019
Eisenhower Public Library District	EE FIC OWENS, D.	Lobby Display	Book - Special Collection 2	On Shelf
Eisenhower Public Library District	EE FIC OWENS, D.	Lobby Display	Book - Special Collection 2	On Shelf
Eisenhower Public Library District	EE FIC OWENS, D.	Lobby Display	Book - Special Collection 2	Checked out - Due 12/10/2019
Eisenhower Public Library District	FIC OWENS, D.	Adult New	Book New	Checked out - Due 12/13/2019
Eisenhower Public Library District	FIC OWENS, D.	Adult New	Book New	Being transferred between libraries
Eisenhower Public Library District	FIC OWENS, D.	Adult New	Book New	Checked out - Due 12/18/2019
Eisenhower Public Library District	FIC OWENS, D.	Adult New	Book New	On hold for someone

[View More Copies](#)

Figure 1 Holdings on the previous version of the catalog

The new version offers a clearer “on shelf” status message and only displays individual items if there are items on shelf. Otherwise, no individual items are displayed, and instead the user sees links to “place a hold” or “view copies at all libraries.”

3.  **Where the crawdads sing** Place Hold

by Owens, Delia, author. author.  
**Publication Date** 2018  
 Book

Holds: 749 Copies at All Libraries: 265

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✔ On Shelf

Call #	Location	Type
EE FIC OWENS, D.	Eisenhower Public Library District Lobby Display	Book - Special Collection 2
EE FIC OWENS, D.	Eisenhower Public Library District Lobby Display	Book - Special Collection 2

[View all copies →](#)

Figure 2 The new display shows individual items and call numbers only if there are copies on shelf

In on-the-fly testing, on library staff member specifically noted that they liked the new on-shelf message.

Recommendation 1a: Release the catalog with the new holdings messages

Since the new display was understandable and skimmable for participants, the new version of the catalog will release with these changes. Additional research is needed to investigate if both a hold button and a hold link is needed. 2 of 4 participants used the hold link instead of the hold buttons.

## 2. Facets and limits are findable, but selection isn't intuitive

All participants were able to find the various ways to limit and sort searches, but using these options was not always intuitive.

### Dropdown search limits

These limits allow the user to “pre-filter” a search, and they have to be selected **before** the search to apply. The first “Libraries” dropdown allows the user to limit to their library’s items only, physical (no ebooks) only, downloadable items only, or article results from the EBSCO Discovery Service. The second “fields” dropdown allows the user to limit to title, author, subject, etc. In a desktop view, these appear to the left of the search box. In mobile view, these appear after the user clicks “Search Options” to toggle the additional dropdown options.

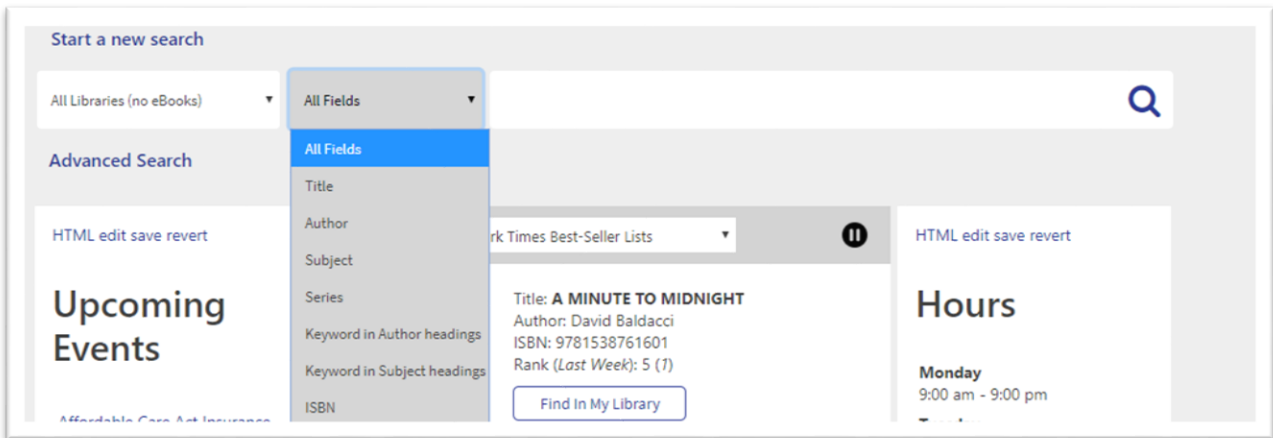


Figure 3 Desktop view of dropdown search limits

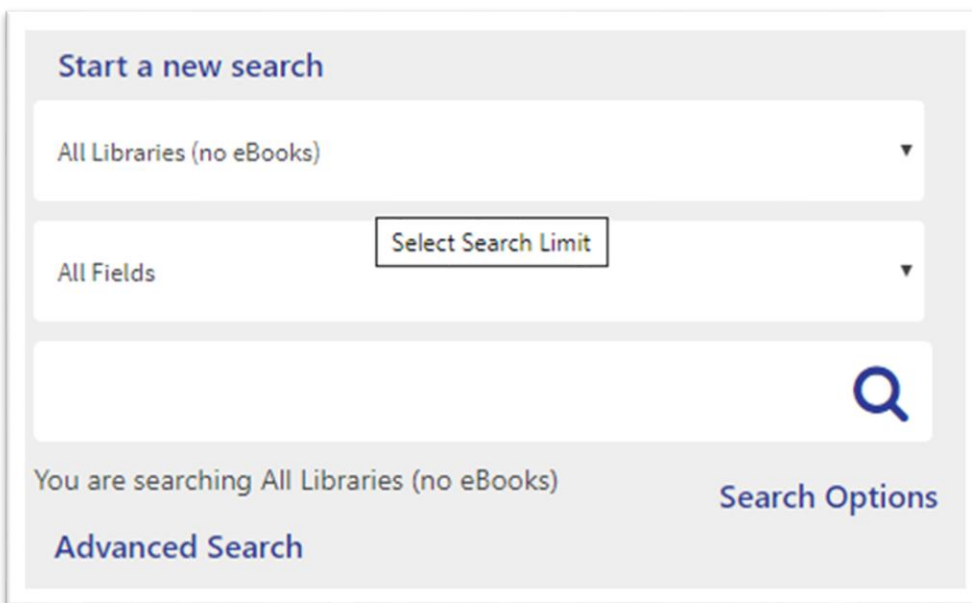


Figure 4 Mobile view of dropdown search limits

None of the participants used the first dropdown, even when prompted to search for an eBook. Two participants looked under the “fields” dropdown for eBooks.

#### Search facet checkboxes

These limits allow the user to filter a search **after** the search is performed to narrow down results by format, audience, etc.

Issues with search facet functionality has been observed in past usability tests, including confusion over buttons to “Include” or “Exclude” buttons. In this version of the catalog, the Exclude button was

removed and Include was renamed to “Apply.” If a user clicks “View all” to see all possible facets in an area, the Include and Exclude buttons are available. In addition, facet areas are collapsed into accordions, so users can more quickly see all categories available.



Figure 5 Search facets

All 4 participants were able to successfully apply search facets using the new “Apply” function over the course of the test.

Two participants struggled with having to click “Apply” multiple times for each set for filters. For example, one participant wanted to filter by Format, Language, Fiction/Nonfiction, and Audience. They had to click “Apply” for each set.

One participant used the format facets successfully early in the test to limit to DVDs. Later in the test, they did not return to the facets and instead looked in the “fields” dropdown for eBooks.

After clicking “View All” to view an entire set of facets, one participant noted that they liked the “Exclude” button but did not use it.

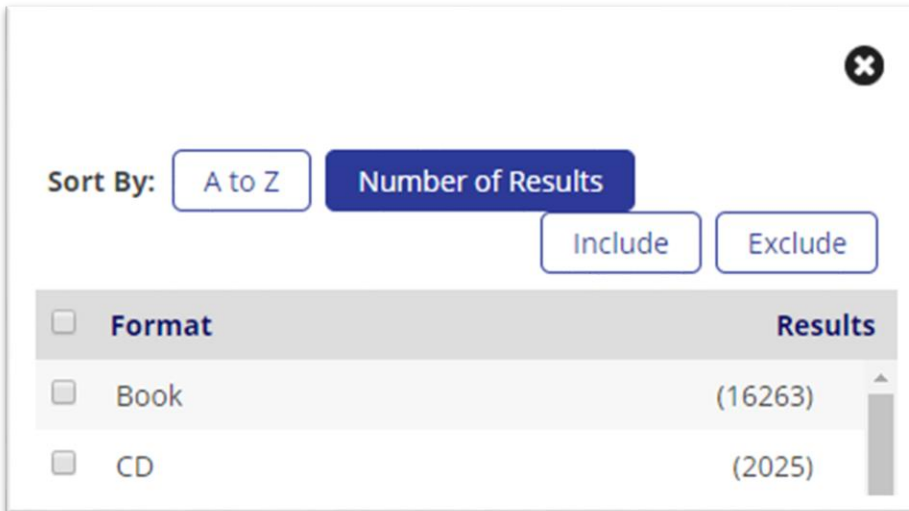


Figure 6 "View all" for any facet displays the Include/Exclude functions

“Sort by” dropdown menu

This dropdown allows the user to sort results **after** the search is performed, by publication date, relevancy, title, or author.



All participants were able to successfully find the sort by publication date feature. This option was not functioning during the test. One participant didn't initially find the dropdown menu and found it later in the test.

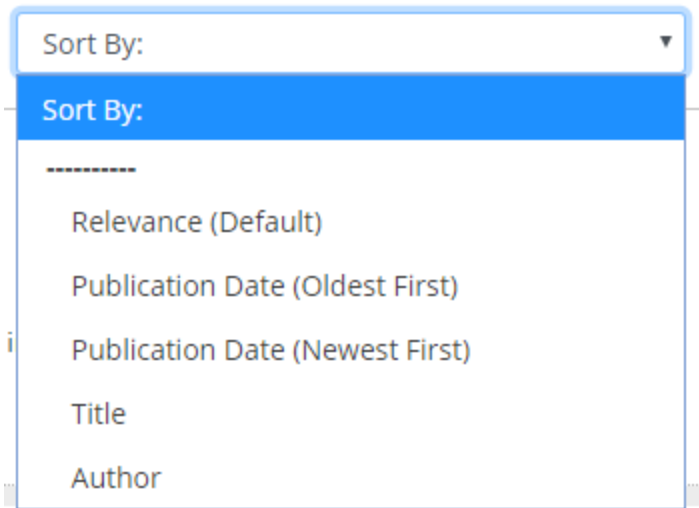


Figure 7 Sort by dropdown

### Search results tabs

Search results in the catalog are separated out between results for Articles, which come from the EBSCO Discovery Service (EDS), and results for Books, eBooks, & Media, which includes eBooks from eResource Central (eRC) and MARC records. These tabs are selected **after** a search is performed.

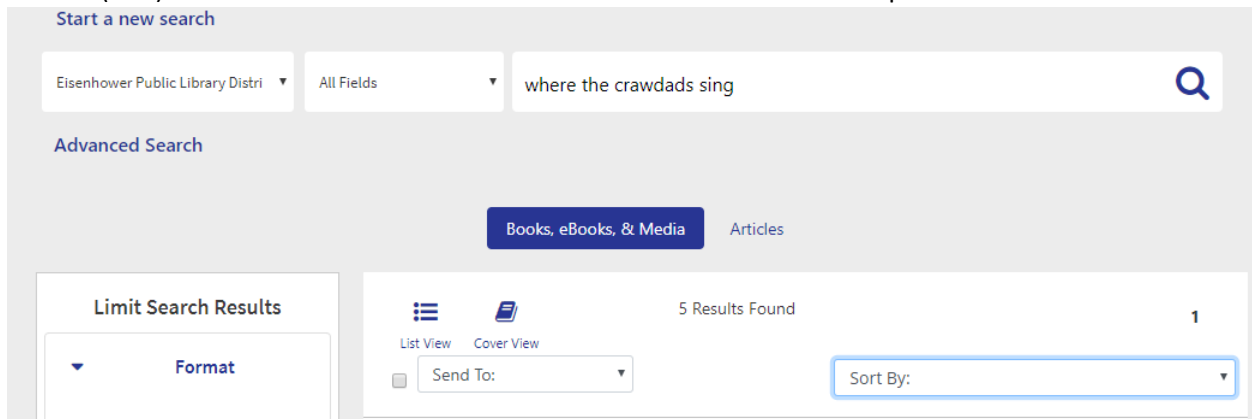


Figure 8 Tabs for 'Books, eBooks, & Media' and 'Articles'

All participants were able to correctly identify that the Articles tab included full text articles from periodicals, newspapers, or magazines that could be read online. However, none of the participants had used this feature before, and one noted they would search for this type of content “on Google.”

One participant struggled to toggle between the two tabs, not realizing that “Books, eBooks, & Media” was already selected, tapping it several times.

Recommendation 2a: Align the functionality of search limits and facets with mental models and common search behaviors

- Selecting a facet automatically applies the facet—no need to choose “apply”
- Users can preserve facets across several searches, and they can pre-select facets and search using those facets

Recommendation 2b: Reduce the number of filtering options

Additionally, reducing the number of options to filter search results and/or clarifying the options available could help users more efficiently perform searches.

Currently, users have to choose from 1 sort dropdown, 2 search limit dropdowns, 11 search facet categories, and 2 format tabs. Several search limit dropdown options are duplicated in search facet checkbox areas:

- Library
- Format
- Author
- Subject

The Articles search limit and Articles tab also duplicate results.

Further research is needed to identify how some of these options could be combined in a way that fits users’ mental models and reduces the number of places they have to look for essentially the same functionality.

### 3. Subject searching is less successful than keyword searching

One participant searched for “Indian food cook book” using the Keywords in Subject Heading limit and returned zero results. Another participant searched for “Shirley Temple” using the Subject limit, with filters for “DVD” and “Juvenile.” While this search returned a few results (4 total), the participant would have seen many more relevant results using a keyword search and the same audience and format filters applied (62).

Recommendation 3a: Conduct further research into patrons’ use of the Subject and Keyword in Subject Heading limit

It is possible that these limits may not be necessary as search limits, since subjects are also available as a facet. In addition, SWAN staff should correlate research with bibliographic data to determine if subject searching can be improved through catalog data enhancement and cross-reference. How well do patrons understand searching by subject and keyword in subject headings? How can we guide them to expand their searches when subject searches do not yield results?

## Next Steps

Enterprise 5.0.1 will release with a responsive design on December 18<sup>th</sup>. Additional testing after the release will reveal additional insights about how patrons are adapting to the new layouts.

In addition, the UX team will monitor Google Analytics to observe any changes in mobile use of the catalog. For example, does mobile traffic to the catalog increase? What types of devices are patrons using to access the catalog?

The UX team will continue to explore improvements to facet behaviors with SirsiDynix. Comparative testing of other catalogs could help us identify ideal facet interaction design.

Additional areas for testing that were not explored in this test include:

- Holds and copies messaging – how do patrons understand the holds process, as conveyed to them through the catalog?
- How successful is mobile fines payment? Fines payment was not available through the test catalog.

## Appendices

### Appendix A: Issues & Task Completion Rates

#### Task 1

**Success criteria: Find an on-shelf item and correctly identify all three possible status messages: on-shelf, no copies, all copies in use.**

**Pass: All participants**

Participant A mentions writing down the call number to find an item. Participant mentions the catalog “downstairs” (desktop catalog) is easier to find facets – found after some scrolling around on Android phone. Participant D used the format facet to find a DVD.

#### Task 2

**Success criteria: Find results for books by Nora Roberts**

**Pass: All participants**

Participant A used author dropdown. Participants B and D used a keyword search. Participant C used the author search facet checkbox. Participant B used back button to reset the search.

#### Task 3

**Success criteria: Use the sort by publication date function**

**Pass: All participants, one passed with difficulty**

Sort by dropdown was not functioning correctly during the test, but all participants found it.

C didn't initially find the sort by function and found it later in the test

#### Task 4

**Success criteria: Find a result with a format of audiobook CD, either by scrolling in results or using the format filters**

**Pass: 3 out of 4 (1 skipped), one participant passed with difficulty**

Participant A used the start new search link and they used facets – they expected to pre-apply filters and search with those filters in place (search clears all filters). Participant B interestingly used many facets earlier in the test, but chose to scroll to find the audiobook format icon. Participant C got distracted

while searching and didn't use the filters or identify an audiobook copy. Participant D looked in the drop down limits expecting to see format facets and they thought the "books, eBooks, & Media" tab was a filter—eventually used Advanced search.

#### Task 5

**Success criteria: Click the hold button or "place a hold" link in results**

**Pass: All participants**

Place hold link was not functional during the test. Participants A and B used the place hold link, Participant C used the hold button, and Participant D's preference for the hold button or link was not recorded. Participant C noted they would always ask at the desk and staff will place holds for them.

#### Task 6

**Success criteria: Find the holds area of My Account**

**Pass: All participants (1 passed with difficulty)**

Participant B was already in My Account, but went back to "hamburger" menu to My Account, then went to holds – didn't realize they could go to holds section of My Account.

#### Task 7

**Success criteria: Find the change hold pickup location functions**

**Pass: 2 out of 4 (2 out of 4 skipped)**

Participant D noted they would never use feature and did not try to change a hold pickup location.

#### Task 8

**Success criteria: Find the suspend hold functions**

**Pass: All participants (1 passed with difficulty)**

#### Task 9

**Success criteria: Find the checkouts area of My Account**

**Pass: All participants**

#### Task 10

**Success criteria: Find the fines area of My Account**

**Pass: All participants**

Fines area was not working in the test version, fines did not display. However, all patrons could fine the fines area of the catalog.

#### Task 11

**Success criteria: Find a Kindle eBook result**

**Pass: All participants (3 of 4 passed with difficulty)**

Participants A and C used facets. Participant B used Advanced Search. Participant D scrolled to a Kindle result.

Participant A searched “cookbook indian food kindle” -- wanted to search by format and get results. Also used subject search with same terms and got no results. When asked to find an “ebook” on an iPad they were able to find ebook results.

Participant B searched for “cooking Indian Food” -- tried to use limit dropdowns but didn’t find “downloads” limit, ended up using Advanced Search and ebook format, then found Kindle version.

Participant C was confused about the search bar in My Account, thinking it would search only My Account. Started a new search with Start New Search button—used eBook format facet and found the Kindle version.

Participant D searched for Indian food cook book as keywords in subject headings and got no results initially. Used Start a New Search and found results using all libraries and all fields, did not use the eBooks facet.

#### Task 12

Success criteria: Correctly describe results seen in each tab, use the tabs to toggle between different results.

#### **Pass: All participants (1 passed with difficulty)**

Participant A tried the tabs, could see there were “periodicals” -- though these were what you could get in an “internet search.” Participant B recognized Articles could be read online. Participant C recognized it was news and periodicals in the Articles tab. Participant D thought the tabs were a search limit or filter, didn’t recognize Books & Media already selected. They were confused by the interface and said they would probably use Google for this information.

#### Additional Notes and Issues

All participants successfully used search facet checkboxes at some point in the testing tasks.

Participant A demonstrated finding movies—used the format facet for DVD, and the audience facet for juvenile items. The “Apply” function in the facet was confusing for multiple facets—they expected to be able to select facets from several categories and hit “Apply” for all. Participant said they liked the “Exclude” feature but didn’t seem to use. Participant also used a subject search for “Shirley Temple” -- “subject” means something different to participants than catalogers.

Participant said they would like more copies of items – wanted a movie with 39 copies and hundreds of holds.

Participant C was thrown off by OpenAthens login screen, they thought “Library Barcode” meant an item barcode.

Participant D expected the library website to have a “my account” link – they had a workaround to do a search, then get to the link but would like to get there without having to search. Participant found the “Limit Search Results” link early in the test and used it to filter to DVDs, but wasn’t able to use it to find

an ebook. It isn't clear if they couldn't recall where the format facets were located, or if they thought eBook facets were in a different location.

## Appendix B: Individual 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.

We're here to test out a new version of the library catalog. It's not yet available to everyone, so you can get a sneak peek and help us test it out.

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.

Finally, I have this consent form for you to sign. It just says we won't share your name or email with anyone, and when we share the results of this test with libraries your feedback will be anonymous.

- **Give participant the permission form**

### Warmup Questions

- What do you like to use from your library? (services, types of things to borrow)
- Do you use the library catalog on your phone? Or tablet?
- Have you ever used the library's mobile app?
- 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. You said the last thing you checked out was \_\_\_\_\_. How would you find that in the catalog again? Backup: Where the Crawdads Sing
  - a. Would you be able to take this home today?
  - b. Tell me what these messages mean:
    - No copies at (library)
    - All copies in use
    - On Shelf
2. Let's say you'd like to search for books by Nora Roberts. How would you search for those?
  - a. How would you search just for the Nora Roberts books at this library?
3. How would you find the newest books by this author?
4. If you wanted to check out a book on CD of this from the library, how would you find that?
  - a. (If doesn't use filters) How would you just see the CD results for this?
5. Let's place a hold on this item (pick an item from the results)
6. How would you see a list of your holds?
  - a. If not sure: Have you ever used this before? (go to My Account)

7. How would you change where to pick up a hold?
8. If you were going on vacation, how would you make sure it didn't come in while you're on your cruise ship?
9. How would you see what you checked out?
10. Do you have any fines right now?
11. Let's go back to the search results, and this time let's say you were looking for an ebook about cooking Indian food, and you want it for a Kindle. How would you find that?
12. Tell me what these are for (Books & Media, Article tabs)

## Appendix C: On-the-Fly Usability Test Plan

### Goals

On a tablet with the new responsive design, can patrons:

1. Search the catalog and find an item
2. See if the item is on shelf at this library
3. Filter results if needed
4. Find where to log in

### Plan

- Set up signage in lobby, have test catalog on an iPad and Laptop
- Take notes on index cards, number each card per patron.
- Provide snacks (and library swag if available) as a thank you/incentive.

### Supplies

- Index cards
- Pens
- Snacks
- Backup tablet or phone

### Script

Hello! I'm here testing out a new version of the catalog. It's not yet available, so you can get a sneak peek and help us test it out. Would that be okay with you?

I have a few questions for you to get started:

- Do you ever use the catalog on your phone? Do you use the library app?
- What do you usually get from the catalog?

(Show the catalog)

- What are you looking for today? Can you show me how you would find that?
- What do you notice that is different from what you usually see?
- If you were at home, how would you log in?
- Is there anything you liked, or anything you would change?

Thanks so much for your time!