

BLUEcloud Mobile Usability Test Report

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Summary

SWAN and Downers Grove Public Library staff conducted onsite usability testing at Downers Grove Public Library on the SWAN Libraries mobile app. The app runs on the SirsiDynix BLUEcloud Mobile platform, and it offers the ability to search the catalog, manage account functions, scan an ISBN barcode to search the catalog, and save a digital library card that is scannable at self-check machines. Libraries can also add custom links on the app to events or online resources. The purpose of this test was to assess the usability of core search, account, and navigation features in the app.

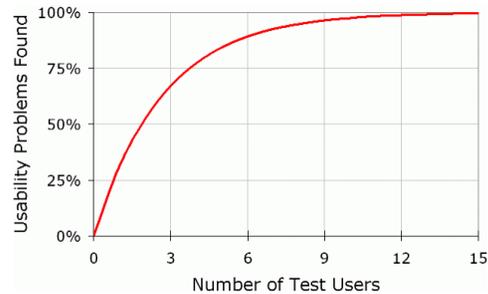
5 people participated in individual usability tests, each lasting about an hour. Each participant brought their own mobile phone to use during the test, and the researchers were able to observe them using the app on the device they are most comfortable with. While some participants had reported using the app before none had used the SWAN Libraries mobile app.

Participants were able to perform all account management tasks successfully, which included managing holds, fines, and checkouts. Participants were also successful at basic keyword searches, but they struggled with using facets and understanding format labels. Using ebooks and databases through the app presented serious usability challenges, and most participants did not recognize the “swipe left” navigation to navigate to additional pages in the app.

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.”¹



The SWAN User Experience Manager recruited five participants through an online survey posted to the Downers Grove Public Library catalog. Through a brief recruitment survey, participants were asked what device they use and if they had used the library’s mobile app before. However, during the test it was revealed that one participant had used BookMyne, a different app, and the other had used the library’s website and catalog on their phone. Selected participants received a \$25 gift card.

Participant	Have you used the app before?	Device(s)
A	No	Samsung Android phone
B	No	iPhone 11
C	No	Samsung Galaxy S7 phone
D	Yes	iPhone 6s
E	Yes	iPhone

Individual usability tests were scheduled for 45 minutes. The SWAN User Experience Manager moderated the tests. Crystal Vela, SWAN User Experience Consultant, and Downers Grove Public Library staff took notes. Sessions were not recorded, as participants were using their personal devices.

Key Findings

1. Search and page swipe functions are not apparent

All participants found the search bar and successfully used it during the test, but some did not see it initially and looked in the “hamburger” menu.

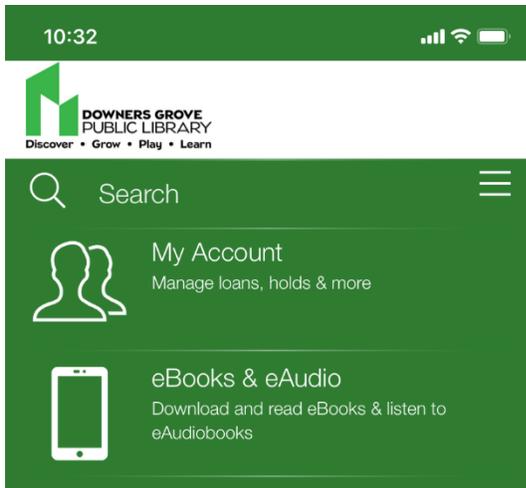


Figure 1 Current search bar

Only two of the participants swiped left and right to navigate to additional pages on the app home screen. One participant accidentally swiped left to the second page of the app when viewing their library card in the app, and they didn't see the links on the first screen for the entire duration of the test. Two participants never swiped left to the second page of the app, which contained links to the ISBN scanner and online databases.

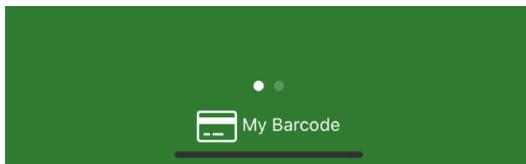


Figure 2 Current swipe icons

Recommendation 1a: Improve the design of the search bar

A change in spacing and/or background color could help users more quickly notice the search function.

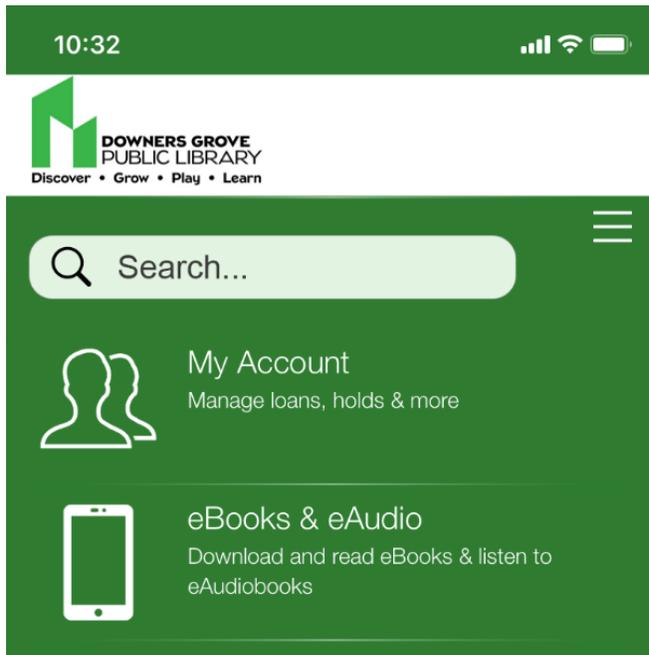


Figure 3 Search bar with a more standard design

Recommendation 1b: Provide more obvious swipe icons

The current swipe icon is very small – larger icons and/or icons placed higher on the screen could make the swipe functionality more apparent.

Recommendation 1c: Move the “My Barcode” icon

The “My Barcode” icon is very close to both the swipe icon and the bottom of the screen. Several users accidentally closed the app trying to access their barcode, especially on iPhone.

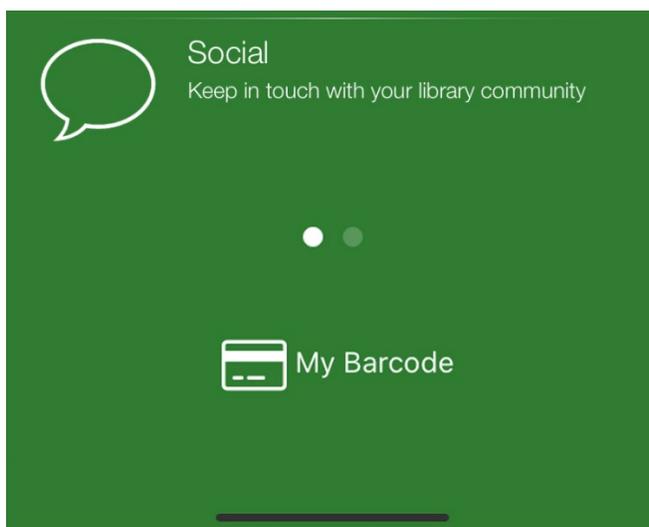


Figure 4 Larger swipe icons and more spacing around elements could improve usability of the swipe and barcode functionality

Recommendation 1d: Keep home screen links to a minimum

App content managers should carefully consider what links are needed on the home screen, keeping in mind that items on a second or third screen will likely not be seen by many users.

2. Format labels are not intuitive

Participants were unfamiliar with many of the format labels. Currently, these do not match the catalog which adds another layer of unfamiliarity. Participants expected to see more familiar labels, such as “DVD” instead of “video disc” and “CD” instead of “audio disc”. Another participant noted they could not see what items were large print and what items were regular print – they all used a format of “book”.

Recommendation 2a: Update format labels

Updating the labels in the app to match the labels currently in use in the catalog would provide consistency of experience. This would also add formats not currently present in the app – like Large Print—and update existing formats to better match patrons’ mental models of looking for DVDs, CDs, BluRay, and other formats that they are used to seeing on retail sites.

3. Filter functionality is not intuitive

Testing revealed issues with labels and functionality of search filters.

The app lists three possible filter options. Tapping anywhere on that area of the screen brings up a menu of four sets of filter options with four dropdowns.

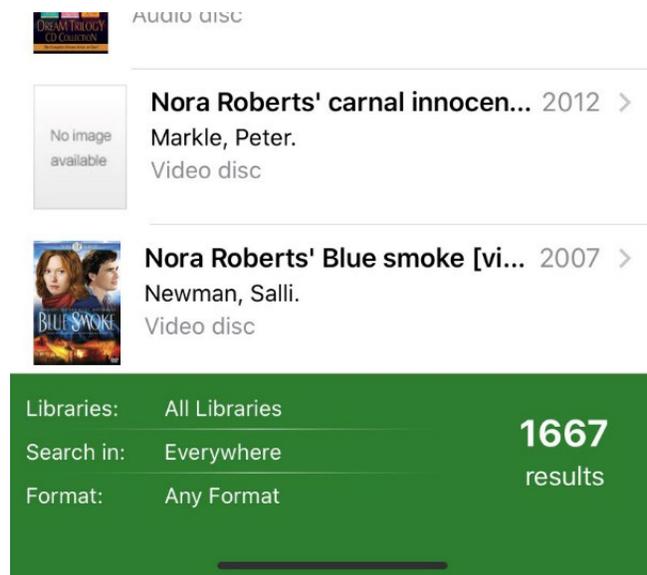


Figure 5 Search filters in search results

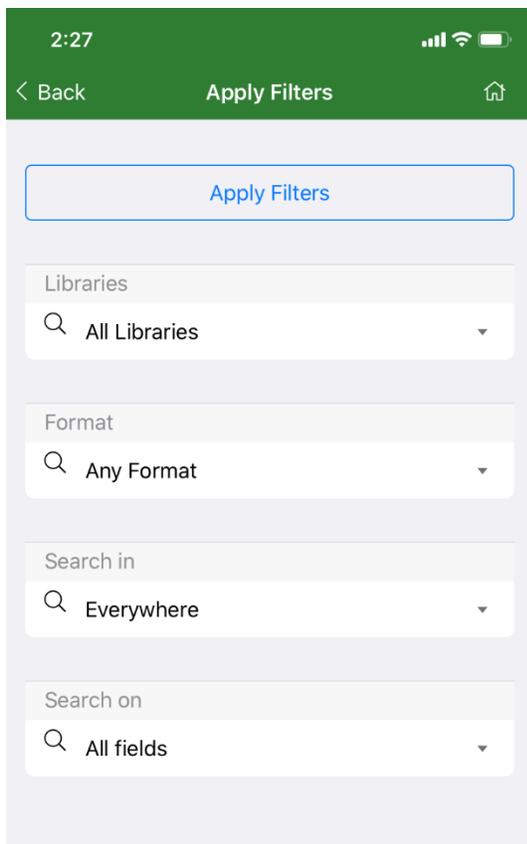


Figure 6 Search filters dropdown menus

Participants thought they could tap one of the filter options and see just the options for that filter, e.g. tapping Formats would just show a list of format options. Instead, they were surprised to see four options and briefly struggled to locate the option they wanted to use. Also, the search results screen doesn't show one of the filter options, which is a limit on fields (author, title, etc.) and only one participant located this limit.

In addition, labels confused patrons. Format was clear and all participants successfully located the format filter at some point in the test. However, participants were unsure what the "Search on" and "Search in" filters would do.

Recommendation 3a: Remove the "Search in" field

This field limits to either eBooks and eAudio items integrated into the app through eResource Central, or physical items. Participants gravitated toward the format filter, and this limit is unnecessary.

Recommendation 3b: Improve the display of filters on the search results page

A prompt to simply “Limit Search Results” would match the catalog and provide a clear call-to-action for the patron. In addition, listing only limits applied would reduce confusion and the amount of information on the search results screen. If no limits are applied, no limits need to be listed.

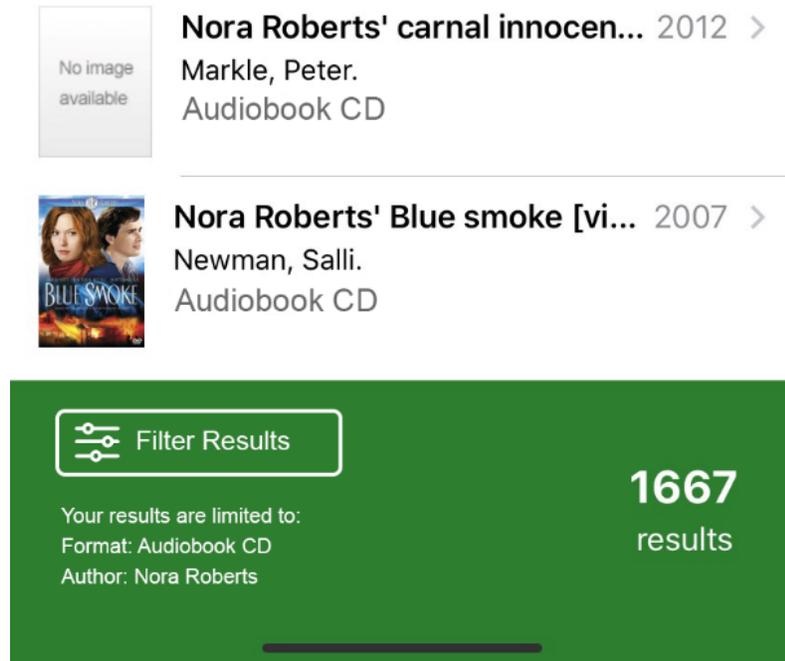


Figure 7 Filter button with applied filters listed

Recommendation 3c: Provide contextual help on the limits selection screen

Brief instructional or example text could help patrons better interpret each limit.

4. Using databases through the app is challenging

All participants struggled with a task to find the Chicago Tribune. Three participants found the link to the library databases page on their website through the app, but they struggled with finding the database link once they were on the website. Participants overwhelmingly expected to search the app or library catalog and just find a link to the database, a functionality currently not present in the app.

One participant that found the link and successfully navigated to the ProQuest Chicago Tribune database was not sure they had successfully completed the task, and they said they expected to see the Chicago Tribune archives site.

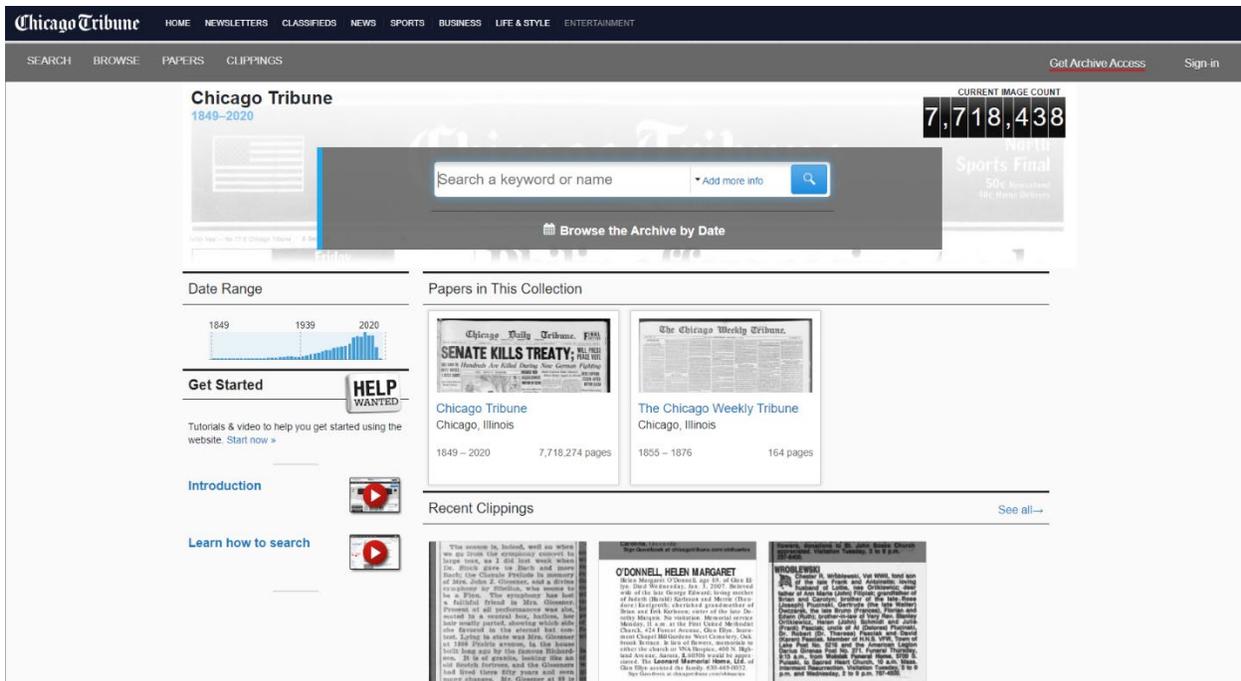


Figure 8 Chicago Tribune Archives at <https://chicagotribune.newspapers.com/>

Recommendation 4a: Careful linking to database lists on the library website

In this particular case, linking to an anchor link on the databases page on the library website could help users more clearly see the databases list. An anchor link directs the user not only to a page, but a section on that page as well – getting the list of databases immediately in front of the patron, and temporarily hiding the prominent catalog search bar.

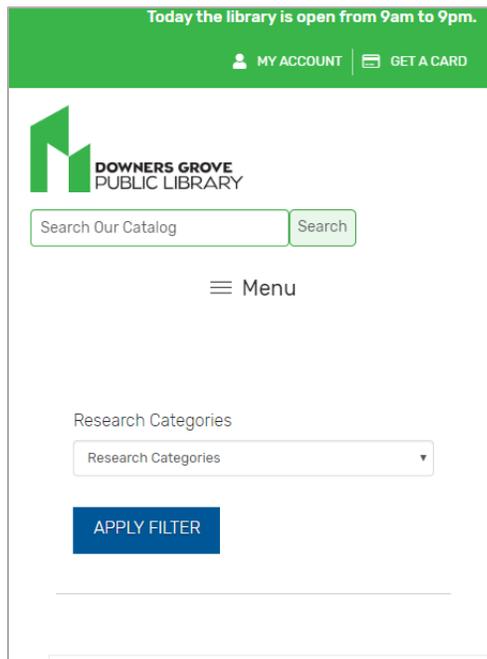


Figure 9 The current link from the app lands at the top of the page

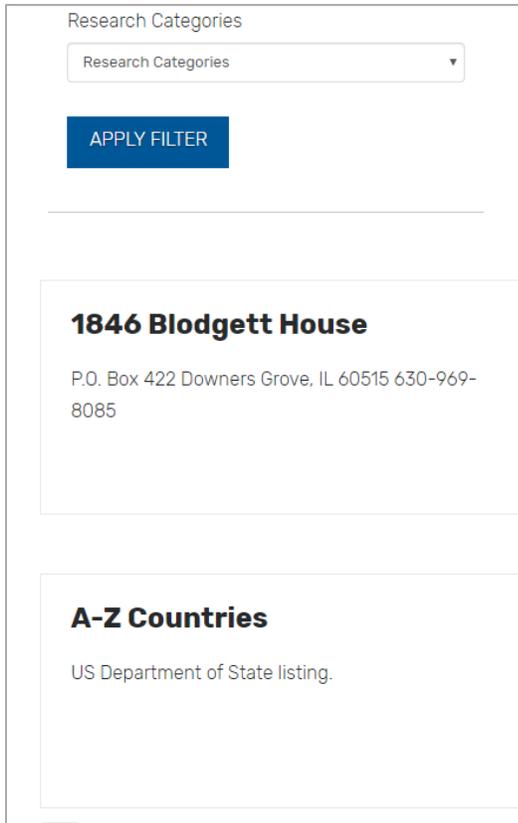


Figure 10 A link to an anchor lower on the same page shows the list of databases

Recommendation 4b: Database search recommendations in the app and catalog
Patrons expect to search the catalog for any resources the library owns. Surfacing a database “record” that connects the user to the database if they search for it by name is a feature in some discovery systems that could be also helpful in the app.

The screenshot displays a library discovery system interface. It features three main sections:

- Item 1: THE NEW YORK TIMES GREAT SONGS OF BROADWAY**
 - AUTHOR:** New York Times
 - PUBLISHER:** Times Quadrangle Books
 - PUB. DATE:** 1973
 - LANGUAGE:** English
 - CHOOSE A FORMAT:** Book (selected), On Shelf, North Branch, 784 New, PLACE HOLD
 - Actions:** MORE INFO, ADD A REVIEW, ADD TO LIST, SHARE (with social media icons)
- Item 2: THE NEW YORK TIMES BOOK REVIEW 2010(MAGAZINE)**
 - PUBLISHER:** Arno Press
 - PUB. DATE:** 1968
 - LANGUAGE:** English
 - CHOOSE A FORMAT:** Magazine (selected), On Shelf, Quick Copy View, PLACE HOLD
 - Actions:** MORE INFO, ADD A REVIEW, ADD TO LIST, SHARE (with social media icons)
- EXPLORE MORE** (highlighted with a blue box)
 - Magazines & Newspapers (with a globe icon)
 - Happy October!
 - List of Online Resources
 - Celebrate Black History Months Kid Entrepreneurs
- Item 3: THE NEW YORK TIMES MAGAZINE (MAGAZINE) 2010**
 - PUBLISHER:** The New York Times
 - PUB. DATE:** 1896

Figure 11 In a search for 'New York Times', this discovery system displays recommended links to the online Magazines & Newspapers database page

Recommendation 4c: Investigate usability improvements for access to the Chicago Tribune. Ideally, articles would be available through the catalog. Continued pressure on the vendor to integrate with other discovery systems could eventually pay off. If these articles were included in Article Search there would not be the need to pass patrons off to the ProQuest site, which was confusing to patrons.

In addition, SWAN should investigate library access to the Chicago Tribune Archive, at <https://chicagotribune.newspapers.com/>. If it were possible to provide this resource to patrons, they would be able to use a more familiar, browsable interface. This would likely be a long term effort, as licensing and rights issues may present obstacles to library licensing for this resource.

5. eBook downloads are difficult to access for Libby users

All participants were able to successfully search for and find the download button for eBooks. However, for the two participants who preferred to use Libby as their eBook app, it was unclear where their files went once they downloaded them. While items checked out through the app would appear in Libby, the participants did not know this and received no prompt to check Libby for their items.

Other participants were successfully directed to the Amazon checkout screen (for a Kindle user) or the app store to download Axis 360.

Recommendation 5a: Direct users to digital checkouts instead of immediately downloading items eBook downloads from the catalog can be complex, due to the many different vendors and apps available to use these items and vendors' different requirements for accounts. Especially since we don't have a single sign on option for these services, directing users to a digital "cart" with further instruction could provide a way to guide the user to a successful download.

The concept of a "cart" is familiar to users of retail sites. The card could list items with instructional text and links to direct the user to the apps available to read or listen to these items. Instead of having to hunt down downloaded files and figure out what to do with them, the user would see their options clearly laid out.

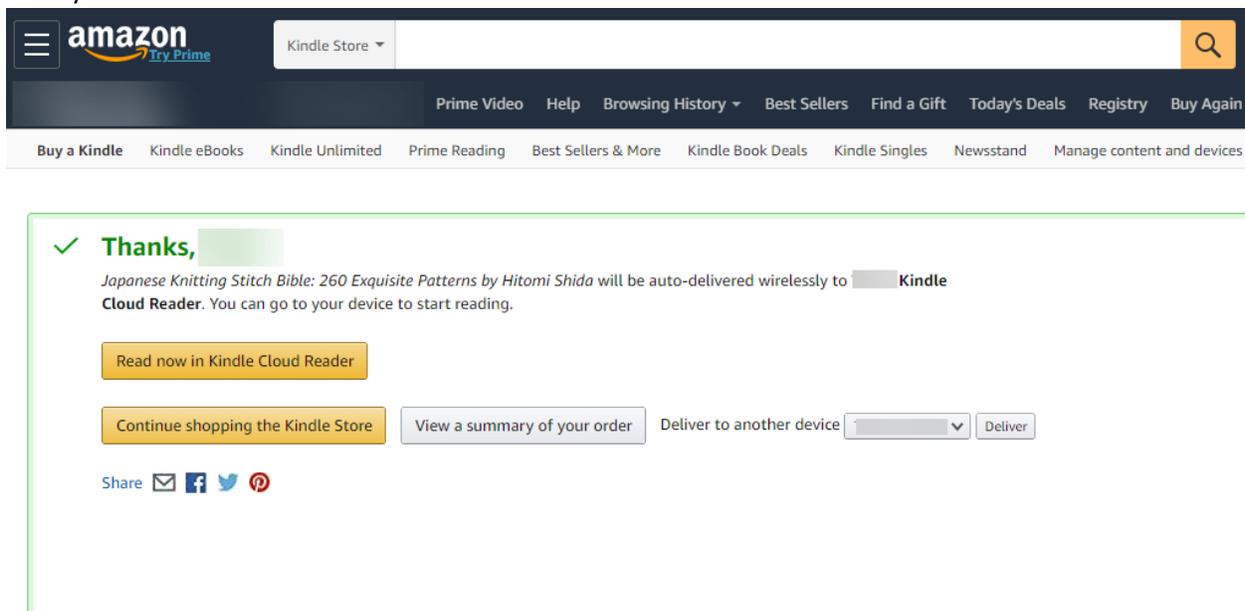


Figure 12 The Amazon.com checkout experience notifies the user the item is delivered wirelessly to the Kindle app and the user has an option to deliver to another device.

6. My account functions are easily findable

Participants didn't struggle with accessing the account functions, including holds, checkouts, and fines. 4 of 5 participants used the "hamburger" menu to access these features; one used the "My Account" link on the app home screen.

Recommendation 6a: Consider removing the My Account link on the home screen

Additional testing is needed to ensure patrons would not be negatively impacted by this change. Since patrons were familiar with the menu and easily found the account functions, its possible the My Account

link on the home screen, which simply opens the menu, could be removed to make room for other information or to reduce the number of options for patrons to mentally process on the home screen.

Issues & Task Completion Rates

Task 1

Success Criteria: Find hours for the library, in the Nearest Libraries section of the app

Pass: 4 out of 5

Most participants easily and quickly found the library's hours. One participant did not see the first screen of the app for the entirety of the test – when logging in and looking at their saved library card, they swiped left to the 2nd page of the home screen and never swiped to the first page, which contained the link to Nearest Libraries.

Task 2

Success Criteria: Use the ISBN scanner in the app to locate a book

Pass: 3 out of 5

The two participants that failed at this activity never swiped to the second page in the app, which contained the link to the ISBN scanner.

Task 3

Success Criteria: Search for a previously checked out, known title in the catalog and view item holdings

Pass: All participants (one with difficulty)

All participants were able to successfully complete a known title search. However a few were initially not sure how to find the search bar but then quickly found it. One participant couldn't remember the exact title and did not return results for the item, even though the title typed in was very close to the actual title. They then searched by the topic of the book and found the title.

All participants were able to find the holdings for the item, but one patron didn't initially realize that they needed to scroll further down the screen to see the holdings. They looked at a large print record for the title, saw the holdings, then went back to the regular type record and scrolled down to see the holdings for the item.

Task 4

Success Criteria: Search for a known author, "Nora Roberts," and use the author limit to narrow results

Pass: 1 out of 5

While all participants were able to successfully perform a keyword search for the assigned author, only one participant found the author limit. The "All fields" label was confusing for participants.

Task 5

Success Criteria: Use the format limit to narrow to book on CD

Pass: 4 out of 5 (3 with difficulty)

The format label “Audio disc” was confusing to most participants. They scrolled through all possible formats looking for something with “CD”. One participant noted that they did not know what a video disc was. The participant that could not complete the task was confused by the format of book on CD. They equated it with an eAudiobook and searched using the “eBooks & eAudio” link on the app home screen. Because this search was limited to downloadable items only, they never saw results or a format limit for the physical audiobooks.

Task 6

Success Criteria: Place a hold

Pass: All participants

All participants were able to locate the hold button and place a hold. Several noted the ability to change their pickup location when placing a hold.

Task 7

Success Criteria: View a list of all holds placed

Pass: All participants

All participants were able to easily locate the “hamburger” menu and view a list of their holds.

One participant noted that the “placed” and “being held” are the only two status options for holds. There is no status for “in transit” holds, which would they would appreciate being able to see so they know when a hold is coming. In addition, this participant didn’t like that the app doesn't allow sorting of the holdings list by alphabetical order, which they are able to do through the online catalog.

Task 8

Success Criteria: Change the hold pickup location

Pass: All participants

One participant didn’t initially see how to select a different library, but quickly realized they had to tap the name of the library and noticed the small triangle dropdown menu icon.

Task 9

Success Criteria: Suspend a hold

Pass: All participants

All participants were able to suspend a hold. Two participants used the suspend all holds functionality while the rest suspended an individual hold. One participant struggled with a start and end dates.

Task 10

Success Criteria: Cancel a hold

Pass: All participants

All participants easily canceled a hold.

Task 11

Success Criteria: View a list of all checked out items

Pass: All participants

All of the participants easily located the list of their checked out items. One participant was also surprised to see their “Libby things”.

Task 12

Success Criteria: View current fines

Pass: All participants

All participants easily located their fines. None of the participants had any fines.

Task 13

Success Criteria: Access the ProQuest database of Chicago Tribune articles

Pass: 2 out of 5 (2 with difficulty)

3 participants found the link to “Articles and Research Databases” and successfully navigated to the list of all databases on the Downers Grove Public Library website. All three participants first used the search bar at the top of the page, which searches the library catalog and searched for “Chicago Tribune.” This did not produce results for the Chicago Tribune database. Two participants looked at the Articles section of search results – this would have been successful, but ProQuest, which provides the Chicago Tribune database, will not integrate with the EBSCO Discovery Service and so there were no results for Chicago Tribune in the search results.

When prompted by the moderator, one participant clicked a suggestion prompt in the Articles results: “Where you looking for this journal? Chicago Tribune”. The participant logged in to OpenAthens to access the databases, but then got an error message of “Unexpected error occurred.”

Two participants eventually navigated back to the databases page on the library website, scrolled further down the page and found the Chicago Tribune link. However, both were confused when they access the database. They expected to see “Chicago Tribune” on the page and instead saw “ProQuest.” One participant asked “why can’t it just say Chicago Tribune?”

Two participants searched the app and were not able to find the database.

Task 14

Success Criteria: Find an eBook to download using a topic search for “gluten-free baking”

Pass: All participants (3 with difficulty)

All participants were able to successfully reset from the previous task and search for an eBook. Only one person used the eBooks & eAudio link on the home page of the app.

One participant navigated to the “More Downloads” link, which went to the library website, then searched the catalog. They were able to find items through the catalog but struggled to find the search

limits until eventually locating the “Limit Search Results’ button. They were prompted by the moderator to search in the app, and they were also able to successfully locate items.

When asked to find an available eBook, participants quickly realized they would have to tap each item to see availability. One participant noted they expected to see an “available” filter and were frustrated that they couldn’t find one.

One participant used Kindle for eBooks, and they successfully navigated through to the checkout page on Amazon.com.

2 participants said they use Libby frequently for eBooks. After downloading eBooks from the app, they didn’t know where the files went. One participant found the files but received a “can’t open file” error on their Android phone. Likely this is because Overdrive is the default app for these files. When prompted to check the Libby app for the item, the participant didn’t see it in their list of current eBook checkouts. Both participants noted they would start a search for eBooks in Libby.

Additional comments

One participant noted that “Preferences” doesn’t do anything – it was not clear that they could use this to drag the My Account options in a different order.

Next Steps

SWAN staff will create enhancement requests with SirsiDynix on improvements to the app interface, which include improvements to the design of:

- The catalog search bar
- Swipe icons
- Search results filters
- eBook and eAudio checkout experience
- Chicago Tribune access

In addition, we will request the ability to add database recommended links in the catalog and app.

Library app administrators should review the links on their home pages and consider what essential items should be on the home screen. In addition, they should consider how they are linking to their websites and where anchor links may be helpful to patrons.