

Usability Test: Request App Function

Recommendations

1. Determine the preferred request process for checked out items and design the request page to reflect these priorities. If DUL prefers users to choose interlibrary loan instead of recall, consider:
 - Moving the interlibrary loan request button above the recall button
 - Aligning the interlibrary loan request button with the recall button
2. Provide users with more information about different request options, in particular, the recall option. A pop-up window or hover-over text box could include information on:
 - How recalling a book impacts other users
 - The usual timeframe for receiving a recalled book
 - *Alternatively*, consider using another term besides “recall”. Get input from other DUL staff for possible word change.

Background

This study was conducted to test the overall usability of the Request App, evaluate how users interacted with the steps required to recall an item, and provide recommendations for future changes and further testing. It builds on prior findings made in December 2018 by Cami Goray and Erin Black. The study was developed and conducted by Amelia Midgett-Nicholson, Allison Cruse, and Devon Waugh with guidance by Emily Daly. On February 18, 2019, we recruited eight participants at a table set up in the lobby of Perkins Library at Duke. Data from the pilot test is not included in this report. Each participant was given a voucher for a coffee or snack in exchange for their time. Amelia Midgett-Nicholson moderated and Allison Cruse took notes.

Questions we hoped to answer through this study:

1. What aspects of the Item Request page do the users find important or unimportant?
2. Do patrons understand login process, or is this unclear or difficult?
3. Do patrons understand information presented about each item, is any needed information missing or unclear?
4. Do patrons understand steps needed to get a single item?
5. Do patrons understand steps when a needed item is already checked out to someone else?

¹For more information, please contact emily.daly@duke.edu

Participants

Participant Demographics:

- 6 undergraduate students
- 2 graduate students

Participant familiarity with Duke University Library's current catalog:

- 3/8 have used the catalog to request items

Participant usage of Duke University Library's current catalog over the last semester:

- 2 used the catalog 0-1 times
- 1 used the catalog 10 or more times

Pre-test questionnaire responses are available at: [Qualtrics](#)

Key findings

Our findings for this study indicate that participants are comfortable using the request app function and find the login process easy. Most user confusion was related to not understanding the differences between request options for checked out items.

1. What aspects of the item request page do users find important or unimportant?

It was difficult to determine what users found unimportant about the item request page because they were not specifically asked to identify these aspects. However, participants did note aspects of the item request page that stood out to them, thereby signally their importance on the page.

- 7/8 participants specifically noted the different request options (recall, where to find it, interlibrary loan etc.)
 - 1/8 participants noted the different colors of each request button
- 2/8 participants chose the request option that matched their preferred library location
 - 1 participant said they would "choose the option I'm closest to, probably Lilly, since I'm a Freshman"
- 3/8 clicked on "where to find it" and examined the floor map

2. Do patrons understand login process, or is this unclear or difficult?

Overall, participants were able to easily login with their Duke NetID and exhibited familiarity with the sign in process. Errors that occurred were due to the user's existing NetID problems, or logout errors made by the test administrators.

- 7/8 participants attempted to login with their Duke NetID after clicking the "request" button
 - 1 participant clicked "request" but never attempted to login
- 2/8 participants clicked on the "NetID" hyperlink when asked to "Enter NetID OR Library Card Number"
 - Both users seemed surprised that it took them to an informational page about NetID. They then went back to the login tab and completed signing in using their NetID.
 - One user said, "I don't know if I have a library card number" but then entered their NetID
- 1/8 participants were asked to log in with multi-factor authentication

3. Do patrons understand information presented about each item, is any needed information missing or unclear?

Participant feedback indicates that patrons understand the information presented on the item page of a resource. Based on observation and feedback, it does not appear that any relevant information has been omitted from or presented unclearly on the item page. The most noticed features of the item page include:

- Item cover image (or lack thereof*): 7/8 participants commented on this feature
- The request button: 7/8 participants noticed this aspect of the item page unprompted
- The "Where to Find It" option with pop-up maps: 5/8 participants commented on this feature

A majority of the feedback regarding unclear information was directed at an item's request options versus information about the item itself. Those concerns are addressed elsewhere in this report.

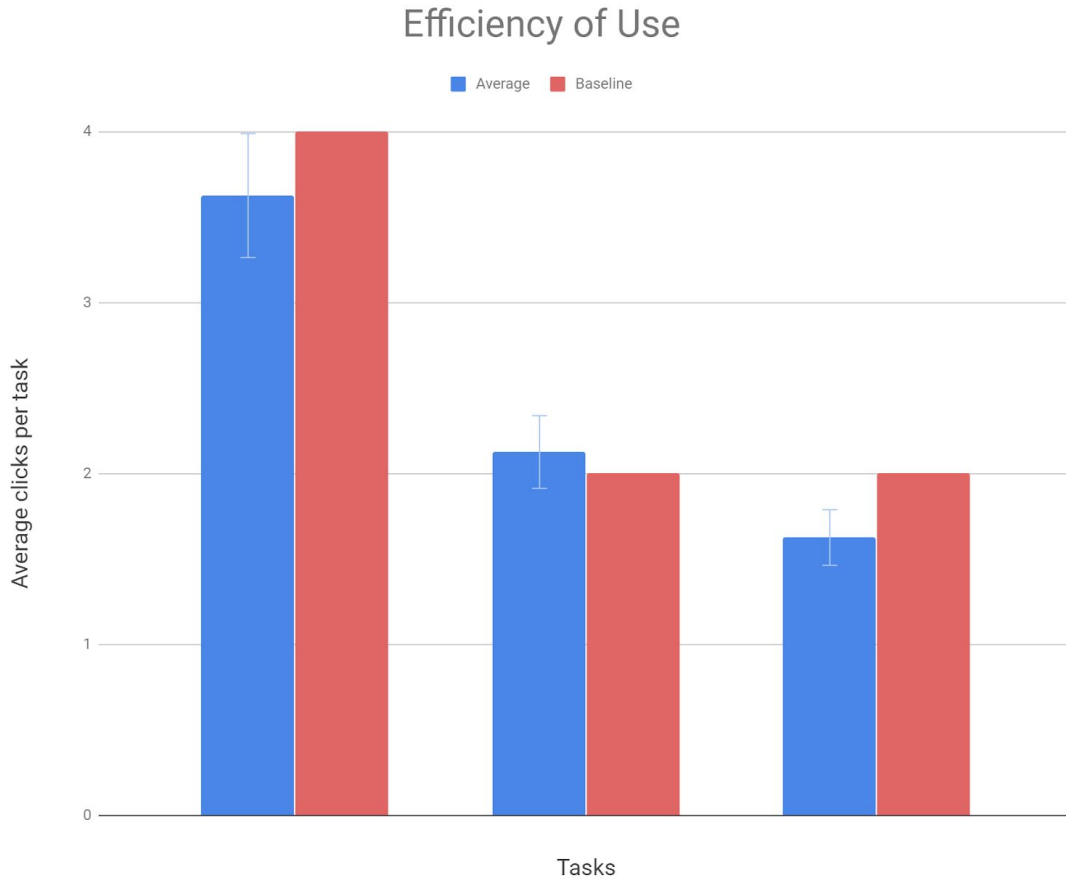
*Note: 3/8 participants commented on the lack of cover image for *Duke: A Portrait*. One user said a lack of image was "confusing." Another called the page "dull." The third user said he'd have to trust this was the correct resource in the absence of a cover image.

4. Do patrons understand steps needed to get a single item?

We measured the steps needed to request an item by comparing the user's number of clicks to the baseline number of clicks required to complete the task. This was achieved by using Zoom to record the user's screen movements and number of clicks per task. A high click rate could indicate that the user has difficulty navigating the system's architecture and that it is difficult to use in terms of requesting items because of the varying permissions.

Measuring the website's efficiency is related to the test's goal of determining whether or not the request app is intuitive to use or must be learned. Additionally, efficiency of use in determining whether problems existed with navigating the varying permissions with the catalog. If there is a high click rate, there could be overall problems with the system's architecture and learnability.

- As the tasks progressed, the participants' average number of clicks became closer with the baseline number of clicks, which could be attributed to the system's learnability and navigation.
 - For the first task, participants averaged 3.625 clicks
 - One of the 8 participants took a very exploratory approach by clicking on various buttons.
 - For the second task, participants averaged 2.125 clicks
 - For the third task, participants averaged 1.625 clicks
- 1/8 participants had 6 clicks on the first task, 8 clicks on the second task, and 4 clicks on the third task
 - This is well above the baseline clicks for each task.
- Participants also self-reported a high efficiency of use on the System Usability Scale
 - The average SUS score was 86.25 - well above the baseline for an above-average system.



5. Do patrons understand steps when a needed item is already checked out to someone?

All participants (8/8) noticed that the Task One item was checked-out. However, more than a third of them mentioned they did not know what to do next or did not know what a specific option was. Only one participant fully articulated an understanding of the recall feature.

- 3/8 participants specifically mentioned they did not understand part of this process:
 - 1 said they would request from ILL but did not know what “recall” meant
 - 1 mentioned using ILL but also indicated that they thought hitting the request button has already placed the request without the need for additional steps; participant later stated they did not know or understand the request process; they thought “request” meant “reserve”

- 1 participant was unsure of what to do on the checked out items request page; they asked aloud if they should recall and the clicked through to the recall screen before they could be stopped

System Usability Scale

The System Usability Scale is a 10-item questionnaire that quantifies user satisfaction with a system. It is known in the field for its high degree of reliability when differentiating between a usable or unusable system. For each question, it offers 5 response options on a Likert scale from strongly disagree (1) to strongly agree (5). We chose to use this questionnaire after the testing because it works best when participants are already familiar with the website or tool.

The results of the SUS are on a scale of 0 to 100 but do not equate to percentages. Instead, they must be normalized to an average score to determine their percentile. Systems are considered usable when the average score among participants is above 68, which is in the 50th percentile. In our test, the average score was 86.25.

- 1/8 participants had an individual SUS score below 68
- 7/8 participants had individual SUS scores above 68

Recall vs. Interlibrary Loan

During the lobby test, the team had an opportunity to talk with Andrea Loigman, the Head of Access and Delivery Services for DUL, about her concerns around the current request function in the DUL catalog. Her main comments centered on her concerns that students do not know what they are asking for when given the opportunity to recall an item from the catalog. Results from the lobby test align with this statement. From her perspective, recalling an item should be the last resort, but the catalog presents recalling as the first option when attempting to request a checked-out item. Additionally, Loigman pointed out that the system will allow users to both recall and request an item through ILL multiple times resulting in multiple recall notices and/or copies of resources to be delivered to the library. Ideally, she would like to see the system recognize user credentials and make request recommendations specific to each individual where the system only allows a single action to be taken. Short term solutions such as creating a pop-up or hover explanation of the recall process and reordering options on the request page to reflect internal preference were discussed with positive feedback.

Appendix A: *Request App* test script

Hello **[NAME]**. Thank you for volunteering to participate in this study. My name is **[NAME]** and I will be walking you through our tasks today. This is **[NAME]** and she will be taking notes. I will mostly be reading from a script to ensure each testing session is as consistent as possible.

We have recently made some changes to our website and we're trying to better understand how our users interact with it.

The first thing I want to make clear right away is that we're testing the site, not you. You can't do anything wrong here so you don't have to worry about making a mistake. All of the tasks we are going to complete today should take around ten minutes total so don't worry about going too fast or too slow. I will ask you to think aloud while you complete tasks so that I can get an idea of your thought process.

Your input is very valuable to our research so please be as honest as possible when providing feedback. If you have any questions as we go along, don't hesitate to ask.

Do you have any questions for me so far?

Thank you.

Now I'd like you to answer a few questions about yourself and your previous experience with the library. Please let me know if you have any questions.

[PRE-TEST QUESTIONNAIRE]

We would like to record your interactions and observations as you do this. Would you be okay with that?

[PARTICIPANT CHOOSES TO GIVE OR NOT GIVE CONSENT]

Thanks. If you are ready to begin, I am going to start recording.

[START SCREEN AND AUDIO RECORDING]

Now I'm going to ask you to try doing some specific tasks. Please remember to think aloud as you complete each task.

[GIVE participant printed out [task descriptions](#)]

Task 1

[OPEN the first window. The tab should be open to the item record for the first task.]

[GIVE the participant the first scenario]

You want to read *Harry Potter and the Sorcerer's Stone*. What stands out on this page?

[OBSERVE: How does the user interact with this page? Do they see the request button?]

How would you get it?

[Once participant is on the request page, ASK]

Does anything stand out on this page?

[If participant clicks through request app, STOP THEM before they submit final request]

Task 2

[Open the second window]

[GIVE the participant the second scenario]

You want to read *Duke: A Portrait* for a class. What stands out on this page?

[OBSERVE: Does the user understand what options are available?]

How would you get it?

[OBSERVE: What option do they choose?]

[If participant navigates to request button, then ASK]

What stands out on this page? What would you do next?

Task 3

[Open the third window]

[GIVE the participant the third scenario]

You are getting ready for a movie night with your friends and want to watch *The Half-Blood Prince*. What stands out on this page?

[OBSERVE: How does the participant check out a media item? What is the request process like?]

[On the item page, ASK]

Based on what you see, how would you get it?

[OBSERVE: What path would the user take?]

[END TASKS]

Great! That concludes our final task.

Before you leave, we have a brief questionnaire to record any final thoughts.

[POST-TEST QUESTIONNAIRE]

[After participant completes questionnaire, ASK]

Do you have any other comments or suggestions?

Thank you so much for your participation in this study. Here is your voucher for The Perk; you can use it until **[TIME]** today.

Have a great day.

Appendix B: *Pre-test Questionnaire*

1. Which of the following describes you best?
 - a. Undergraduate student
 - b. Graduate student
 - c. Doctoral candidate
 - d. Faculty
 - e. Staff
 - f. Other: _____

2. IF UNDERGRAD/GRAD/DOC: How many years have you been enrolled at Duke?

3. IF UNDERGRAD/GRAD/DOC: What is your major or program of study?

4. IF FACULTY/STAFF: How many years have been in your current position?

5. IF FACULTY/STAFF: What is your department?

6. This school year, have you requested a book, journal, or other materials from the library catalog?
 1. Yes
 2. No

7. How many times in the last month have you requested an item?
 1. 0-1
 2. 2-4
 3. 5-6
 4. 7-9
 5. 10 or more

8. We will be recording your session to allow Duke University Libraries staff members who are unable to be here to observe your session and benefit from your comments.

Please read the statement below and provide your name and UniqueID where indicated. I understand that my usability test session will be recorded.

Amelia Midgett-Nicholson, Allison Cruse, and Devon Waugh
Assessment and User Experience Department
February 28, 2019

I grant Duke University Libraries permission to use this recording for internal use only for the purpose of improving the designs being tested.

1. Name
2. UniqueID

Appendix C: Post-Test Questionnaire (System Usability Scale)

Please circle the number that best matches your thoughts on the following statement.

	STRONGLY DISAGREE			STRONGLY AGREE		
1. I think that I would like to use the request process frequently	1	2	3	4	5	
2. I found the request process unnecessarily complex	1	2	3	4	5	
3. I thought the request process was easy to use	1	2	3	4	5	
4. I think that I would need the support of a technical person to be able to complete the request process	1	2	3	4	5	
5. I found the various functions in the request process well integrated	1	2	3	4	5	
6. I thought there was too much inconsistency in the request process	1	2	3	4	5	
7. I would imagine that most people would learn the request process very quickly	1	2	3	4	5	
8. I found the request process very cumbersome	1	2	3	4	5	
9. I felt very confident using the request process	1	2	3	4	5	
10. I needed to learn a lot of things before I could get going with the request process	1	2	3	4	5	