

# Usability Test: LibKey Discovery

## Key Observations

1. The [LibKey interface](#) provides an easier and more straightforward path to browsing journals than [DUL](#)'s current article search results interface. However, when asked how test participants seek more resources on the same subject, they responded that they do not consult the journal issue in which they found a relevant article.
2. To access an article from the search results page in both interfaces, test participants' typical behavior was to click the hyperlinked article title. This was true even if test participants noticed the other links for article access (e.g., "Journal Article: Full Text Online"; "Article PDF: Download Now; or "View Complete Issue: Browse Now").
3. The majority of test participants preferred the LibKey interface, even if they did not actively engage with its features during testing.

## Recommendations

Based on users' stated preference for LibKey and the positive response to LibKey from DUL staff, we believe that LibKey is potentially useful. However, the majority of users will not use LibKey Discovery unless actions are taken to increase awareness of its features.

1. Introduce and promote LibKey features
  - a. Engage in regular, ongoing promotional activities (e.g. website homepage, social media, and newsletter) to increase and maintain awareness of LibKey Discovery and its services.
  - b. Provide tutorial/orientation materials to familiarize users with LibKey Discovery and highlight it during library orientation and instruction sessions.
2. Add visual emphasis to encourage users to click the "Article PDF: Download now" link.
  - a. Change "Article PDF: Download now" text to "View Article PDF."
  - b. Make the link more prominent by promoting its position on the page, adding color, adding a larger icon, or changing it to a button.
3. Increase prominence of Preview link, which users usually did not notice. Use of this link may improve user confidence by enabling them to preview details of the article before clicking "Article PDF: Download now".
4. Investigate the following:
  - a. Participate in technical update webinars about new LibKey features (e.g., LibKey Nomad, PubMed integration).

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- b. Consult with LibKey developers to create tutorial/orientation materials if Third Iron Technologies does not have help documentation and promotional material available for us to use.
- c. Consult with Professional School Library staff to see if they are also interested in LibKey Discovery, and consider sharing licensing costs with other Duke libraries.
- d. Find out whether or not BrowZine will become the default journal-browsing interface for other DUL interfaces (e.g., Online Journal Finder, Link 2.0).
  - i. Users like the BrowZine interface, but we do not think that users will access BrowZine from the article search results page. If BrowZine is accessible via alternate paths, this is an additional benefit of LibKey.

## Background

*This study was conducted as a follow-up to a usability test conducted in March 2019, to gain further insight into whether Duke University Libraries should purchase the LibKey Discovery tool. The previous test produced inconclusive results as to whether users find [LibKey Discovery](#) more usable than the current [Duke University Libraries interface](#), or which interface users find preferable. The [March 2019 test report](#) recommended additional testing of LibKey Discovery to focus on graduate/doctoral student and faculty, and in which each participant interacts with both interfaces. Both of these recommendations were incorporated into this test, along with edits to the original testing script and post-questionnaire. Amelia Midgett-Nicholson, Allison Cruse, and Devon Waugh developed the original study, and Samantha Thorne and Eden Andes developed and conducted this study, all with guidance from Emily Daly. Testing took place on May 29, 2019 and June 3, 2019 at a table set up in the lobby of Perkins Library at Duke University. Eden Andes moderated the first three tests and Samantha Thorne moderated the last four tests. Each participant was given a voucher for a drink or snack in exchange for their time.*

## Questions we hoped to answer through this study:

1. How do users find additional relevant articles once they have found an article for their research?
2. What path do users take to browse issues of journals in the current Duke Libraries interface versus the LibKey interface?
3. What path do users take to obtain an article they want to read in the current Duke Libraries interface versus the LibKey interface?
4. Do users prefer the current Duke Libraries interface or the LibKey interface? What are their reasons for this preference?

## Participants

### Role at Duke:

- 2 undergraduate students

- 1 doctoral candidate
- 1 postdoc
- 1 staff member
- 1 faculty member
- 1 spouse of a professor with a Duke Libraries family card

**Average number of years undergraduate students, doctoral candidates, and postdocs have been enrolled at Duke: 3**

**Average number of years faculty and staff have been in their current position: 17**

**Majors and programs of study represented in this study include** Probability theory, German studies, Engineering, and Biology.

**Departments of faculty and staff:** Neuroscience and the Nicholas School of the Environment

**Frequency with which participants access articles online:**

- Very Frequently: 3/7
- Somewhat Frequently: 3/7
- Very Infrequently: 1/7

## Key findings

### 1. How do users find additional relevant articles once they have found an article for their research?

This question was asked of participants directly; they were not asked to demonstrate it via a task.

- 5/7 use the references or bibliography of the article
- 3/7 search again with different keywords
- 2/7 look through the other articles listed on the search results page
- 2/7 use Google Scholar
- 1/7 uses a subject index and a bibliography specific to his discipline

When asked specifically, "To find additional articles on the same topic, do you ever look at the other articles in the same journal issue?" 5/7 participants do not, 1/7 did not actually answer the question, and 1/7 said yes, but it became clear that they did not understand what the question was asking.

LibKey highlights the usefulness of its journal browsing link by saying that since many journals are published thematically, a user would want to explore the whole issue of a journal for related articles. According to our testing results, this is not an activity users have engaged in. Also, when

tasked with browsing an issue of a journal (*Journal of Business Ethics*) for related articles, one user commented that the other articles in the issue were not very relevant to the article in question.

## 2. What path do users take to browse issues of journals in the current Duke Libraries interface versus the LibKey interface?

**DUL Interface:** 5/7 clicked the article title link, which opened the article in the SpringerLink interface, then clicked the hyperlinked issue number, which is just above the article title, though only 2 out of these 5 participants took these steps quickly and without confusion. 2/5 were confused about the task or next steps they should take and required clarification from the moderator, and 1/5 wanted the first step to be clicking the journal name, but when that was not possible, chose to click the article title link instead. 1/7 clicked the “Related Articles” link, and said she would browse these instead of the journal issue. This participant had used LibKey Discovery first for this task, and when she browsed the issue there, found that the other articles in that issue were not particularly related to the article topic. 1/7 took a long, multi-step path to the journal, which started with clicking the article title link, but then involved searching twice within SpringerLink for the journal title, using the search filters to locate the journal within the search results, and finally not remembering the issue number and thus not ending up at the needed journal issue page.

**LibKey Interface:** 5/7 clicked the “View Complete Issue: Browse Now” link without delay or trouble, and 1/7 found this link quickly after first attempting to click on the journal title. 1/7 instead clicked the article title, which opened the article in ProQuest, and from there the participant clicked the name of the journal, then year span, month, and specific volume. 4/7 made positive comments about the [BrowZine journal browsing](#) interface, which is included in the LibKey Discovery license. 3/7 commented on the icons underneath each article title, though responses were mixed. They liked having these options available without opening the article, and the range and type of actions they provide, particularly export citation. One participant liked the use of icons to represent these actions, even though he had to hover over some of them to know what they mean, while another participant prefers text labels (like in the SpringerLink interface), which don’t require hovering. 2/7 remarked that it is easy to access the other issues of the journal using the left side menu. Other positive comments included that it seems user-friendly and the article author is helpfully clear. Negative comments included that the mouse is in the finger shape over the author when it is not possible to click and the month of the issue is not displayed.

These findings suggest that if a user is interested in browsing the full issue of a journal from the article search results page, the LibKey interface provides an easier, more straightforward path that users notice and use. Participants were still successful for the most part when using the DUL

interface, which takes the user to the journal's website. Something to keep in mind, however, is that some journal websites may be more confusing than the website used in this usability test (SpringerLink).

### 3. What path do users take to obtain an article they want to read in the current Duke Libraries interface versus the LibKey Interface?

**DUL Interface:** 6/7 participants noted the "Full Text Online" link in the search result. 4/7 participants noted the icons in the search results, including the image of the journal cover in addition to the cite, link, and share icons to the right of the article title. Despite the majority of participants noting the "Full Text Online" link, only 3/7 clicked on "Full Text Online" when prompted to access the article to read it. 3/7 clicked on the article title link when prompted with the same task. 1/7 clicked on the image of the journal cover to the left of the article title link before clicking on the "Full Text Online" link. Overall, users on the Duke interface clicked the "Full Text Online" link and the article title link equally in order to access the article, despite over half noting the "Full Text Online" link at the bottom of the search result.

**LibKey Interface:** 4/7 noticed the LibKey "Download now" and "Full Text Online" options. 2/7 did not notice the LibKey options. 1/7 did not click on anything and stated that "if it's less than 4 pages I would read it online instead of print it." 5/7 clicked on the article title link when prompted to access the article in order to read it. 2/7 clicked on the LibKey "Download now" option when prompted with the same task. Overall, users preferred to click on the article title link in order to access the article.

These findings suggest that users tend to click on the article title link first before clicking on any other link in both interfaces. "Full Text Online" link and the LibKey "Download now" direct link to the article in PDF format both appeared to be secondary options.

### 4. Do users prefer the current Duke Libraries interface or the LibKey Interface? What are their reasons for this preference?

**LibKey Interface:** 4/7 said they preferred LibKey, and three of these four cited the "Article PDF: Download Now" option as the primary reason. One participant stated that she finds it more accessible overall, since more interaction can happen immediately, and that it is "easier to find related articles." Another participant liked that they didn't have to click through so many links to find the article in PDF format, stating that they "really like that they can download right from the search options." One participant's reason for preferring LibKey was the "View Complete Issue: Browse Now" link and the BrowZine interface, although this participant also stated during the test that they do not browse journal issues for related articles. Of the 4, one user mentioned that they preferred the publisher interface for browsing the journal for related articles over the LibKey BrowZine feature.

**Duke Interface:** 1/7 said they preferred the Duke interface. They stated that the “Related Articles” link narrowed down the results much better. Outside of that, they stated that the interfaces were comparable.

**No Preference:** 2/7 said they didn’t have a preference between the two, both commenting that they didn’t see much of a difference between the two interfaces. 1/7 commented that the easy accessibility of other journal issues in the BrowZine interface was nice, though this participant doesn’t browse journals for related articles.

These findings, taken in context with the rest of this study, show that though the majority of users tended to prefer the LibKey interface, they didn’t actively engage with the features that LibKey offers. This suggests that an orientation and familiarization with the feature would increase use.

## **Appendix A: 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 are considering making 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?

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

### **[HAND PARTICIPANT THE CONSENT FORM]**

Please read and fill out this form if you give consent for us to record your session.

### **[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]**

Task 1

**[Do not show either interface to user at this point.]**

When you're conducting your own research and you find a relevant article, how do you find additional articles on the same topic?

**[RECORD: Their response.]**

To find additional articles on the same topic, do you ever look at the other articles in the same journal issue?

**[RECORD: Their response.]**

**[Go to search record page, first interface]**

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

*Cryptocurrencies and Business Ethics* is an article you found that is relevant to your research. You want to see if there are similar articles in the same issue of this journal.

Show me how you would browse the issue of this journal.

**[OBSERVE: What path does the user take next?]**

→**[If/when the user accesses the journal, ASK]**

What stands out on this page?

**[OBSERVE: Does the user understand the options?]**

**[Switch to second interface.]**

We are going to repeat this task in a second website.

*Cryptocurrencies and Business Ethics* is an article you found that is applicable to your research. You want to see if there are similar articles in the same issue of this journal.

Show me how you would browse the issue of this journal.



**[OBSERVE: What path does the user take next?]**

→**[If/when the user accesses the journal, ASK]**

What stands out on this page?

**[OBSERVE: Does the user understand the options?]**

Task 2

**[Return to the search record for the first interface.]**

**[GIVE the participant the first scenario]**

Here is a new scenario: You need to read the article *Cryptocurrencies and Business Ethics* for class. Without clicking on anything yet, talk me through the options you see on the screen for viewing the article.

**[OBSERVE: How does the user interact with this page? Do they understand the available options?]**

Can you show me how you would go about accessing the article to read it?

**[OBSERVE: What path does the user take to access the article?]**

→**[If/When the user ends up on the full article text page, if they pause, ASK]**

Does anything stand out on this page?

What additional steps would you need to take to get a copy of this article?

**[OBSERVE: Does the user understand how to get a PDF?]**

**[Return to the search record for the second interface.]**

**[GIVE the participant the first scenario]**

We are going to repeat this task in a second website.

You need to read the article *Cryptocurrencies and Business Ethics* for class. Without clicking on anything yet, talk me through the options you see on the screen for viewing the article.

**[RECORD: Do they understand the available options?]**

Can you show me how you would go about accessing the article to read it?

**[OBSERVE: What path does the user take to access the article?]**

→**[If/When the user ends up on the full article text page, if they pause, ASK]**

Does anything stand out on this page?

What additional steps would you need to take to get a copy of this article?

**[OBSERVE: Does the user understand how to get a PDF?]**

Great! That concludes today's test. I have a few more questions to ask you about your experience with these websites.

**[POST-TEST QUESTIONNAIRE]**

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?
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
  
3. IF UNDERGRAD/GRAD/DOC: What is your major or program of study?
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
  
4. IF FACULTY/STAFF: How many years have been in your current position?
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
  
5. IF FACULTY/STAFF: What is your department?
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
  
6. In the past 3 months, how often have you accessed journal articles online?
  - a. Very infrequently
  - b. Somewhat infrequently
  - c. Occasionally
  - d. Somewhat frequently
  - e. Very frequently

### **Appendix C: *Post-Test Questionnaire***

1. Do you prefer one of these websites over the other?
  - a. If YES: Which website do you prefer? Why do you prefer this one to the other?
  - b. If NO:
    - i. What do you like most about the first website? What do you like least?
    - ii. What do you like most about the second website? What do you like least?
2. Is there anything else you would like to say about your experience today that you haven't had a chance to tell us yet? Or any other comments or suggestions?