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In the Wake of Discovery: Student Perceptions, Integration, and Instructional Design

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ABSTRACT

Academic libraries have increasingly adopted web-scale discovery tools in order to meet the expectations of students who want immediate results, efficient algorithms, and a single search box. As they have become the de facto search tool at many libraries, librarians and patrons alike have been forced to confront the way they think about research processes and in some cases, modulate ingrained habits. In this article, the authors explore student perceptions of efficacy, relevancy, and ease of use of a library discovery tool through a 2017 mixed-methods user experience study conducted at three City University of New York (CUNY) campuses. The results from this user study will be useful to other institutions that already have implemented discovery layers within their library and help inform website design, discovery layer design, and pedagogy. By combining student interviews with a task analysis, the authors were able to learn more about student search behaviors, how they respond to challenges, and what they expect from search tools. Identifying these barriers to student use of the Primo discovery tool has helped us articulate best practices for instruction and interface customization that may address these barriers and has illuminated implications for website integration.

KEYWORDS

Discovery tools; Primo; user experience; academic libraries; information literacy instruction; research

Introduction

Academic libraries have increasingly adopted web-scale discovery tools in order to meet the expectations of students who want immediate results, efficient algorithms, and a single search box. Discovery platforms, search engines, and changes in student research expectations have prompted many libraries to critically reconsider approaches to information interface design, reference services, and information literacy (Brett, Lierman, & Turner, 2016). The discovery tool, often displayed as a single search bar on the library's website, allows users to search across multiple platforms available through the library including: catalog (OPAC), databases, institutional

repository, electronic book collections, and research guides. Discovery tools work with a central index that aggregates results from a mix of commercial and openly available materials. As discovery layers have become the de facto search tool at many libraries, librarians and patrons alike have been forced to confront the way they think about research processes and in some cases, modulate ingrained habits. In the wake of discovery implementation, many librarians have raised concerns about relevancy ranking and proprietary algorithms, usability, and pedagogical efficacy (Foster, 2018; Lee & Chung, 2016; Stovold, 2017). At many institutions, there has been resistance from librarians to fully embrace discovery tools and learn how to navigate the software most effectively, leading to struggles about how to integrate necessary search skills into student learning (Aharony & Prebor, 2015; Brett et al., 2016).

CUNY libraries licensed Ex Libris's web-scale discovery platform Primo (locally branded as OneSearch) in 2014 and it was met with a mixture of resistance, skepticism, and excitement. In conversations about OneSearch, CUNY librarians often cited the potential positive and negative impacts of discovery on students, but in the absence of data about student perceptions and search behaviors at our institution, these conversations were too often based on speculation and influenced by our own biases. In this article, the authors explore student perceptions of efficacy, relevancy, and ease of use of OneSearch through a 2017 mixed-methods user experience study conducted at three CUNY campuses. The results from this user study will be useful to a variety of academic institutions that have already implemented (or are considering implementing) discovery layers within their library and help inform website design, discovery tool design, and pedagogy.

The CUNY library system consists of a consortium of libraries that serve the learning and research needs for a large, public, urban university of 12 senior colleges, seven community colleges, and five graduate and professional schools. In order to familiarize librarians across the campuses with the new platform, the CUNY Office of Library Services (OLS) offered demonstrations, centralized support, and monthly webinars which were open to all librarians. The CUNY Libraries Public Services Committee, which was originally concerned with OPAC and catalog issues, is now fully dedicated to discussing issues and topics related to OneSearch. OLS acts as a direct liaison between the CUNY libraries and Ex Libris. Subsequent to this implementation, OLS decided to sunset the CUNY Libraries OPAC. The findings of this study thus have additional importance because they inform the layout, design, and instructional practices for the only search tool available to students, faculty, and librarians across the consortium.

By combining student interviews with a task analysis, the authors were able to learn more about student search behaviors, how they respond to

challenges, and **what they expect from search tools**. Some of the questions driving our project included: Is this tool easy to use, does the tool return relevant results, would students use this tool again or recommend it to a friend, and how do students view the tool in comparison with Google? The results from the user study may help libraries at the senior, technical, and community college levels implement best practices related to discovery tools that will impact pedagogical planning, implementation, website design, and student success.

Literature review

As discovery tools have increasingly become the de facto search tool, librarians recognize the value of user feedback and have designed user experience studies to evaluate how discovery is being used, to gauge users' satisfaction with these platforms, and to understand difficulties users encounter.

Lown, Sierra and Boyer (2013, p. 240) highlight the importance of, "balanc[ing] user needs and expectations with the capabilities of library information systems". In this study, the authors determined that students could not differentiate between source types in the platform and determined that the search box should contain clearer labels. Azadbakht, Blair, and Jones (2017, p. 40) corroborate these findings, noting that "many of the undergraduates could not differentiate a journal from an article". Fagan, Mandernach, Nelson, Paulo, & Saunders (2012) and Lown et al. (2013) also found that students experienced difficulty discerning what exactly (e.g., articles, journal, library website, books) the discovery tool was searching and confusion when the results did not match their information need.

In multiple studies, students were very successful in completing the tasks presented to them (Azadbakht et al., 2017; Fagan et al. 2012; Hanrath & Kottman, 2015; Niu et al., 2014). Fagan et al. (2012) noted that although students were able to complete assigned tasks and could easily navigate through the tool, they had difficulty determining source types. **Determining source types continued to prove difficult across the studies. Several studies found that students generally liked the discovery tool** (Hanrath & Kottman, 2015; Kliever, Monroe-Gulick, Gamble, & Radio, 2016; Lundrigan, Manuel, & Yan, 2015). Positive factors cited by students in these studies included relevant results, high-quality sources, and ease of use.

In terms of facet searching, studies by Niu et al. (2014) and Hanrath and Kottman (2015) found that **students were under-utilizing facets. (Primo now uses the term "filter" within its interface.)** Hanrath and Kottman (2015) found that only 32% of students were utilizing the facets, which

might indicate that students are not refining their results or are relying on the first results that they find. Brett et al. (2016, p. 19) found that “users successfully completed the tasks in this usability study. Unfortunately, they did not take advantage of many of the features that can make such tasks easier—particularly facets” and called for collaboration between vendors and libraries to more deliberately analyze how users are utilizing (or not) facets in order to re-address interfaces accordingly. Fagan et al. (2012) found that students were more apt to use the facets if they were provided in a drop-down list in the search box at the beginning of the search process. Chickering and Yang (2014) noted that although a drop-down search box with facets available would encourage students to utilize these facets more often, adding the drop-down would also diminish the “Google-like” simplicity of the search box.

Although students were able to utilize the search tool efficiently and effectively, several researchers have documented problems related to the relevance of results (Foster, 2018; Kliever et al., 2016; Lee & Chung, 2016; Niu et al., 2014). Most discovery tools weigh the title field most heavily, followed by author, but beyond that the algorithms and what is being searched are often unclear and confuse librarians and students alike. Kliever et al. (2016, p. 571) reported that “students expressed a vague understanding that their search results were based on an algorithm that pulled from the resources indexed in Primo, and that issues with finding relevant sources lay with this algorithm”. Subsequently, some vendors, notably Ex Libris, have attempted to address some of the issues regarding relevancy. Chickering and Yang (2014, p. 20) point out that Ex Libris added the option to sort results by popularity. “Primo’s popularity ranking is calculated by use. This means that the more an item record has been clicked and viewed, the more popular it is”. Stovold (2017) noted that discovery tools yielded relevant results in the health sciences when comparing the results from subject-specific databases. These findings imply that discovery tools would yield similar results in terms of relevance for other topics and disciplines.

Many of the studies also identified challenges for librarians as discovery layers become ubiquitous. The challenges include librarians’ resistance to using the tool, based on the view that students might not have developed good search strategies and evaluation techniques (Gross & Sheridan, 2011); identifying new ways to teach the tool (Fagan et al., 2012); and evaluating and assessing the tool (Hanrath & Kottman, 2015).

Methods

In the fall of 2017, librarians at three CUNY campuses conducted an Institutional Review Board (IRB)-approved user experience study to gauge

student perceptions of OneSearch. The authors used a mixed-methods approach to assess the perceived efficacy, relevance, and ease of use of OneSearch and introduced Google as a point of comparison. Methods used included: a preliminary structured interview, a set of user tasks based on a research scenario including a citation activity, and an evaluative questionnaire about the user interface and the returned results.

Students were recruited from three CUNY campuses: Brooklyn College, a senior college; New York City College of Technology (“City Tech”), a technical college; and Guttman Community College (Guttman CC). Ten students at each campus were recruited, using flyers, email blasts, and announcements on the library’s website. All of the participants in the study were undergraduates, though this was not intentional. There was no screening prior to conducting the student study. Researchers collected preliminary data at the outset of the study about each student including major, college level, and perceived level of experience with research. The sample of students was a well-represented spectrum of CUNY students comprising a range of majors, ages, years, and research experience.

Students were given a research scenario with four tasks: select from a list of four topics, conduct a search in OneSearch, find a relevant article using the platform, and record the citation for the source they found. During the task phase, researchers made informal observations of the users’ search behaviors by taking notes about the students’ actions within the discovery tool, difficulties that students encountered, and details about the students’ search patterns. These notes included keywords used, how students navigated to full text documents, if they used tabs, and if they scrolled or advanced the page. After completing the task, students were asked to evaluate the efficacy, relevance, and ease of use of OneSearch based on the results returned and their search experience, using a questionnaire (Appendix A).

These tasks allowed us to assess whether the tool’s layout, navigation, features, and language were intuitive for students, and to isolate obstacles to student use. We anticipated that student facility with the discovery tool would depend on their prior experience conducting library research and so we used contextual questions about students’ prior research experience to qualify questionnaire response data.

This study adds a recent mixed-methods case to a small number of existing discovery tool studies. In our mixed-methods study, we combined librarians’ observations with quantitative and qualitative data collection. Our study was also distinguished by its inclusion of undergraduates at the community, technical, and senior college levels, and across a range of majors, ages, and years. The study data were supplemented with Primo usage statistics.

Findings

When asked (on a 10-point Likert scale) how easy OneSearch was to use, students overall gave the tool high average scores: Brooklyn College: 9.0, City Tech: 8.1, and Guttman Community College: 8.8. The average rating for ease of use by students across the three libraries was 8.6. One City Tech student stated:

I didn't have any difficulty using it but since it was my first time I had to explore the site and to get to know the cite [sic]. I like the articles more on onesearch because they are more detailed. The articles on onesearch are more professional and more appropiate [sic] for an article.

Although this student had never used the discovery tool before, they perceived the results to be of higher quality than they would normally find elsewhere. The quotation also articulates how even novice discovery tool users have the confidence to navigate the tool without much trouble or guidance.

When asked about their perceptions of OneSearch (again using a 10-point Likert scale), students responded positively. They indicated that it was "very easy" to find an article (an average rating of 8.8) and found the overall results to be relevant (8.3).

When asked to compare the ease of use of Google and OneSearch, students were divided evenly with approximately 50% of the students articulating that Google was easier to use and 50% deeming OneSearch easier to use. One student stated:

Only reason why I'd say Google would be easier b/c OneSearch has a lot going on - not necessarily "messy" just a lot of options as opposed to search & enter (might overwhelm). However, these features facilitate locating & filtering relevant and desired results. Would use again if 1) I remember, 2) easily accessible. I tend to forget things so would prob only recommend to friend if it came up etc. Q8: easy to use but didn't yet explore all options. Love it b/c it's like online shopping - can narrow results till you find what looking [sic] for.

When asked about the likelihood of using OneSearch again for future research assignments (on a 10-point Likert scale), students gave an average rating of 8.2 (Table 1). Some of the students perceived that the tool was better for finding scholarly articles or evidence for their research projects:

There wasn't any difficulty; it's just it takes time to find an article; which is relevant for your paper. There are many choices; a bit time consuming, but helpful when you need to write your paper. In general it wasn't difficult; contains good information when you need to support your argument.

On the other hand, some students noted that they found the interface tricky, that keywords did not yield relevant results, or that the tool was not as easy to use as Google. One student noted that they were confused by clicking on a title and not being led directly to the full text, something that vendors like Ex Libris might consider (if the full text is available):

Table 1. Students' self-reported likelihood of reusing OneSearch (10-point Likert scale).

Brooklyn College	8.9
City Tech	7.4
Guttman CC	8.3
Average	8.2

"It sent me to a lot of different places after clicking on the header. With Google you just click the header and it takes you straight to the page."

Despite the mostly favorable quantitative rankings students gave OneSearch, numerous students indicated that they found the interface difficult to navigate or too overwhelming. For example, 7 out of 30 (23.3%) students indicated that they had difficulty finding or opening the full-text of articles. A student was quoted as saying:

"In the beginning I thought the link just gave me a small blurb. I did not know to click view full article."

There were also disparities between how students used the tool and how OneSearch is designed to be used. A majority of students did not use the results toolbar options (details, locations, etc.), and subsequently item-level tools (save, cite, email, etc.) were not visible. In our observations, several students had difficulty locating citations: several clicked on "citations", which leads to related articles, rather than the "cite" tool button. One student stated:

The articles that appeared are relevant to the topic but many articles weren't the type I was looking for. [...] Lastly, when finding the citations, it was difficult because the button for it wasn't very obvious. It took me a while to find it.

Several students had spelling errors in their searches, which affected the relevance and number of returned results, and subsequently had difficulty completing the task. While almost all students ranked the tool as easy to use and indicated that they found the task of finding an article easy to complete, it is interesting to note that only 26 out of 30 students (86.7%) in our user study successfully found an article.

There could be a number of reasons for the disparity between students' perceptions of the discovery tool's ease-of-use and the difficulties they encountered while using the tool. Students often rate their ability to conduct research highly, no matter how (in)experienced they might be in doing research or using a particular search tool (Georgas, 2013). Because students are familiar with Google's single search box, they may be rating the discovery tool based on their ability to use Google to easily find sources. The discovery tool generated a number of results that students perceived as reputable and they may have attributed this to their research abilities, rather than the fact that results are culled from an already-curated index of (mostly) scholarly sources. Simultaneously, students do not often

Table 2. Students' self-reported likelihood of recommending OneSearch (10-point Likert scale).

Brooklyn College	8.7
City Tech	7.8
Guttman Community College	8.3
Average	8.3

use an advanced search in Google and do not apply filters to their search. The ability to filter their results in a discovery tool may not seem necessary for a more effective search strategy because they expect that the discovery tool has already “filtered” relevant results for them.

Students were asked if they would recommend OneSearch to fellow students. Students value and rely heavily on peer recommendations and so this was a point of interest for us. Their views on whether they would recommend OneSearch to fellow students was consistent with the data on whether they would use the tool again themselves. On average (8.3), students said they would recommend the tool to fellow students (Table 2).

Of the 30 undergraduate students interviewed in the study across the three campuses, 26 (86.7%) were able to use OneSearch to successfully find an article (Table 3). Of the articles students found, 73.3% were scholarly (even though they were not specifically directed to find a scholarly article). This emphasizes the fact that many of the students are choosing scholarly sources because the discovery tool makes those items more accessible to students than a Google search. In this light, the tool is truly acting as a “discovery” device, illuminating items that students might not otherwise find. Additionally, in the context of a more academic setting and with a task to complete a research assignment, students may perceive the need to find a scholarly resource to fulfill the assignment's requirements or a professor's expectations.

Students articulated a number of reasons why they chose a particular article (Table 4). Many of the students said that they chose the article because it was the most relevant or it was one of the first results. In observing student search behavior, the researchers noticed that most of the students didn't go past the first page of results. Very few of the participants stated that they chose the article because they thought that it was the most credible. This implies that some students may not fully evaluate the sources that they choose even when using a library discovery tool and need continued instruction on evaluating the relevancy of a source.

When asked to rate the relevance of results found using OneSearch (using a 10-point Likert scale), students gave an average rating of 8.3 (Table 5).

When asked to compare OneSearch with Google, 20 out 30 students (66.7%) said OneSearch would yield more relevant results, 8 out 30 students (26.7%) said Google would yield more relevant results, and two

Table 3. Students who successfully used OneSearch to find an article.

Brooklyn College	100%
City Tech	70%
Guttman CC	90%
Average	87%

Table 4. Motivations for selecting resources (numbers of students).

College	Brooklyn College	City Tech	Guttman CC	Total
Most relevant	8	7	6	23
One of first results	5	2	7	14
One of few results	1	2	1	4
Most credible	2	5	0	7
Other	2	3	1	6

Table 5. Students' evaluation of the relevance of results (10-point Likert scale).

Brooklyn College	8.5
City Tech	7.8
Guttman CC	8.7
Average	8.3

students (6.7%) said both would yield relevant results (Table 6). One student stated:

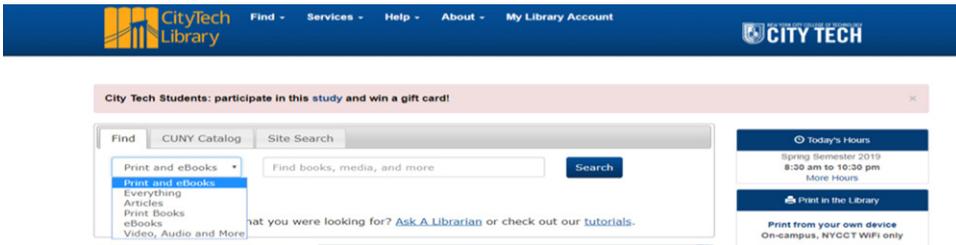
I didn't find much difficulty using OneSearch to find an article. The articles that appeared are relevant to the topic but many articles weren't the type I was looking for. For example, I wanted an article about digital identity involving students but OneSearch lead me [sic] to network articles. Lastly, when finding the citations, it was difficult because the button for it wasn't very obvious. It took me a while to find it.

Only nine out of 30 students (30%) used facets. The facets used were: "Articles", "Peer-Reviewed Journals", and "Topic/Subject". Despite the fact that the discovery tool is designed to have users utilize the facets in order to filter their results, few students limited their results by using a filter. In our study, students were more likely to use a filter if it was offered in a drop-down bar. The City Tech library website's OneSearch searchbox presents a drop-down menu of facets and more City Tech students utilized facet searching, with 5 out of 10 (50%) students filtering their search (Figure 1). This implies that if students are prompted to choose from particular facets at the beginning of a search, they are more likely to utilize them.

While we identified some interesting search behaviors from our observations and from student feedback on the questionnaires, we supplemented this data with Primo analytics in order to draw more evidence-based conclusions. Ex Libris reports that the majority of keyword searches are queries of five words or less (Stohn, 2015). These types of searches have the potential to return an overwhelming number of results. Librarian observations in our user study illustrated that many of the students relied heavily on

Table 6. Students' evaluation of which search tool would yield more relevant results (numbers of students).

Brooklyn College	Google: 3	OneSearch: 6	Both: 1
City Tech	Google: 4	OneSearch: 6	Both: 0
Guttman CC	Google: 1	OneSearch: 8	Both: 1
Total	Google: 9	OneSearch: 20	Both: 2

**Figure 1.** City Tech OneSearch search box.

supplied keywords (these would typically be derived from an assignment or terms they had previously generated in a proposal or question). In our user study, 77% of students used keyword phrases as supplied. Even with unsuccessful searches (few or irrelevant results, misspellings, etc.) only four students out of 30 (13%) in our study tried keyword variants.

It has been shown that students do not generally advance past the first results page (Kliwer et al., 2016). In our user study, only 5 of 30 students (17%) clicked to view the next page of results. OneSearch analytics from our institutions support this finding. In 2016, only 30% of students at our CUNY campuses clicked to view the next page of results.

Discussion

Quantitative findings from the study were mostly positive. Many students indicated that OneSearch was easy to use, that they would use it again and would recommend it to a friend. In spite of how favorably students rated the tool, however, there were disparities in the qualitative feedback from students and from the investigators' observations. This qualitative data revealed that many of the students found the interface difficult to navigate or too overwhelming. This disparity raises the question of whether students actually found the tool easy to use. Certainly, it makes evident the importance of collecting qualitative feedback from students in order to present a more accurate and nuanced assessment of a library search tool.

In our user questionnaires, seven out of 30 students (23.3%) had difficulty opening or locating the full text of articles. We also observed that four of the students (13%) did not fully understand how to navigate back to the original search results if they had opened a full-text article. If the article appeared in a new tab, some of the students would often continue

their search within a specific journal or another platform, not realizing that they were no longer in OneSearch. In our observations, 12 students (40%) experienced difficulties in finding the “Cite” function. Often, they would confuse the “Citations” link with the “Cite This” link. We also observed that students would not utilize the results toolbar (details tab, locations tab, recommendations, etc.). In our study, 23 out of 30 (77%) students used the keywords exactly as provided (including Boolean operators). Additionally, most of them did not try new searches when they had unsuccessful searches (few or irrelevant results, misspelled keywords). It should be noted that only nine students (30%) utilized facet searching and when they did narrow their results, they mostly used the “Articles” filter. This filter may have been utilized because the directions asked students to find an article. There was a higher level of facet use at City Tech and we hypothesize that this can be attributed to its website’s customized OneSearch search box with a drop-down menu of facets.

Our study confirms findings from previous discovery tool user studies and provides additional evidence to support instructional practices that librarians can employ when teaching discovery layers. Specifically, they can instruct students on the usefulness of facets, advanced search, and toolbar options during one-shot instruction and reference desk interactions. Teaching students to go beyond supplied keywords, use keywords and subject headings provided by the interface, and perform additional searches when results are relevant will help them search more efficiently and find more relevant results. Showing students how to access the full text of articles, ebooks, and other types of publications may also alleviate student confusion. Additionally, based on our finding that some students were having difficulty using the “Cite” feature, we propose that lessons that address how to use this feature (and where it is located) are important. Such lessons might also allow for discussions about scholarly practices such as the peer review process and the sharing and creation of new knowledge amongst scholars. This could include discussions about the information cycle, why they might utilize a particular resource type as evidence, or how they might find and access known items drawn from a source’s references.

Teaching librarians can capitalize on the fact that students are often getting some relevant results in their discovery searches. At least 22 (73%) of students in our study found a relevant scholarly article with the search tool. Teaching librarians can create flipped classroom lesson plans where students explore the tool before a class session, or lesson plans centered on comparison of discovery with Google that allows more in-depth conversations about authority.

Although students are finding relevant articles, previous studies have shown that students have difficulty in distinguishing between information

types (Azadbakht et al., 2017; Kliewer et al., 2016). Discovery tools' displays offer the opportunity to expose students to multiple forms of information types. Practitioners can create lesson plans about distinguishing between resource types and understanding when a particular resource type is relevant to their research needs. Students are very familiar with Google and it is often the go-to tool for their research needs. Librarians can use students' experience with Google to help them reflect upon alternative search tools and provoke conversations about academic research. Engaging students on a peer-to-peer level in the classroom and utilizing active learning techniques allows students to explore the tool autonomously, and allows students to get a more organic understanding of the tool with the support of the instructional librarian when needed.

Finally, our study illuminated implications for how discovery tools are integrated on campus library websites. **Students are more apt to find and utilize the tool if it is the default search on the library's website, so visibility is essential.** This has become especially important for our institutions given the decision to eliminate the OPAC. As of 2020, OneSearch will be the only search tool available to our students, staff, faculty and librarians. Our user study indicated that students are more likely to use the facets if they are built into search boxes as drop-down options, so utilizing this info can improve student search efficiency.

Conclusion

Our study was subject to a number of limitations. The small number of participants (30) may have been too small a sample size to demonstrate all possible student search behaviors. Each of the campus library websites has a different OneSearch interface. Only one has a drop-down menu of facets on its website interface, where users begin the searching process. It is possible that this difference may have skewed the data, especially concerning the use of facets. It should also be noted that we were testing a legacy version of Primo and certain improvements have been made in the newer iterations of the tool.

We expect that the findings from our study can inform library instructional strategies and instructional design decisions in terms of how the discovery tool is introduced and presented to students in classrooms and on CUNY library websites. The findings may be useful for other academic libraries at the community, technical, and senior college levels in how they display their discovery tool on the library's website and how they teach and promote the tool. As anticipated, students conducting searches found relevant results in relation to the defined user scenario, but many encountered obstacles and found certain features of the tool confusing or difficult to

use. Identifying these difficulties has helped us affirm best practices for instruction and interface customization.

As indicated earlier, there is some resistance from librarians using the discovery tool or teaching it to students at the Reference desk and during information literacy sessions. It is essential that librarians become familiar with the tool so that they can, in turn, help students understand how to use the tool both contextually and maximally. Librarian buy-in is essential to help address issues with instruction, usability, and web integration. At the time of the study, OneSearch was the default search display on many campuses' library websites. Students are finding and using the tool, so it is imperative that librarians teach students how to use it effectively. If libraries and librarians continue to analyze student search behaviors, they will be better informed about which aspects of the search tool should be explained and demonstrated, leading to students more effectively and efficiently accessing the library's resources. Concurrently, librarians need to continue to analyze student search behaviors in order to inform design and layout of the tool's interface. Armed with student search behavior data, they will be better equipped to delve into conversations with vendors about discovery tool usability and offer suggested changes from the field.

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Notes on contributors

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Disclosure statement

No potential conflict of interest was reported by the authors.

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Appendix A: “Evaluating OneSearch” questionnaire

Research Scenario and Questions

You're doing research for a class assignment. Your professor has asked you to find an article on one of the following topics.

1. Choose ONE topic from the following. Circle your selection.
 - Choose ONE topic from the following. Circle your selection.

- Facebook and privacy
- Cyberbullying and teenagers
- Online education and college students
- Digital identity and Instagram

Use the OneSearch tool on your library's website to find one article that you believe to be relevant for the topic you chose.

2. Find an article that you would use in your paper assignment. Then, cut and paste the citation here:
3. Why did you choose this article? Circle all the answers that apply.
 - a. It was the most relevant result
 - b. It was one of the first results that came up
 - c. It was one of the only articles that came up
 - d. It was the most credible source
 - e. Other_____
 - f. On a scale from 1 to 10, how easy was it for you to find this article?
4. On a scale from 1 to 10, how easy was it for you to find this article?

Not easy Very easy

1---2---3---4---5---6---7---8---9---10

5. Are there other articles on the results page that you would also use? Circle one.

Yes/No

6. On a scale from 1 to 10, how relevant are the overall search results?

Not relevant Very relevant

1---2---3---4---5---6---7---8---9---10

7. Which search tool do you think would yield more relevant results on your topic? Circle one.

Google/OneSearch

8. On a scale from 1 to 10, how easy was OneSearch for you to use?

Not easy Very easy

1---2---3---4---5---6---7---8---9---10

9. Do you think OneSearch or Google is easier to use? Circle one.

OneSearch/Google

10. On a scale from 1 to 10, how likely are you to use OneSearch for other assignments?

Not likely Very likely

1---2---3---4---5---6---7---8---9---10

11. On a scale from 1 to 10, how likely are you to recommend OneSearch to a fellow student?

Not likely Very likely

1---2---3---4---5---6---7---8---9---10

12. Did you have any difficulty using OneSearch to find an article? What problems did you encounter?