

Sailing the Wide-Open Seas of Discovery:

Assessing Students' Use and Perceptions of Summon for Conducting Research

*Tracy Gilmore, Stefanie Metko, and Charla Gilbert**

Introduction

For some time now, libraries have been using web-scale discovery tools for enabling an easier, user-centric research experience for students. Many believe that a web-scale discovery (WSD) layer provides greater access to library collections. While many instruction librarians have embraced WSD tools, there is still some debate about the philosophical and practical implications of teaching the discovery layer during library instruction. One advantage to teaching web-scale discovery layers is that it allows for less focus on explanatory instruction and provides more time for focusing on student exploration. Some librarians are concerned about this approach, believing that library instruction should focus on search mechanics such as Boolean operators.¹

Driven widely by the varying perceptions and teaching of WSD in the library classroom, this study sought to uncover user perceptions and behavioral practices related to the use of WSD. One goal of this study was to examine the contextual linkage between information literacy and user experience. The study also focused on similarities and differences between Summon user perceptions and attempted to fill a gap in the literature in regards to longitudinal data of WSD user perceptions over time. The findings of this study highlight the needs and barriers to research that may exist for users at all levels in the research process, including perceptions and usage and how that might relate to information literacy.

Literature Review

As more scholarly material becomes available online, assessment of WSD becomes increasingly valuable in understanding the full user experience and context. Per Dehmlow, user context is a multidimensional matrix that encompasses (1) level of experience; (2) research need; (3) type of scholarly materials; (4) user discipline; and (5) the physical or virtual research location of the user.² In addition, as Lundrigan, Manuel & Yan suggests, further studies are needed on satisfaction levels between user groups, particularly users who combine research tools or who have had limited library instruction.³

With WSD becoming widely adopted due to its perceived ease of use, Vaughn highlights the challenges to wide-scale implementation.⁴ Challenges surrounding the need to educate faculty about WSD, getting librarians to promote the service, and identifying user populations that should be targeted for use, have been discussed. While there is limited information in the library literature about student and faculty experience with discovery

**Tracy Gilmore, Stefanie Metko, and Charla Gilbert are all at Virginia Tech.*

tools over time and correlations to information-seeking behavior, there is some evidence that suggests “students are transferring their search behavior from web search engines, to academic research tools.”⁵

Building off past research, the researchers conducted a study of Summon that aimed to address user satisfaction using criterion such as (1) searching by subject or database; (2) ease of use; (3) graduate student use; and (4) how student perceptions compared to other resources such as social media, and Google.⁶ One significant finding was that students who used Google in tandem with Summon reported higher rates of user satisfaction than students who only used Summon. In addition, the graduate and undergraduate student experience was much different, especially in relation to the use of subject-specific databases. This finding indicates a need for more research into the user experience of both graduate students and faculty when using WSD for conducting higher-level research. Another interesting finding was the connection between instructor feedback on positive versus negative student perceptions of WSD. In cases where faculty input was high, students were much more likely to perceive Summon as an effective research tool. This presents an interesting consideration on the possibility for faculty librarians to play a greater role in providing feedback to students and to use their influence to promote a better user experience when teaching WSD during library instruction.

One area of interest is whether librarian attitudes and biases have the potential to influence student and faculty perceptions of Summon.⁷ Also notable is whether librarian biases related to specific tools such as WSD may influence user perception. Allen mentions that librarians at one particular institution spoke of bias in their own use of certain tools during instruction and that the biases observed may have influenced the application of information literacy approaches.⁸ Although this study did not find statistical significance or correlation between librarian preference for specific tools and what tools they taught, there was enough anecdotal evidence to suggest that further studies were needed, as librarians did state a general dislike for Summon. For example, Cmor & Li, stated in their study on librarian attitudes related to WSD, that many librarians who teach information literacy sessions believe that teaching the discovery layer would “dumb down students’ information search skills, thus providing a poor foundation for higher degrees and future careers.”⁹ Although many institutions have challenged this belief through alternative ways of implementing WSD into information literacy instruction sequencing, this attitude is still pervasive throughout academic libraries and has influenced the way that information literacy skills are taught at many institutions.¹⁰

Research Design and Methodology

This mixed methods, longitudinal study on the use and perception of Summon for research was conducted at Virginia Tech, a public land-grant university. Virginia Tech has an FTE of 33,000 and as of 2016 has a total of 26,000 undergraduates, 7,000 graduate students, 7,000 faculty, and 3,000 staff.¹¹

The study was conducted over a three-year period beginning in the spring of 2012 through the fall of 2015. The purpose of the study was to identify trends in the usage and satisfaction of Summon among Virginia Tech library users, and to make inferences that would inform future approaches to information literacy. Data collection included surveys, usability testing, and focus groups. All participants were required to sign consent forms prior to engaging in the research.

Surveys were administered through Qualtrics survey software, and included a skip logic design to allow for open-ended responses. The design allowed participants to skip questions not pertinent to their experience. Percentages that were used in the survey results represent the number of participants that responded to the correlating questions. The surveys included questions designed to assess user satisfaction and perceptions of the service using six basic criteria: (1) ease of use; (2) knowledge of faceted search; (3) finding articles from top-ranked journals; (4) search and retrieval effectiveness; (5) use of facets to improve search strategies; and (6)

user likeliness to start library research using Summon. The survey consisted primarily of 5-point Likert-scale and multiple choice questions. Qualitative data was collected through open-ended survey questions related to satisfaction or dissatisfaction.

Usability testing was conducted in a classroom in the library using QuickTime Player software. All participants began the test from the Summon home page on the library website and timed recordings of users' screen movements were captured. Participants were given five tasks that were designed to be completed in two-minute intervals. The test was designed to be completed within twenty minutes. Usability study objectives were: (1) to find and email a citation to the moderator; (2) to find a book in the catalog for a given citation; (3) to find an eBook by a specific author; (4) to find a full-text article for a given citation; (5) to narrow the results to less than 300 resources using keywords and facets on a given research topic.

Focus groups were conducted in a University Libraries classroom over a two-day period. The researchers offered incentives to participants, including raffle items, lunch and door gifts. The focus groups were promoted through Twitter, Facebook, library listservs, the library website, and digital signage located throughout the Library Commons. Seven guiding questions were asked during the focus groups. The discussions centered around three quantitative questions to measure the level of user satisfaction, and four qualitative questions to assess user expectations and perceptions of Summon.

Limitations of the Study

Some of the terminology used in the surveys proved to be a limitation for some of the respondents, as not everyone understood what was meant by the term "facets." This limitation became evident in the qualitative open-ended portion of the survey where many participants mentioned that they were unfamiliar with faceted searching or simply asked "what is a facet?" This was a repeated occurrence when analyzing the data related to information literacy instruction.

Listservs were used in the 2012 and 2013 implementation of the surveys. Participants who subscribed to these university listservs may not have necessarily been representative of the entire Virginia Tech user population. To mitigate this limitation and improve randomization, access to the 2015 survey was limited to the pop-up window on the library's website, resulting in lower participation rates.

The usability study was limited in that the sample size was small, but when analyzing the data in support of the surveys and focus groups, the results appear to be consistent with other findings.

Study Population and Response Rate

The study population was made up of faculty, staff, undergraduate, and graduate students at Virginia Tech. The appropriate Internal Review Board (IRB) protocols were approved and included the survey instruments, focus group questions, and the usability protocol.

The survey respondents included 470 participants in 2012; 789 participants in 2013; and 271 participants in 2015. The breakdown of survey respondents by user type were undergraduate students, graduate students, faculty, and a small number of unspecified users.

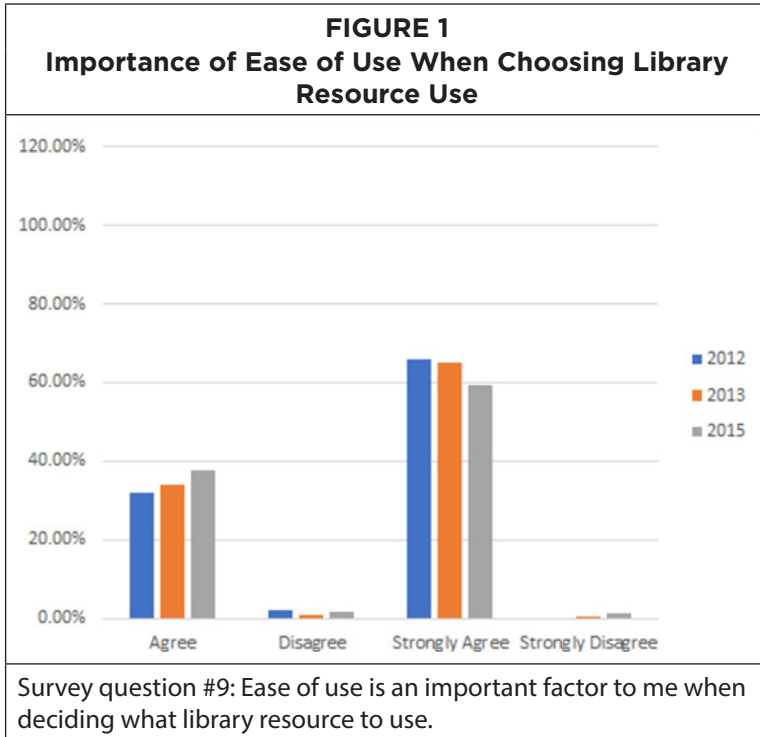
The focus groups were conducted in the spring of 2015 and included fifty-five (55) participants over the course of eight, 50-minute sessions. Thirty-five (35) participants were graduate students, eleven (11) undergraduate students, six (6) faculty, and four (4) staff employees.

Usability testing included twenty-one (21) participants in fall 2015. Usability was not conducted in prior years of the study. Undergraduate and graduate students as well as faculty participated in the usability testing.

Research Findings

Research Area 1: Ease of use of Summon and Search Retrieval Effectiveness

Given that the main goal of adopting a WSD is ease of use, it was important to assess whether faculty and students perceived Summon as an intuitive and easy to use system when compared with other library research tools. It was also important to investigate whether perceptions translated into ability to use Summon effectively for conducting research.



For all three years, survey responses confirmed that users agreed that ease of use was an important criterion for determining what type of library resource to use, with a large percentage stating that they agreed or strongly agreed that ease of use was influential when choosing what tool to use in their research. The results demonstrate a strong preference for ease of use when conducting research.

Yet, when analyzing survey responses, it became clear that although most respondents agreed that Summon’s ease of use features led to satisfaction with the service, a large group of respondents mentioned dissatisfaction with the level of Summon’s ease of use. While many users connected dissatisfaction with the level of instruction they received before using Summon, many other respondents were dissatisfied

with the interface itself. This study indicates a strong perception among users that Summon was not an intuitive and easy to use research tool, particularly faculty and graduate student populations. When compared with the Addison library catalog and Google Scholar, it was clear that respondents felt most comfortable with Google Scholar, particularly when it was used in tandem with Summon. In fact, in all three years of survey data, nearly all respondents agreed that Google was easy to use. This reinforces data seen in surveys as well as anecdotally in working with students that they are using Google as a first-line research tool due to its ease of use.

One anomaly within the data was the preference for using Summon for searching for discipline-specific information. When

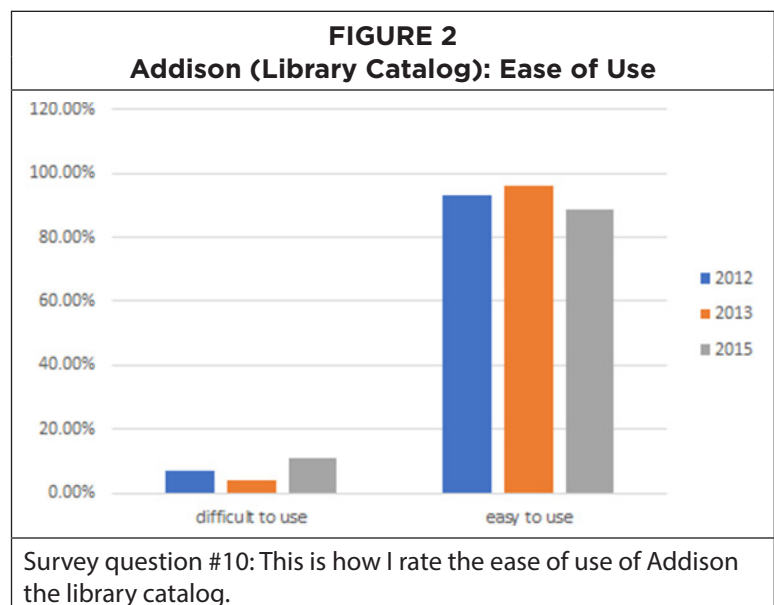
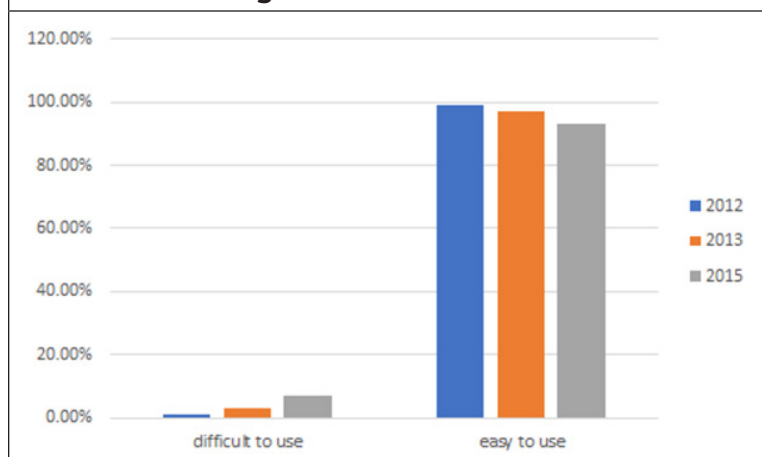
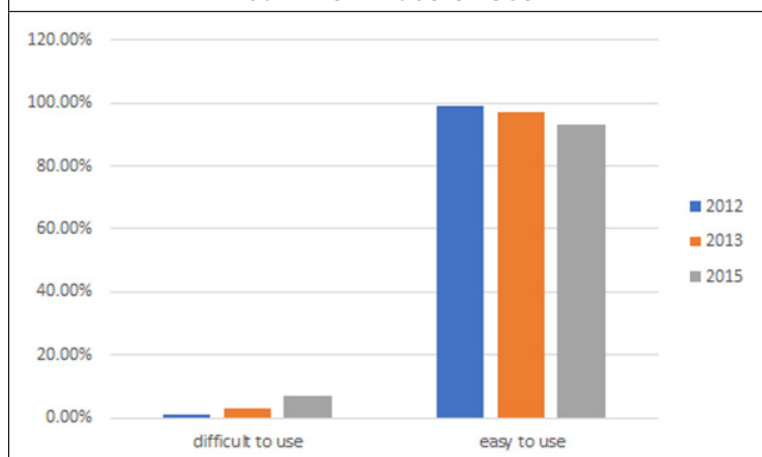


FIGURE 3
Google Scholar: Ease of Use



Survey question #10: This is how I rate the ease of use of Google Scholar.

FIGURE 4
Summon: Ease of Use



Survey Question #10: This is how I rate the ease of use of Summon.

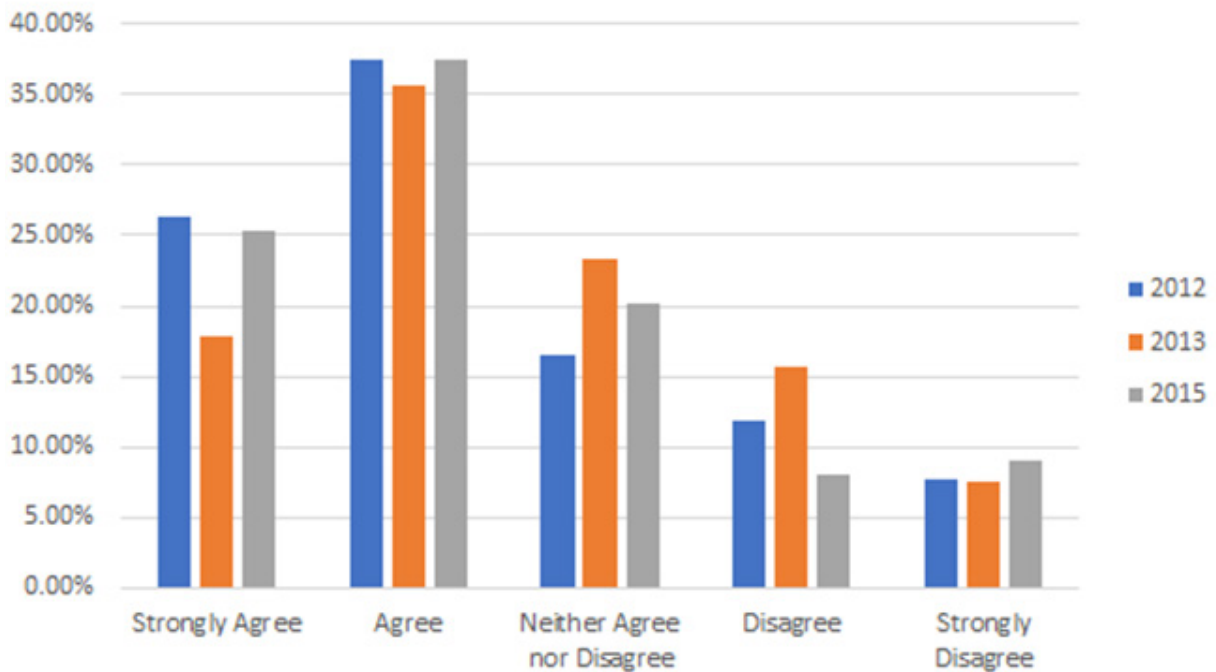
asked if users could find articles from top ranked journals in their chosen discipline, just over thirty (30%) percent of respondents stated that they were successful. This is a drastic difference from overall ease of use statistics in other areas of the study. This suggests that while Summon may be viewed as a preferential tool for starting research, it may not be the best tool for advanced researchers who are looking to conduct in-depth, exhaustive searches within their discipline. It was noted in the qualitative data that for subject-specific areas, users preferred to use the databases or journals in which they were already familiar. This may suggest that Summon is more effective for cross-disciplinary research. The data may also suggest a need for more instruction at the graduate and faculty levels in regards to advanced searching in Summon.

Many of these findings were also confirmed through usability testing. Of the twenty-one (21) participants, forty-five (45%) percent did not know how to use the citation feature in Summon or how to email citations, suggesting that ease of use with citation tools were an issue. Thirty-six (36%) percent of participants used the advance search feature for limiting results, while fifty-eight (58%) percent of participants began their search using natural language instead of Boolean operators or appropriate

keywords. These results may suggest that the advanced features of Summon were underutilized by users.

Focus group results also pointed to various issues related to ease of use and search and retrieval effectiveness. For example, forty (40%) percent of focus group participants expressed a need or desire to receive additional instruction pertaining to filtering searches and improving search results by using search terms. This may indicate that the tool was not easy to use when compared to a search tool like Google Scholar. Qualitative data also suggested ideas for improving the ease of use in Summon. These suggestions included: (1) keyword autocomplete in the search box; (2) better relevancy ranking; (3) providing information regarding the number of times articles were cited. Several participants mentioned that fewer clicks to get to the actual article would be an improvement, indicating that ease of use was also tied to Summon linking issues, as well as library-related interface issues. Although interface design is not addressed in this paper, it was observed that the ability to link directly to articles did have a direct impact on user perceptions and use of Summon as a viable research tool.

FIGURE 5
Importance of Ease of Use When Choosing Library Resource Use



Survey Question #17: The search and retrieval effectiveness of Summon meets my expectations.

Research Area 2: Student and Faculty Preferences for Research Tools and Use of Faceted Searching

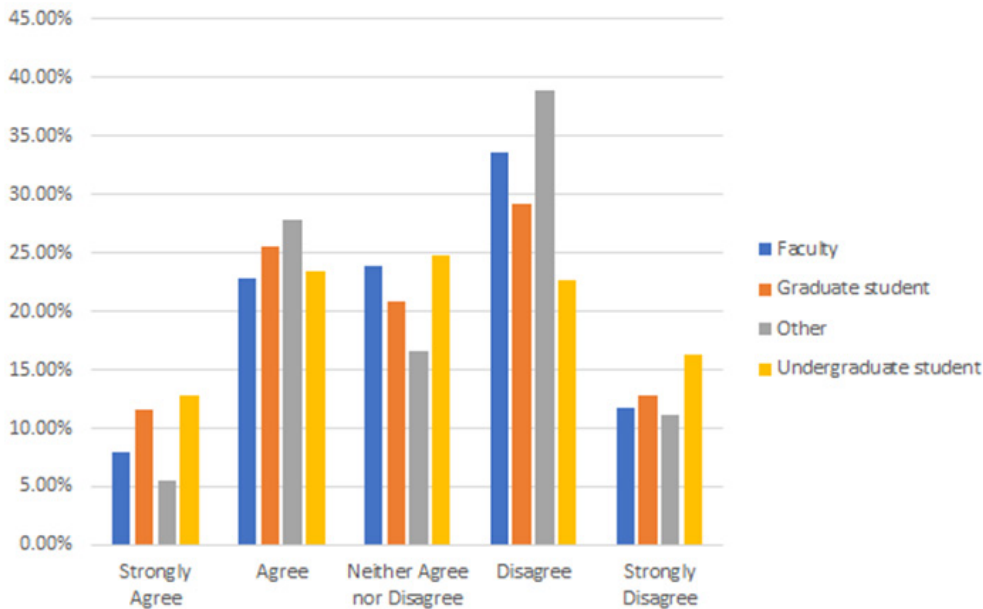
Ninety (90%) percent of participants in the focus groups acknowledged using Google or Google Scholar to conduct scholarly research. In keeping with these results, several studies indicate that upwards to ninety-five (95%) percent of students use general search engines as their “first port of call.”¹² Interestingly, this study found this to be true because users also stated that they were using Summon in tandem with Google when starting their research.

These findings make sense considering that much of user expectations for conducting research on the web is shaped by popular internet browsers and commercial web sites that make searching intuitive and easy to navigate. Faceted navigation is an effective tool when conducting research, as it enables users to conduct simple searches with their preferred keywords, as well as having the ability to refine and limit results.¹³ It is important to understand how effectively researchers use facets to refine and improve their search strategies within a discovery layer and whether online behavior translates to the research environment.

Ease of use, facets and likeliness to start their research in Summon appear to be linked. According to the surveys, nearly seventy (70%) percent either agreed or strongly agreed that they were likely to start their research using Summon. This trend remained relatively stable in years two and three of the study. This data is consistent with other survey data that states a desire for users to also learn more about Summon to use it effectively for research. For example, sixty-eight (68%) percent of respondents either agreed or strongly agreed about wanting to learn about Summon. In fact, one of the common themes repeated in the focus groups was the desire for more instruction on how to use Summon, which was a trend that remained stable throughout the study. For example, many participants in the focus groups emphasized finding articles as opposed to discovering resources,

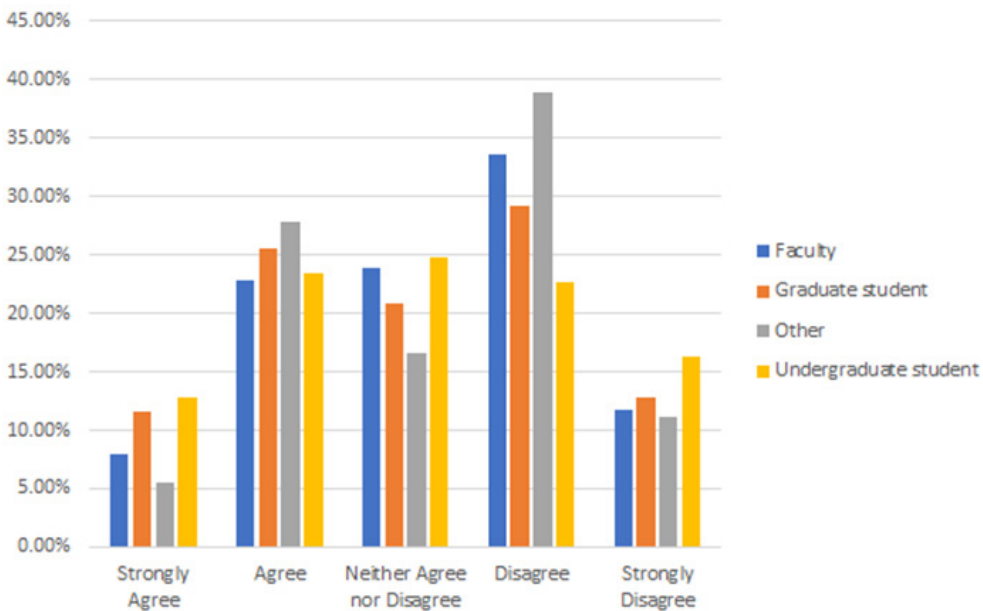
indicating that they used Summon only when they had a known citation or knew exactly what they were looking for. Emanuel noted that without training, users may not adapt their strategies to take advantage of the facets.¹⁴ Information literacy instruction is necessary for realizing the full potential of discovery services and faceted navigation, which was noted in many areas throughout the survey and focus groups.

FIGURE 6
Knowledge of Facets in Summon



Survey question #13: I always use facets in Summon to improve my search strategy.

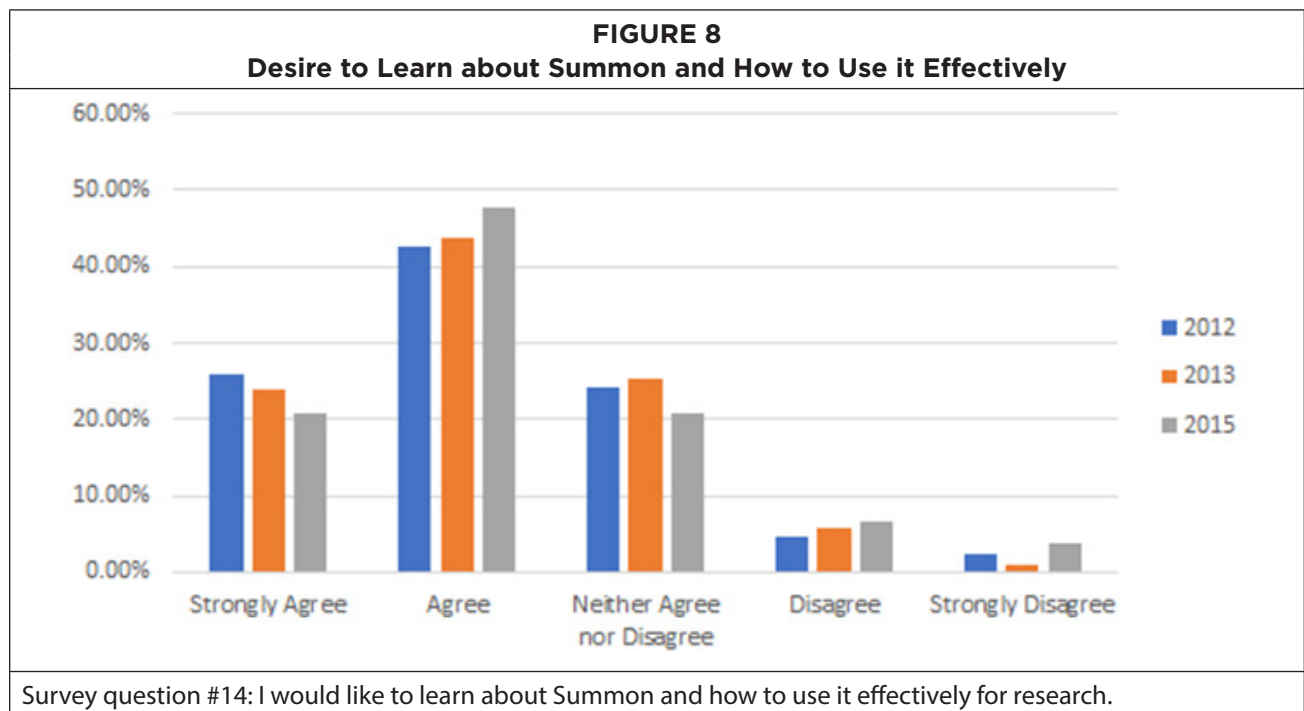
FIGURE 7
Likelihood to Start Library Research Using Summon



Survey question #23: In the future I am likely to start my library research using Summon.

Research Area 3: Information Literacy Implications

Yang & Wagner, in their quasi-study on OPACs at four institutions observed that there was more value in “implementing discovery layers in comparison to ILS OPACs,” suggesting that when selecting a WSD, consideration should be taken into how students will perceive access to multiple discovery tools versus offering a simple search interface such as Summon.¹⁵ Libraries who choose to offer both may need to take advanced measures to instruct students and faculty alike on the value of each tool and research goals in relation to the tool selected. In this study, lack of instruction on tool selection for specific research needs was a noted barrier and warrants further consideration. Some users indicated that they felt more instruction was needed, including specific suggestions for (1) online tutorials and videos; (2) webinars; and (3) general instruction. For example, one survey respondent stated that “if a webinar or brief course was offered on [Summon’s] benefits, then perhaps I would be more open-minded to changing how I search for articles and other research documents.” This and other similar comments indicate a need for more robust online resources for instruction on the Libraries’ WSD, particularly resources that address benefits.



Several themes that emerged in the qualitative survey data were: (1) the time-consuming nature of the Ask a Librarian feature; (2) the need for more than a one-shot instruction session to feel confident, especially as a new student; (3) specific suggestions for multiple library sessions scaffolded over time and not just in the first semester; (3) library instruction that allowed them exploratory time with Summon with time for questions and answers during the research process; (4) a strategy for overcoming information overload in the beginning of their course of study and not enough follow-up instruction later on in their studies; and (5) requests for point of need resources such as online sessions, tutorials and webinars.

In addition, users who have not received instruction on Summon may not fully utilize the faceted search options. When using the single search option, many users indicated that they became overwhelmed with the results, leading to dissatisfaction with the interface. In addition, without instruction that is more exploratory in nature, users did not understand why they were receiving a variety of format types, such as book reviews when

searching for books, which caused frustration. Specific to this issue, survey data indicated that the integration of resources available outside of Virginia Tech was quite confusing; often resulting in users believing they had to request an article via interlibrary loan when we already owned the resource.

Discussion and Future Research Implications

Perhaps the most important findings from this study to date are the connections to information literacy instruction. While the perception among faculty and librarians may initially have been that WSD enables users to more easily access the collection, this study indicates that it is not that simple. Users still have many barriers to accessing the collection and require library instruction to understand the nuances of a discovery tool, particularly advanced features, citation tools, natural versus Boolean language, and available format types. Being able to use faceted searching is also critical for users to reap the benefits of the tool, however, this is not a skill that is natural without instruction.

In considerations for future studies, the researchers plan to conduct usability tests that include a pre-survey that measures the extent to which the research participant has participated in information literacy instruction. This will help to find possible correlations between information literacy instruction and student and faculty perceptions of Summon as an effective research tool. Information literacy librarians at Virginia Tech are also currently conducting a large-scale curriculum mapping project that will identify points in the curriculum where Summon is being taught. This is an attempt to investigate possible connections to academic and disciplinary status and student perceptions of WSD. Because of this, the 2017 survey may be conducted at a different time within the academic year. This may affect the overall responses on the need for instruction as well as the ease of use and understanding of facets. Additionally, the qualitative portion of the survey needs further analysis to address improvements to the integrated library system.

Conclusion

This longitudinal study, combined with plans for continuing this work, will help researchers to learn more about how information literacy and WSD upgrades impact the research experience of students and faculty. Further, the researchers plan to conduct additional studies into the self-efficacy of students and faculty in specific disciplines and how that impacts their use and perceptions of WSD tools. In the future, it will be helpful to conduct pre- and post-surveys with students who have received library instruction to identify and account for any differences in user experience that can be directly correlated to instruction.

Responses from this study indicate that there is a demand for greater instruction in learning how to use Summon effectively, and there is potential for instruction librarians to have a significant impact on user satisfaction with Summon. Specifically, the need for more point of need tutorials, videos and instructional modules would improve user perception and use of Summon as an effective research tool. While this is easily accomplished, it does beg the question of whether the benefits associated with WSD is actual or perceived.

At the very least, the study results suggest that the advanced tools in Summon are not naturally intuitive, especially for students who have not received instruction. While ease of use is highly valued and expected by users of the service, the data shows that users were generally satisfied with beginning their research in Summon, but may need more guidance for advanced research. More research needs to be conducted in the future to assess the value of Summon, particularly among specific user populations.

Appendix. Qualtrics Survey Software

Demographics

1. What is your status?

- Faculty
- Graduate student
- Undergraduate student

2. What is your college? (if in more than one college, select your **primary** college affiliation)

- Agriculture and Life Sciences
- Architecture and Urban Studies
- Engineering
- Liberal Arts and Human Sciences
- Natural Resources and Environment
- Pamplin College of Business
- Science
- Veterinary Medicine

3. What is your gender?

- Male
- Female

4. What is your age group?

- 18 - 22
- 23 - 27
- 28 - 32
- 33 - 37
- 38 - 42
- 43 - 47
- 48 - above

Summon Awareness & Use

5. I have **heard of** the Summon Discovery Service provided by the Virginia Tech Library

- True
- False

6. I have **used** the Summon Discovery Service provided by the Virginia Tech Library

- True
- False

Preferred Research Tools & Success Rate

<https://new.qualtrics.com/ControlPanel/PopUp.php?PopType=SurveyPrintP...>

1/5

7. When conducting library research I rate my preference for using the following resources as:

	high preference	moderate preference	neither high nor low preference	somewhat low preference	low preference
Addison (library catalog)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Google Scholar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Summon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. My search success rate when I use the following resources is:

	high success rate	moderate success rate	neither high nor low success rate	somewhat low success rate	low success rate
Addison (library catalog)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Google Scholar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Summon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Ease of Use

9. Ease-of-use is an important factor to me when deciding what library resource to use

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Indicate your level of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. I rate the ease-of-use of the following resources as:

	easy to use	moderately easy to use	neither easy nor difficult to use	moderately difficult to use	difficult to use
Addison (library catalog)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Google Scholar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Summon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Knowledge of Summon

11. I have an understanding of the scope of the content included in Summon

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Indicate your level of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. I know how faceted searching works

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Indicate your level of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1/19/12

Qualtrics Survey Software

13. I always use the facets in Summon to improve my search strategy

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Indicate your level of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. I would like to learn about Summon and how to use it effectively for research

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Indicate your level of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Summon Effectiveness in Subject Fields/Disciplines

15. I would recommend Summon for finding research information in my subject field/discipline

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Indicate your level of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. When I search using Summon I can find articles from the top-ranked journals in my subject field/discipline

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Indicate your level of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. The search and retrieval effectiveness of Summon meets my expectations

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Indicate your level of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Rating Search Results

18. When conducting research with any library resource my priority rate for the following attributes are:

	high priority	moderate priority	neither high nor low priority	somewhat low priority	low priority
Full-text access to results	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relevance of results (how closely results match search topic)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Number of items retrieved	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Retrieval of desired format(s) - e.g. newspapers, journal, articles, books, e-books, dissertations etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Academic quality of results (Scholarly/Peer reviewed)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to subject-specific	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1/19/12

Qualtrics Survey Software

(or discipline-specific) content

Rating Summon Features

19. The following is my rating of the importance of Summon features:

	important	moderately important	neither important nor unimportant	somewhat unimportant	unimportant
Faceted searching (i.e. ability to refine search using check the boxes on the left)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to add results from other libraries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to search for articles as well as books and other library material in one search	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using a single search box	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Direct links to articles/books (or records of books) from the search screen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to format item citations into desired style (APA, AMA, MLA, Chicago/Turabian, Harvard, Uniform)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to Export citations into citation manager (EndNote, RefWorks, BibTex)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to sort results by relevance or by date	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to modify searches (i.e. narrow or broaden search) using facets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Summon User Satisfaction

20. Here are my comments on what I like about Summon:

21. Here are my comments on what I dislike about Summon:

22. Overall I am very satisfied with Summon

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Indicate your level of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1/19/12

Qualtrics Survey Software

23. In the future I am likely to start my library research using Summon

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Indicate your level of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24. Based on my experience I would recommend Summon to other users

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Indicate your level of agreement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Notes

1. Natasha D. Allen, "Utilizing discovery tools for classrooms: how do librarian attitudes on discovery impact tools they teach?" (*Library Hi Tech News*) 8–12.
2. Mark Dehmlow, "Services and user context in the era of web-scale discovery" (*Information Technology and Libraries*), 2.
3. Courtney Lundrigan, Kevin Manuel, Yan May, "pretty rad: Explorations in user satisfaction with a discovery layer at Ryerson University" (*College & Research Libraries*), 43.
4. Jason Vaughan, "Investigations into library web-scale discovery services" (*Information Technology and Libraries*), 32–82.
5. Diane Cmor, Li Xin, "Beyond boolean, towards thinking: Discovery systems and information literacy" (*Library Management*), 450–457.
6. Lundrigan, Manuel and May, "pretty rad: Explorations in user satisfaction" 42.
7. Ibid.
8. Natasha D. Allen, "Utilizing discovery tools for classrooms", 10.
9. Diane Cmor, Li Xin, "Beyond boolean, towards thinking", 451.
10. Courtney Lundrigan, Kevin Manuel, Yan May, "pretty rad", 44.
11. About Virginia Tech. <https://www.vt.edu/about.html>
12. Barbaraella Frazier, "Niche Search Engines: Expanding Information Discovery", (*The Reference Librarian*), 168.
13. Jennifer Emanuel, "Usability of the VuFind next-generation online catalog" (*Information Technology and Libraries*), 44.
14. Ibid.
15. Sharon Yang, Kurt Wagner, "Evaluating and comparing discovery tools: how close are we towards next generation catalog?" (*Library Hi Tech*), 691.

Bibliography

- Allen, N.D. (2015). Utilizing discovery tools for classrooms: how do librarian attitudes on discovery impact tools they teach? *Library Hi Tech News*, 32(1), 8–12. doi:10.1108/LHTN-09-2014-0078.
- Cmor, D., Xin, L. (2012). Beyond boolean, towards thinking: Discovery systems and information literacy. *Library Management*, 33(8/9), 450–457. doi: 10.1108/01435121211279812.
- Dehmlow, M. (2013). Services and user context in the era of web-scale discovery. *Information Technology and Libraries*, 32(2), 1–3. Retrieved from <http://login.ezproxy.lib.vt.edu/login?url=http://search.proquest.com.ezproxy.lib.vt.edu/docview/1399551290?accountid=14826>.
- Emanuel, J. (2011). Usability of the VuFind next-generation online catalog. *Information Technology and Libraries*, 30(1), 44. doi: 10.6017/ital.v30i1.3044
- Frazier, B. (2013) Niche Search Engines: Expanding Information Discovery. *The Reference Librarian*, 54(2), 168–174. doi:10.1080/02763877.2013.755440.
- Lundrigan, C., Manuel, K., May, Y. (2015). "pretty rad": Explorations in user satisfaction with a discovery layer at Ryerson University. *College & Research Libraries*, 76(1), 43–62. doi:10.5860/crl.76.1.43.
- Vaughan, J. (2012). Investigations into library web-scale discovery services. *Information Technology and Libraries* (Online), 31(1), 32–82. Retrieved from <http://login.ezproxy.lib.vt.edu/login?url=http://search.proquest.com.ezproxy.lib.vt.edu/docview/1022273986?accountid=14826>.
- Virginia Tech. "About Virginia Tech." VT.edu. <https://www.vt.edu/about.html> (accessed January 29, 2017)
- Yang, S., Wagner, K. (2010). Evaluating and comparing discovery tools: how close are we towards next generation catalog? *Library Hi Tech* 28(4), 690–709. doi:10.1108/07378831011096312.