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# Utilizing discovery tools for classrooms: how do librarian attitudes on discovery impact tools they teach?

Natasha Danae Allen

*Western Michigan University*, [natasha.allen@sjsu.edu](mailto:natasha.allen@sjsu.edu)

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**Utilizing Discovery Tools for the Classroom: How Do Librarian Attitudes on Discovery Impact  
What Tools They Teach?**

*Author: Natasha Allen, Western Michigan University*

Do librarian attitudes on discovery tools affect what they teach in the classroom? My goal was to answer this question, at least in part, as part of a course project for my Library and Information Science distance education program at the University of Wisconsin-Madison.

Discovery tools are currently a hot topic among librarians. Many libraries, including the one at which I am currently employed, are either considering a switch or have already made a switch to a cloud-based discovery layer. At this point in time, my library utilizes three different search systems on the main website: a traditional OPAC (Voyager), an open-source discovery layer (VuFind), and a next generation discovery tool (Summon). We would like to replace all three with one discovery product within the next couple of years.

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I chose to focus specifically on librarians because I noticed in my research for a literature review on the subject, that there are a plethora of user studies that focus on students and faculty members who use library services, but none that focus on the librarians themselves. Librarians use library services on a regular basis both for their own research and on behalf of the patrons who ask for their help, yet their own feelings on discovery tools seem to be regularly overlooked. Librarians are essentially “the face” of the library, and unlike Internet search engines, still have their own opinions and biases about any number of subjects, including the tools they use. They are human after all. I wanted to know if this bias might have any effect on the patrons with whom they regularly interact.

I found several examples of this type of bias from discussions with librarians on the subject of discovery tools. There seemed to be a general dislike for Summon as opposed to Voyager or even VuFind, and I wondered if this attitude translated into what kinds of tools they taught in the classroom. The librarians at our school often utilize different tools based on the types of subjects they are teaching, and therefore might use different boxes compared to their colleagues on the main search page. I wondered if it was

possibly affecting what students are learning in their Information Literacy courses, and might be factoring in to how students are productively using the library.

In a recent University-wide LibQUAL+ survey of library users, many comments noted that the website was confusing and that users felt they were unequipped to properly use it. I wondered if the confusion our survey respondents expressed might have something to do with the fact that there are so many search boxes on the library’s main page. I also wondered if there was a possibility that these students were encountering confusion during one-shot information literacy sessions.

Click the link to each of these searches from the classic catalog and Vufind and rate the results you get from both on a scale from 1-5 with 1 being least useful and 5 being most useful. It should take about 20 minutes. **Thank you** for your response.

1. A student is looking for the book "A portrait of the artist as a young man. Click these links to conduct a title search in both systems and rate what you find.

In Vufind:  
<https://catalog.library.wmich.edu/vufind/Search/Results?lookfor=a+portrait+of+the+artist+as+a+young+man&type=Title&filter%5B%5D=&filter%5B%5D=&submit=Find>

In Voyager:  
[https://www.library.wmich.edu/cgi-bin/Pwebrecon.cgi?DB=local&SL=none&Search\\_Arg=a+portrait+of+the+artist+as+a+young+man&Search\\_Code=TKY%5E\\*&CNT=25](https://www.library.wmich.edu/cgi-bin/Pwebrecon.cgi?DB=local&SL=none&Search_Arg=a+portrait+of+the+artist+as+a+young+man&Search_Code=TKY%5E*&CNT=25)

Please rate these searches on a scale from 1-5:

Vufind:  
 1 - Least Useful    2    3    4    5 - Most Useful

Voyager:  
 1 - Least Useful    2    3    4    5 - Most Useful

Would you choose one search system over the other for this specific search? If so, why?

### Survey Example

My study initially began by surveying the instruction librarians of my institution. I asked them to rate the usefulness of discovery tool search results compared to a traditional OPAC. I ensured that the search examples in each tool gave the same results so I could accurately measure if the preference was based on a bias toward a particular system or not. I sent out a list of five questions to each of the participating librarians. The librarians were asked when they graduated library school and how many

years they had worked in a library setting. They were also asked certain demographic information such as their gender, date they graduated from library school and if their employment status was faculty or staff. I asked these questions to obtain as much usable data as I could from the responses.

For each question, the librarian would conduct a search based on a simple research scenario in our traditional catalog, Ex Libris’ Voyager, then conduct the same search in Villanova University’s open source discovery tool VuFind. Next I asked them to rate their results page on a 1-5 scale with 1 being least useful and 5 being most useful. I asked each librarian to decide if they thought one search was better than the other, and why they would choose it. The answers were recorded in Excel then analyzed in SPSS.

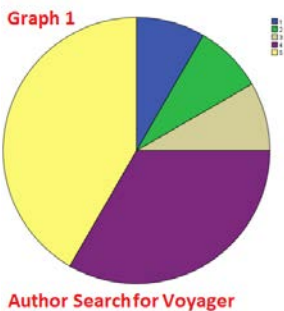
The results, which are displayed in table 1, showed that the

**Table 1** Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Title Search Vufind	12	1	5	3.83	1.115
Title Search Voyager	12	1	4	3.08	.996
Author Search Vufind	12	1	5	3.08	1.443
Author Search Voyager	12	1	5	3.92	1.311
Subject Search Vufind	12	1	5	3.50	1.314
Subject Search Voyager	12	1	5	3.00	1.348
Call Number Search Vufind	12	1	5	3.83	1.467
Call Number Search Voyager	12	1	5	4.17	1.403
Title Keyword Search Vufind	12	1	5	3.08	1.730
Title Keyword Search Voyager	12	1	5	2.67	1.371
Year of Graduation	12	1977	2010	1995.42	12.802
Years Since Graduation	12	3.00	36.00	17.5833	12.80240
Grouped Years Since Graduation	12	1.00	3.00	2.0633	.99620
Individual Years In Libraries	12	2	37	20.33	12.033
Grouped Time In Libraries	12	1.00	3.00	2.1667	.93744
Gender	12	1.00	2.00	1.4167	.51493
Faculty or Staff	12	1.00	2.00	1.4167	.51493
Average Vufind Rating	12	1.00	4.60	3.4667	1.07647
Average Voyager Rating	12	1.00	4.20	3.3667	.95664
Valid N (listwise)	12				

librarians are using VuFind and Voyager equally. On average, both systems were rated fairly highly with VuFind being rated at 4.6 out of 5 and Voyager at a 4.2 out of 5. Some searches, such as Voyager's author search were rated higher (Graph 1) than VuFind's (Graph 2). Other searches such as VuFind's title search (Graph 3) were rated higher than the Voyager search (Graph 4) regardless of demographic.

This told me the librarians are using different systems for different kinds of searches, and that they seem to view the systems equally as helpful in general. In the comments section of the test, one participant said, "I tend to use Voyager for author and title searching, since I think it is more precise and accurate. I now tend to do topic searches in advanced mode VuFind because of the superior way to enter the searches. (For example, being able to put 'great Britain' or England or 'united kingdom' on one line. I cannot do that in a Voyager advanced search."

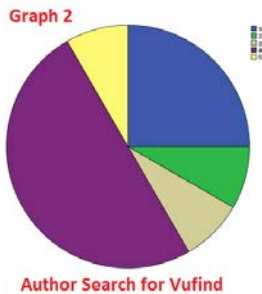


Interestingly, another participant said "I know many of my colleagues may see me as a traitor, but I do like the way results are displayed in VuFind." What this may suggest is that even though a search may come up with the same results in each tool, some participants may still end up using the OPAC because they prefer it and are comfortable with it, and further, this bias affects how their colleagues view each system as well. However, I still wondered about how this might affect students. If the librarians are unhappy

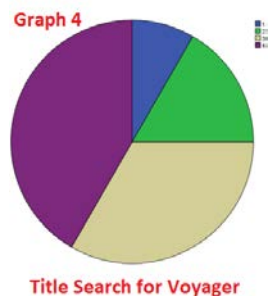
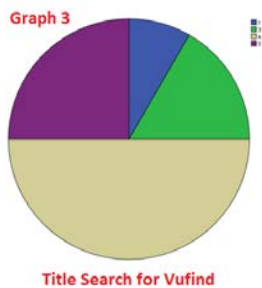
with searching, or even teaching the discovery tool, is it possible the students they teach might also be uncomfortable with the new system?

In another interesting comment, one participant mentioned feeling "overwhelmed" by the faceted search bar in VuFind, and "loved" the simplicity of Voyager's interface. If the librarians who are doing instruction are themselves "overwhelmed," what about students who are unused to searching the library system? Are students not also overwhelmed? Do they decide to use a free internet search engine such as Google due to being overwhelmed by library searches? It seems more work must be done to ascertain if this is the case, and ultimately how it may be fixed. These results indicate that the survey participants may benefit from a workshop for how to use a discovery tool in ways that would help them feel more comfortable using the system. Perhaps they may end up using the tool more often if they are aware that search results can be the same even if they use a different search strategy more

appropriate for a discovery tool. Perhaps this potential solution can also be applied to students who may feel “overwhelmed.”



If the librarians themselves are disagreeing on which system to use for even the simplest query, this could ultimately affect students. Students may find these systems confusing and yet still not have the capacity to judge which system is best for which search, driving them even farther away from library resources in favor of Google’s less confusing layout: “Users want fast performance, relevant results, and an intuitive search interface” (Boyer & Besaw, 2012). Rather than trying to fit the student to a certain way of conducting research at the library, the librarian needs to be considering the needs of the student and modifying their searches to fit what the student needs: “It is the behaviour of our information seekers that should drive our services (Howard & Wiebrands, 2011). The scope of my study did not specifically cover student attitudes on discovery tools. However, in many of the user studies I did find, I noted that users can be negatively or positively affected by how librarians design their services.



While the use of differing systems based on librarian preference may seem trivial, it harms libraries the same way Google, Ebay, and Amazon do. During the course of my study’s literature review, I found a 2005 article by OCLC which gave an interesting viewpoint on the matter, saying only 1% of all users begin their search for information in the library. “Users now have been conditioned by the free commercial resources to find full text instantly, and they expect nothing less” (Kornblau, Strudwick & Miller, 2012). This can be seen in my earlier LibQUAL+ example. Users are confused by how to properly use the website to get what they need.

I am concerned that if libraries and librarians do not focus on the needs of the users, they face becoming obsolete in favor of the far-reaching power of Google: “The well-beaten dirt path leading to Google makes a mockery of the intricately crafted information superhighways librarians have created and provided for our users, with users in many cases bypassing the library and the resources it provides” (Howard & Wiebrands, 2011).

While I had found evidence of some preference among librarians as to which system they used, I wanted to see if this had any bearing on what they taught in the classroom. I followed up on my survey with a second study. This time I wanted to know what kinds of courses the librarians taught, and what kinds of tools they were using in the classroom. I was especially interested in finding out if there was any link between the kinds of classes the librarians taught, and the tools being taught.

I began my study by determining what one-shot information literacy classes were taught at the library and who taught them. I then surveyed the instruction librarians, asking which primary and secondary search tools they use for each class, their personal preference for each tool, and their preference for what tool they use at the reference desk. Next, I did a statistical analysis of this data in SPSS.

I used a series of tests such as the Pearson Chi-squared test to find out if there were any correlations between personal preference and what search tool is taught in each class. If there are any correlations in the data, the test should show a number between 0 and 1. The Pearson Chi-squared test had a value of 73.682 (Graph A), which indicates that there is no correlation. I also found no correlations between personal preference and reference preference (Graphs B and C).

Despite my best efforts to look at the data from all angles, I found no statistical significance in any of the data I pulled from the survey. I also tested to see if personal preference had any bearing on reference preference and found that there was no statistical significance between personal preference and reference preference. I removed all responses that said “it depends” and the results showed me that there still wasn’t any statistical significance between personal preference and reference preference.

**Graph A** Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	73.682 <sup>a</sup>	9	.000
Likelihood Ratio	78.666	9	.000
N of Valid Cases	144		

a. 9 cells (56.3%) have expected count less than 5. The minimum expected count is .17.

**Graph B** Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.200 <sup>a</sup>	9	.616
Likelihood Ratio	7.674	9	.567
N of Valid Cases	16		

a. 15 cells (93.8%) have expected count less than 5. The minimum expected count is .06.

**Graph C** Personal Preference \* Reference Desk Preference Crosstabulation

Count		Reference Desk Preference				Total
		It Depends	No Preference	VuFind	Webvoyage	
Personal Preference	It Depends	6	0	2	0	8
	Summon	1	0	0	0	1
	VuFind	0	0	1	0	1
	Webvoyage	3	1	1	1	6
Total		10	1	4	1	16

I concluded that it appears librarian preference does not have an effect on the types of tools librarians teach. However, due to the small sample size and the nature of the data, this is not a definitive conclusion. I think if I had a bigger data set and had framed my questions less ambiguously, I might have come up with more conclusive results. Also, there could be other reasons librarians choose not to use a particular tool, such as one tool being better for a particular search than another.

My results led to even more questions, which I hope to address in other research articles. For both surveys, I did not receive a large enough sampling of librarians to adequately gauge how this affects libraries and their patrons in general. Ideally, I would survey more libraries similar to the one where I am employed and see if my results change. I would also like to connect these survey results with usability studies of students, and perhaps conduct a comparison between how students use discovery tools compared to how librarians use discovery tools. Since I began this study in 2013, there has been a lot of internal interest with regard to how librarian attitudes on searching these catalogs is affecting their ability to teach search concepts to students. I hope I, and others, will continue more research on this subject.

Libraries can rebrand their services by utilizing and advocating for discovery tools, but it will only happen if they are willing to make changes on their attitudes toward discovery tools. This might mean replacing the OPAC with a discovery tool, which ultimately means learning new ways of searching, but “librarians as a group are not comfortable with change, especially change where they have little involvement or input” (Thomsett-Scott & Reese, 2012). Therefore, it’s not a matter of whether or not discovery tools are an acceptable alternative to the traditional catalog, it’s a matter of training librarians to use these tools in effective ways, whether in the classroom or at the reference desk: “For optimal use of discovery tools, public service librarians need to be more involved in the selection, implementation, maintenance, and evaluation of the tools. Librarians need to be comfortable with a resource in order to teach and advocate for it” (Thomsett-Scott & Reese, 2012). If librarians are not actively involved with the development of these tools, they are far more reluctant to use these tools because of their general unfamiliarity with how the tools operate, and are “resistant to change despite evidence that the new technology is satisfying faculty and students” (Howard and Wiebrands, 2011).

Library professionals dedicate their entire careers to information organization, ensuring that others will be able to properly find and disseminate information in ways that contribute to growth in knowledge



and creativity as well as for the public good. From the first card catalog, to the introduction of the Online Public Access Catalog (OPAC), to the introduction of Next Generation Discovery Layers, the goal has always been to improve information retrieval to better match the user's original query and allow users to find the information they need in faster and more efficient ways. My hope is that soon we will find ways to better serve our patrons that are both easy for them to use, and give them the best possible information. My study is just the tip of the iceberg in the research that needs to be done. Only time will tell if this will happen.

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