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Mirlyn Search Satisfaction Survey

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Usability Report Cover Sheet

Project	Overall Project: Mirlyn Project Title: Search Satisfaction Survey
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Table of Contents

Usability Report

Introduction

In August 2009 the University of Michigan Library released a new version of the Mirlyn Library Catalog (http://mirlyn.lib.umich.edu/). This new system is based on VuFind, open source software developed at Villanova University, with local customizations implemented by the University of Michigan. The old catalog, renamed "Mirlyn Classic," continues to be provided as an option but is not promoted as the primary catalog.

The University of Michigan Library set out to develop this new catalog based on a need for a more modern approach to searching and navigating the library catalog. In addition to features like facets and a more modern design, this new catalog employs a very different search model – one of discovery as opposed to the classic model of precise searching. Mirlyn Classic simply executes an exact search for the terms submitted. For example, if a user searches the three terms: Barack Hussein Obama, Mirlyn classic will conduct a default Boolean AND search for: Barack AND Hussein AND Obama. This search results in a total of eight items, none of which are the books written by President Obama because they were not cataloged using his middle name. If the same search is executed in the new Mirlyn Catalog, 472 results are retrieved, with books authored by President Obama occurring on the first page. This is because the discovery search is more broad and found all items with at least two of the three terms present in the record. This discovery model, combined with more sophisticated relevancy ranking, results in a more inclusive list of results. However, as the rate of recall increases, the precision decreases. Because of this, searches using fairly common terms or many terms, tend to result in very lengthy search results with a lower percentage of relevant items.

The primary purpose of this survey was to gather information about how satisfied patrons are with search results in Mirlyn and whether satisfaction levels vary significantly between categories of users (i.e. undergraduates, graduate students, faculty, etc.). The survey was designed to measure satisfaction with searching overall and with two different kinds of searches: known item searches for specific items a patron already knows about and subject searches for items about a particular topic or subject.*

*This report describes a usability assessment performed by the MLibrary Usability Group and Task Force. Usability assessment is a part of the iterative design process used to develop new systems and services at MLibrary. This report describes one test in a series of tests performed at one point in the iterative design process. Sample sizes are small and findings serve only as clues to help guide decisions. Implementation of any recommendations should take these limitations into account.

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Test Description

A 10-question online survey was deployed using the Qualtrics survey tool. The survey was made available for a period of one week. The survey was linked via the site-wide Mirlyn header and read: "Tell us what you think about Mirlyn searching and you could win a $25 gift card!"
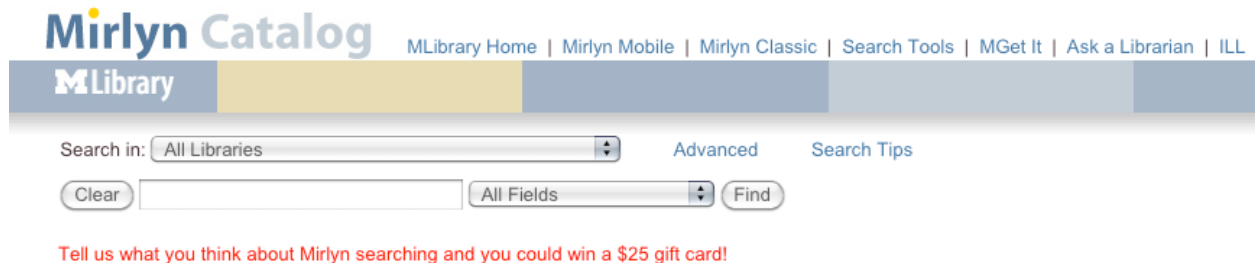
Survey responses and personal information submitted for the drawing were handled separately to ensure anonymity. Once the survey was completed, respondents were asked if they were interested in entering the gift card drawing and if so, were prompted to authenticate and then redirected to a new page to submit their information. Library staff and those not currently affiliated with the University were ineligible for the drawing, though they were welcome to complete the survey.

539 surveys were started and 525 were completed (a 97% completion rate) although not every respondent answered every question.

The survey asked the following questions:

- A multiple-choice question and an open-ended question on general satisfaction with Mirlyn
- An open-ended question, which asked respondents to recall recent searching experiences on which to base their survey responses
- Frequency of use of Mirlyn in general
- Two clusters of questions about two kinds of searching, known-item and subject searching:
    - General satisfaction with this type of searching
    - Satisfaction with the number of search results returned for this type of searching
    - Frequency of this type of searching
- Respondents' affiliation with the University

The complete survey is included in Appendix A.

Results

Respondents were asked to provide their affiliation with the University of Michigan so that survey responses could be examined according to user group.

Affiliation	Response	%
Undergraduate Student	178	34%
Graduate Student	238	45%
Faculty	27	5%
Librarian	8	2%
Staff	35	7%
Researcher	19	4%
Some other affiliation	15	3%
Not affiliated	5	1%
Total	525	100%

1. Known-item searching is more frequent than subject searching

The majority of respondents stated that they use Mirlyn for searching exact items once a week or more (66%), whereas the majority of respondents stated they use Mirlyn for subject searching twice a month or less (55%).

2. Mirlyn satisfaction levels are high

The survey results clearly show that survey respondents are generally satisfied with Mirlyn. Out of the 525 completed responses, 469 people (an overwhelming 87%) responded to Question 1 that they were either "very satisfied" or "somewhat satisfied" with their Mirlyn search results. This was true across all user groups (see cross tabulation in Appendix B). The group with the largest percentage of dissatisfaction was the faculty, of which just over 18% of respondents (5 out of 27) said they were "somewhat dissatisfied."
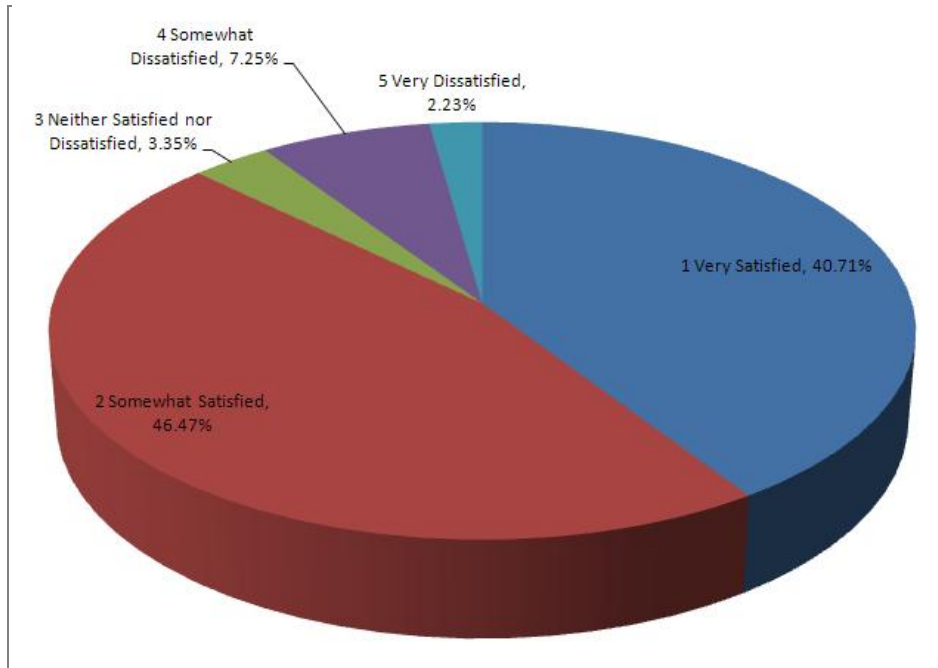
Question 1: General satisfaction with Mirlyn

Selected comments regarding general search satisfaction:

> *"The new Mirlyn is much improved - the list of related topics on the sidebar is great, and the way the results are now presented, with key information highlighted, is very helpful."*

> *"Mirlyn is an extremely useful tool for students. Looking for specific resources can be overwhelming, but Mirlyn makes it easier to narrow down the search to find exactly what you're looking for."*

3. Known-item searching satisfactions levels are high

A large majority of the survey respondents, 83.4% (449 out of 538 respondents), use Mirlyn to search for known items on a regular basis (2-3 times a month or more). A total of 452 (86%) respondents are either "very satisfied" or "somewhat satisfied" with known-item searching, with very few (only 10%) being dissatisfied. This holds true for both frequent and infrequent users of Mirlyn (see cross tabulation in Appendix B).
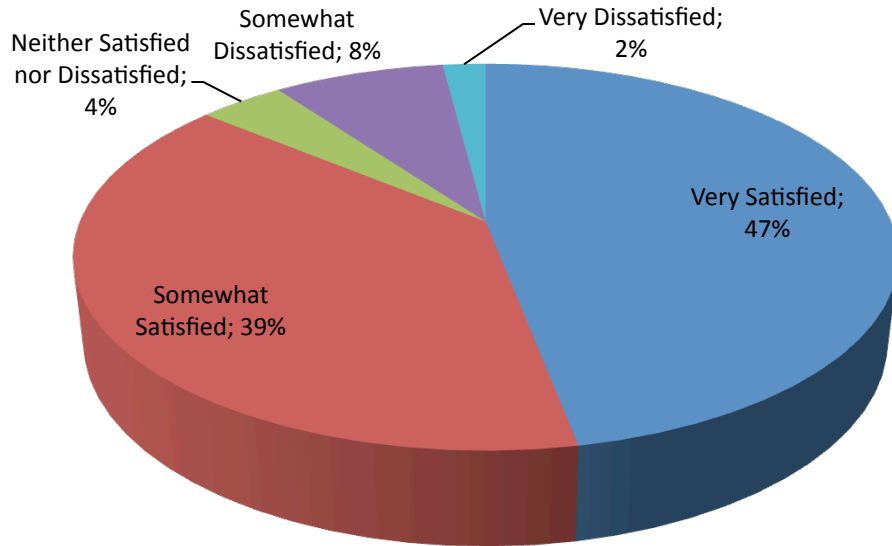
Question 3.1: General satisfaction with known-item searching

4. Subject searching satisfaction levels moderately high

When looking at user satisfaction with subject searching in Mirlyn, the results are not as overwhelmingly positive as they are for known-item searching. A total of 349 (72%) are either "very satisfied" or "somewhat satisfied." However, in comparison to known-item searching, there is a much larger group who remain neutral on subject searching, a total of 17% of respondents (81 out of 484). Although the percentage of dissatisfied respondents remains small (10%, almost the same percentage of users dissatisfied with known-item searching), it is clear that, as a whole, there is more ambivalence in regard to subject searching.
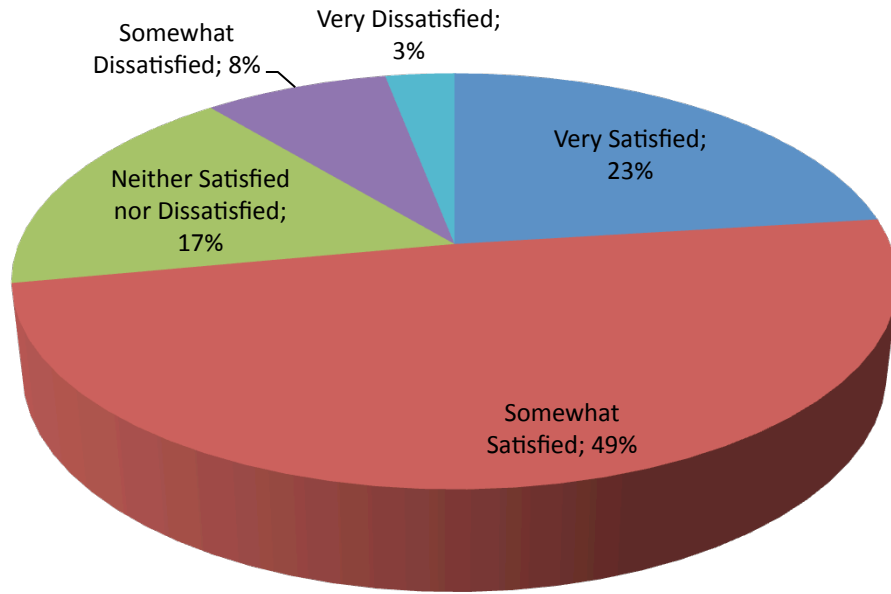
Question 4.1: Satisfaction with subject searching

It is interesting to note that, unlike the respondents to the known-item searching questions, the large majority of whom were relatively frequent known-item searchers, the respondents to the subject searching questions were more evenly distributed in terms of frequency of use. The majority (66%) conducts subject searches at least 2-3 times per month, but many (27%) are also infrequent subject searchers and 8% say they never conduct this type of search.

Frequency of Subject Searching
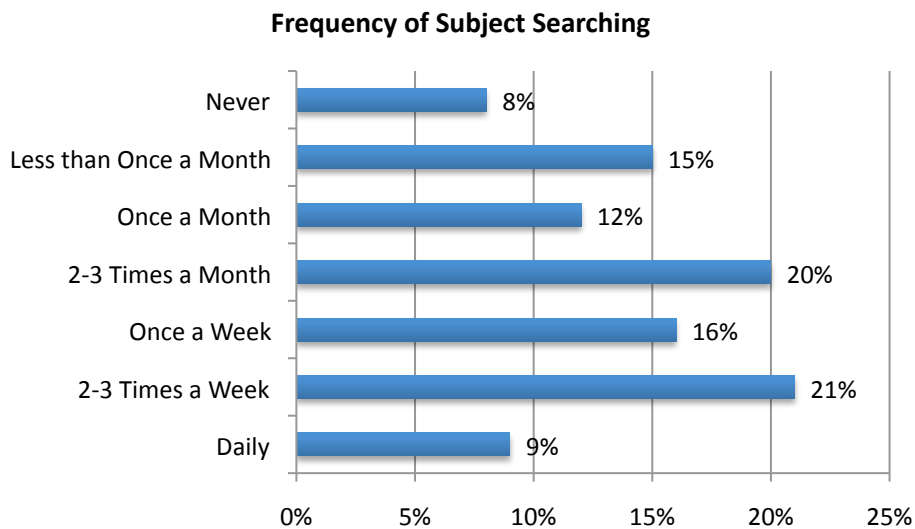
5. Moderate satisfaction with the number of search results

For both known-item and subject searching, the majority of respondents are satisfied with the number of search results returned (questions 3.2 and 4.2). We interpreted "satisfaction" to include both response number 2 ("the right amount of results") and response number 4 ("the number of search results does not matter as long as the most relevant results are listed first"). With exact item searching, 64% (or 337/523) of respondents chose response 2 or 4; for subject searching, 62% (or 298/484) of respondents chose response 2 or 4.

However, it should be noted that for both known-item and subject searching, approximately 1/3 of respondents (32% for known-item searches, and 34% for subject searches) stated that there were "too many search results." So even though the majority of respondents were satisfied with the number of search results, there remains a sizeable percentage who believe that there are too many results.

#	Answer		Response	%
1	Too many search results		167	32%
2	The right number of results		203	39%
3	Not enough search results		19	4%
4	The number of search results does not matter as long as the most relevant results are listed first.		134	26%
	Total		523	100%

Question 3.2 Known-item searching – number of results

#	Answer		Response	%
1	Too many search results		164	34%
2	The right number of results		148	31%
3	Not enough search results		22	5%
4	The number of search results does not matter as long as the most relevant results are listed first.		150	31%
	Total		484	100%

Question 4.2 Subject searching – number of results

6. Relevancy is important to both groups

Another point of note is that *relevancy* is an important issue for both known-item and subject searching. Twenty-six percent (134 of 523) of respondents, when asked about known-item searches, chose option 4: "The number of search results does not matter as long as the most relevant results are listed first." Thirty-one percent (150 of 484) chose the same option when asked about subject searches. Because there is higher general satisfaction with known-item

searching rather than subject searching (see result #2, above), this may be a more important point when considering subject searches.

7. General results related to subject searching by affiliation

- A majority of graduate students (52.52%), faculty (51.85%), and researchers (57.9%) performed subject searches at least once a week.
- An almost equal percentage of graduate students felt that they got too many results (31.93%) and that the number of search results did not matter as long as the most relevant results were listed first (32.77%).
- For subject searching, an almost equal percentage of undergraduate students felt that they got too many search results (31.46%), and the right number of search results (30.34%).
- The plurality (largest number) of faculty respondents (37.04%) and researcher respondents (36.84%) felt that they got the right number of search results for subject searching.
- For subject searching, the plurality of graduate student respondents (32.77%) and staff respondents (28.57%) felt that the number of results was irrelevant as long as the most relevant results were listed first.

8. General results related to known-item searching by affiliation

- The plurality of graduate student (39.92%), faculty (40.74%), and staff (28.57%) respondents performed known-item searching in Mirlyn 2-3 times a week.
- The plurality of the undergraduate (28.57%) and researcher (31.58%) respondents performed known-item searching in Mirlyn once a week.
- The plurality of graduate (37.39%) and undergraduate (40.45%) student respondents felt that they mostly got the right number of search results for known-item searching.
- On the other hand, a plurality of faculty (51.85%), librarians (50%), staff (42.86%) and researchers (36.84%) felt that they got too many search results for known-item searching."

Additional Results

The following findings are based on the write-in responses to the optional Q5 "Please describe your overall experience when using Mirlyn to search for items." Although based on low numbers, there were a handful of trends that emerged.

- Foreign-language material: Eight respondents mentioned difficulties searching for foreign language material.

  > *"It is better than most other online catalogs, but I'm often disappointed with the system, especially when looking for books in a language other than English."*

- Facets:

Seven respondents commented on the usefulness of the facets:

> *"I like that I can narrow the search using options in left column. I often search only for films, so it would be great if I could 'Search in' Askwith at the top of the page."*
>
> *"I liked and mostly use the left side bar to narrow down the categories."*

However, several respondents described scenarios in which they could have benefited from the use of facets and may not have been aware of them:

> *"I also find that I often have to wade through multiple media types that I was not interested in and many items have an unclear classification anyway."*
>
> *"Sometimes there are too many search results not related to my topic. This usually isn't a problem as the item I was looking for usually appears first. Nonetheless, if my goal isn't first, it can be difficult to wade through all of the items."*

- Confusion about the scope of Mirlyn: Five respondents described problems searching for articles using Mirlyn. This comes as no surprise since articles are not indexed in Mirlyn. Articles are findable via other access systems (primarily SearchTools and ArticlesPlus). There is further evidence of this in the responses to Q2 "What was a recent search you did in Mirlyn? " where six responses explicitly stated that they'd recently searched for journal articles.

- "Sort" drop-down menu option not seen: Three respondents noted the need for additional sorting options, particularly an option to sort by date. At least one respondent noted a need for this functionality in addition to that provided by the "Date of Publication" facet. Users may not be aware that this functionality is available from the "Sort" menu at the top right of the search results page or may find it unsatisfactory.

- Difficulty searching for music and related items: Three respondents described problems with searching for music and related items. Most of the problems described pertain to the complexity of the metadata for music items.

Recommendations

1. Survey respondents are generally satisfied with Mirlyn's search functionality; there is no need to make major changes to the search.

2. Keeping recommendation #1 in mind, however, we should explore tweaking the Mirlyn search to improve subject searching, since satisfaction rates for subject searching were not as high as for known-item searching. In addition, we should examine the concerns of smaller groups of users who expressed dissatisfaction.

3. Although we did not explicitly ask about the use of facets in Mirlyn, it is clear from user comments and from the heuristic evaluation of Mirlyn conducted by the Mirlyn Usability Task Force that use of facets may enhance user satisfaction with Mirlyn searching. Promoting facets and examining and revising their display in the interface may help patrons to make more effective use of Mirlyn's rich narrowing features.

4. As evidenced by some of the write-in responses to this survey along side Mirlyn search log data, it is clear that some users persist in searching for articles within Mirlyn. There are a number of ways this might be mitigated. One option might be to add a link on the Mirlyn interface to redirect these users to the appropriate tool (i.e. "Searching for articles? Try Articles*Plus*."

Lessons Learned

What Went Well

1. Response rate
The survey got a very good response with 525 completed surveys in only one week. The placement of the survey link beneath the basic search appeared to be very effective. The red link text was also very noticeable.

2. Incentives
It seemed effective to offer an incentive and to put the incentive information into the survey notice. It may have encouraged those who may have been neutral about Mirlyn to begin the survey.

3. General Mirlyn user information
The survey responses helped up paint a more complete picture of how Mirlyn is being used, satisfaction levels, and how use varies by user group. The results of this survey will be valuable information to use for further testing and for making refinements to the catalog based on user group.

What Did Not Go Well

1. Mirlyn vs. other library access system confusion
Despite the fact that the survey was only linked to from Mirlyn and not from Mirlyn Classic or any other library access system, and the fact that the survey constantly framed questions in regards to "Mirlyn," some survey takers appeared to be confused about which library service they were being asked to evaluate. In the open-ended general satisfaction question, some of the responses seemed to refer to Mirlyn Classic, SearchTools or the library website in general.

We've experienced this problem before but have yet to find reasonable solution for helping the respondents differentiate our various systems.

2. Distribution of Respondents by Affiliation
Most survey respondents were students (416 out of 525, or 79% of the whole). Only a few faculty, staff, researchers, library personnel, other affiliations, and non-affiliates responded to the survey. While there are more students than any other affiliation in the University community, the entire Mirlyn user group wasn't evenly surveyed, especially the faculty (only 27/525 respondents, or 5%). Roughly, faculty make up 10% of the campus population, undergraduates comprise 35%, graduate students comprise 20%, and staff comprise 35%.

3. Lack of Library Staff Category
There was not a clear affiliation for library staff – the only options were "staff" or "librarian." It would have been useful to have one "library staff" category for both librarians and library staff. In retrospect, we should also have decided beforehand whether or not we wanted to encourage library employees to take the survey, and should have made that clear with a message sent out prior to the survey launch, or in the introductory text.

Ideas for Future Testing

Faculty survey or focus group
Due to the small number of responses from the faculty, we may want to do another, more in-depth survey of faculty Mirlyn search satisfaction. Alternatively, we could conduct a faculty focus group to supplement our original survey data.

Limit on number of search results
There is some concern reflected in the survey responses about there being too many results returned – 31% stated this for known-item searching (not the largest percentage of respondents) and 31% for subject searching (the largest percentage of respondents). This opinion is reflected in the open-ended question response as well, along with issues about relevance ranking.

A future usability test might explore ways to improve narrowing and sorting of large results sets, and provide more opportunities for users to apply facets to their search results.

Appendix A: Complete Survey Questions

UTF Mirlyn User Satisfaction Survey

Mirlyn User Satisfaction Survey Thank you for giving us your thoughts on Mirlyn. The survey is open to everyone; we appreciate your input! At the conclusion of this short survey, you will have an opportunity to enter a drawing to win one of two $25 gift cards. (The drawing is open to all current University of Michigan students, staff, and faculty. Library employees and non-UM affiliates are not eligible to win.)

1. In general, when you do a search in Mirlyn, how satisfied are you with your results?
○ Very Satisfied (1)
○ Somewhat Satisfied (2)
○ Neither Satisfied nor Dissatisfied (3)
○ Somewhat Dissatisfied (4)
○ Very Dissatisfied (5)

2. What was a recent search you did in Mirlyn? (open-ended, optional)

3. How often do you use Mirlyn to search for an exact item that you already know exists? (Example: 'Harry Potter and the Sorcerer's Stone')
○ Daily (1)
○ 2-3 Times a Week (2)
○ Once a Week (3)
○ 2-3 Times a Month (4)
○ Once a Month (5)
○ Less than Once a Month (6)
○ Never (7)

If Never Is Selected, Then Skip To 4.

3.1. When you use Mirlyn to search for an exact item that you already know exists, how satisfied are you with the search results? (Example: 'Harry Potter and the Sorcerer's Stone')
○ Very Satisfied (1)
○ Somewhat Satisfied (2)
○ Neither Satisfied nor Dissatisfied (3)
○ Somewhat Dissatisfied (4)
○ Very Dissatisfied (5)

3.2. When you use Mirlyn to search for an exact item that you already know exists, how would you describe the number of search results?(Example: 'Harry Potter and the Sorcerer's Stone')
❍ Too many search results (1)
❍ The right number of results (2)
❍ Not enough search results (3)
❍ The number of search results does not matter as long as the most relevant results are listed first. (4)

4. How often do you use Mirlyn to search for items about a particular topic or subject?
(Example: 'architecture,' 'World War II,' 'Peace Corps,' etc.)
❍ Daily (1)
❍ 2-3 Times a Week (2)
❍ Once a Week (3)
❍ 2-3 Times a Month (4)
❍ Once a Month (5)
❍ Less than Once a Month (6)
❍ Never (7)

If Never Is Selected, Then Skip To 5.

4.1. How satisfied are you with the search results you get when you use Mirlyn to search for items on a particular topic or subject?(Example: 'architecture,' 'World War II,' 'Peace Corps,' etc.)
❍ Very Satisfied (1)
❍ Somewhat Satisfied (2)
❍ Neither Satisfied nor Dissatisfied (3)
❍ Somewhat Dissatisfied (4)
❍ Very Dissatisfied (5)

4.2. When you use Mirlyn to search for items on a particular topic or subject, how would you describe the number of search results?(Example: 'architecture,' 'World War II,' 'Peace Corps,' etc.)
❍ Too many search results (1)
❍ The right number of results (2)
❍ Not enough search results (3)
❍ The number of search results does not matter as long as the most relevant results are listed first. (4)

5. Please describe your overall experience when using Mirlyn to search for items. (open-ended, optional)

6. What is your affiliation with the University of Michigan:
- ❍ Undergraduate Student (1)
- ❍ Graduate Student (2)
- ❍ Faculty (3)
- ❍ Librarian (4)
- ❍ Staff (5)
- ❍ Researcher (6)
- ❍ Some other affiliation, please indicate: (7) _____
- ❍ Not affiliated (8)

Appendix B: Cross Tabulations

Satisfaction by User Group

		In general, when you do a search in Mirlyn, how satisfied are you with your results?					
		Very Satisfied	Somewhat Satisfied	Neither Satisfied nor Dissatisfied	Somewhat Dissatisfied	Very Dissatisfied	Total
What is your affiliation with the University of Michigan:	Undergraduate Student	43%	46%	5%	5%	1%	100%
	Graduate Student	41%	46%	3%	8%	2%	100%
	Faculty	41%	41%	0%	19%	0%	100%
	Librarian	13%	75%	0%	13%	0%	100%
	Staff	31%	51%	6%	3%	9%	100%
	Researcher	21%	63%	0%	16%	0%	100%
	Some other affiliation, please indicate:	60%	33%	0%	0%	7%	100%
	Not affiliated	80%	20%	0%	0%	0%	100%
	Total	41%	47%	3%	7%	2%	100%

Satisfaction by Frequency of Use for Known-item Searching

		In general, when you do a search in Mirlyn, how satisfied are you with your results?					
		Very Satisfied	Somewhat Satisfied	Neither Satisfied nor Dissatisfied	Somewhat Dissatisfied	Very Dissatisfied	Total
How often do you use Mirlyn to search for an exact item that you already know exists? (Exampl...	Daily	39.29%	44.05%	0.00%	16.67%	0.00%	100.00%
	2-3 Times a Week	42.13%	46.07%	4.49%	6.18%	1.12%	100.00%
	Once a Week	41.30%	45.65%	6.52%	4.35%	2.17%	100.00%
	2-3 Times a Month	37.89%	48.42%	0.00%	8.42%	5.26%	100.00%
	Once a Month	34.21%	57.89%	2.63%	0.00%	5.26%	100.00%
	Less than Once a Month	52.38%	33.33%	7.14%	4.76%	2.38%	100.00%
	Never	22.22%	77.78%	0.00%	0.00%	0.00%	100.00%
	Total	40.71%	46.47%	3.35%	7.25%	2.23%	100.00%

Satisfaction by Frequency of Use for Subject Searching

		In general, when you do a search in Mirlyn, how satisfied are you with your results?					
		Very Satisfied	Somewhat Satisfied	Neither Satisfied nor Dissatisfied	Somewhat Dissatisfied	Very Dissatisfied	Total
How often do you use Mirlyn to search for items about a particular topic or subject? (Example:...	Daily	32.65%	40.82%	4.08%	22.45%	0.00%	100.00%
	2-3 Times a Week	42.34%	45.05%	5.41%	4.50%	2.70%	100.00%
	Once a Week	44.71%	47.06%	2.35%	3.53%	2.35%	100.00%
	2-3 Times a Month	41.90%	52.38%	0.95%	4.76%	0.00%	100.00%
	Once a Month	47.54%	39.34%	3.28%	8.20%	1.64%	100.00%
	Less than Once a Month	38.46%	46.15%	3.85%	7.69%	3.85%	100.00%
	Never	24.39%	53.66%	4.88%	9.76%	7.32%	100.00%
	Total	40.38%	46.60%	3.40%	7.36%	2.26%	100.00%