2012-09-12

Interviews with Experienced Users

Mishra, Sonali; Alvarez, Barbara; Desai, Shevon; Hagedorn, Kat;

Chapman, Suzanne; Barta, Caitlin

https://hdl.handle.net/2027.42/106784

http://creativecommons.org/licenses/by-nc-sa/3.0/us/

Downloaded from Deep Blue, University of Michigan's institutional repository

Interviews with Experienced Users Library Website – Winter-Summer 2012

Usability Group: Sonali Mishra, Barbara Alvarez, Shevon

AUTHOR(S) Desai, Kat Hagedorn, Suzanne Chapman (chair)

Project intern: Caitlin Barta

SHORT DESCRIPTION

Findings from interviews with graduates and undergraduates experienced in using the library website for research.

REPORT INFO

Report date: 9/12/2012

Online location: www.lib.umich.edu/usability-library/usability-

report/interviews-experienced-users

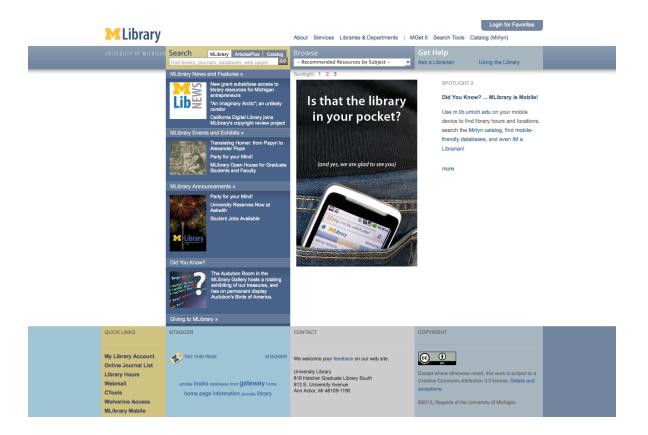


Table of Contents

Introduction	1
Methods	1
Research Methods	1
Recruitment	1
Participants	2
Interviews	3
Analysis Methods	3
Part 1 - Group post-it note exercise	3
Part 2 - Individual transcript analysis	4
Part 3 - Modeling the research process	5
Findings	6
I. Searching	6
A. Eight participants expressed that they value discipline-specific databases who	en
searching for articles	6
B. Ten participants expressed value for "broad" (interdisciplinary) search tools	like Google
Scholar, ArticlesPlus, WorldCat, and the MLibrary multisearch	7
C. Four participants mentioned using facets to narrow their search	8
II. Browsing	9
A. Four participants valued the features that allow them to more easily browse	MLibrary
resources to find individual items	9
B. Two participants expressed value for the Browse tool on the library website	to find
resources	10
III. Access to Resources and Items	11
A. Seven participants expressed that they value or desire shorter routes to freq	uently used
databases or journals	11
B. Nine participants expressed value or need for document access services like	MGet It, Get
This, ILL, and 7FAST	12
C. Two participants used Favorites as shortcuts to Mirlyn items	13
D. Four participants expressed a value for visiting the open stacks	14
E. Four participants explicitly valued our large collection	15
F. Nine participants expressed a value for librarian and staff assistance	15
IV. Citation Management	16
A. Four participants mentioned devoting time and energy towards citation man	agement16

V. Other Findings	16
A. Two participants desired longer rental periods at Askwith	16
B. Magic Button responses	17
Discussion	17
General Themes and Next Steps	17
General Themes	17
Next Steps	18
Benefits of the Interview Format	18
Limitations and Lessons Learned	19
Limitations on the study	19
Lessons Learned	19
Appendix A - Screening Survey and Participant Invitation Email	20
Screening Survey	20
Participant Invitation Email	21
Appendix B - Summary Table of Participants and their Survey Responses	22
Appendix C – Setup Documents and Interview Protocol	24
Setup Instructions	24
Consent Form	26
Interview Protocol	27
Appendix D - Services Mentioned by Participants	29
Appendix E - Screenshots of library services	30
Library Homepage and search results	30
Mirlyn Homepage and search results (highlight link to favorites)	31
Mirlyn Home	31
Mirlyn Search Results	32
MGet It through ArticlesPlus (series of screenshots)	33
MGet It in ArticlesPlus results	33
Full Text Article Successfully Retrieved through MGet It	33
Citation Only Article through MGet It	34
MGet It - Export Citation expanded	34
MGet It - Request Delivery	35
Get This	36
Get This button in Mirlyn record	36
Get This main screen	36
LibX Toolbar in Firefox	37

Introduction

In the winter of 2012, the Usability Group launched a project to study how users interact with the library website and what online services they value. This study focused on experienced users (upper level undergraduates and graduate students) who have already spent a great deal of time and energy conducting their own research and navigating the often-complex library research environment. Through this project, we aimed to answer the following questions:

- What resources do experienced users value? Were they easily discovered? Are they easy to return to as needed?
- What resources are experienced users still missing or struggling with? How can we help them utilize them more efficiently in the future?

Our assumption with taking this approach was that if an experienced user struggles to accomplish a task or encounters a roadblock, a novice user would struggle equally as much, if not more. And if an experienced user values a certain resource, then this is likely something a more novice user would appreciate using as well.

The insights gained through this process will guide future design decisions to improve MLibrary public web interfaces. A possible follow-up to this study would be to conduct a series of usability tests with novice users with tasks based primarily on the resources cited by the experienced users as valuable.¹

Methods

Research Methods

Recruitment

Subject specialist librarians distributed a screening survey created by members of the Usability Group. The screening survey asked respondents for their status, affiliation, area of research, and a self-report of how comfortable they were with the library website and what they used it for (see Appendix A for full screening survey). The screening survey was initially opened on January 9th, 2012, and closed on February 20th, 2012. Usability Group members selected ten

¹ The inherent value test, as described by Jared Spool, might be a good model for following up on this study: http://www.uie.com/articles/inherent_value_testing/

participants, undergraduates and graduate students from different disciplines, and invited them to be interviewed in exchange for \$25 Visa gift cards.

The User Experience Department intern, Caitlin Barta, analyzed the responses and compiled a list of "experienced" users -- that is, respondents who rated themselves as comfortable with the site and reported using several specific services. After her initial report on the survey responses from different disciplines, two members of the Usability Group, Shevon Desai and Barbara Alvarez, created a report to share with subject selectors (http://www.lib.umich.edu/usability-library/usability-report/interviews-experienced-users-screening-survey).

Participants

Our participant group was made up of 7 graduate students and 3 upper class undergraduates with the following areas of study: Chemical Engineering, Mechanical Engineering, Aerospace Engineering, Computer Science, Communication Studies, Economics/Public Policy, Anthropology, Urban Planning/Natural Resources and the Environment, and Public Health. All participants reported having been at UM for at least 2 years.

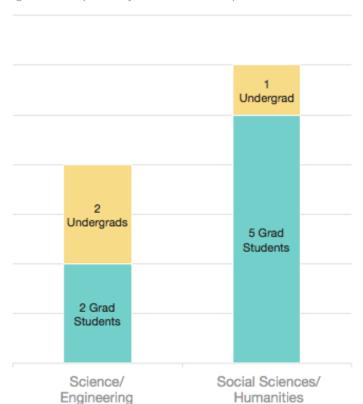


Fig. 1. Participants by status and discipline

Participants reported in the screening survey that they use the site for a range of tasks, including finding DVDs in Askwith, accessing databases to search for articles, searching Articles*Plus*, renewing their books online, exporting citations, and placing ILL and 7FAST requests. See Appendix B for a summary table of participants' information and their survey responses.

Interviews

In order to hear what users had to say about library services in their own words, with minimal prompting, we decided to conduct interviews instead of a more task-based study like a usability test.

Each interview was conducted by two members of the Usability Group, a moderator and a notetaker. In each interview, the participant was asked to walk the interviewers through their research process and demonstrate how they used different online services. They were then asked which services they valued most and what services they would wish for if they had a 'magic button' for the library website. See Appendix C for the full interview protocol, along with setup documents for interviewers.

The sessions were recorded with a video recorder pointed at the participant's screen and an audio recorder as backup in case the video recording failed. Each session was transcribed by an intern or a Usability Group member.

Analysis Methods

Part 1 - Group post-it note exercise

The first step of our analysis was to see what patterns emerged across participants. To do this, we conducted a post-it note exercise in which valued services, roadblocks, and end goals were extracted from each transcript.

- Goals: What was the participant trying to achieve?
- **Valued Services**: What services did the participant value most? What services were most useful to them in their work, whether explicitly acknowledged or not?
- Roadblocks: What got in the participant's way?
- General comments: Did the participant make any interesting observations or suggestions during the session?



Our initial post-it note session; photo courtesy of Melissa Dettloff

During a two-hour session, members of the Usability Group combed two transcripts each to create individual post-it notes about participants' goals, valued services, roadblocks, and other significant comments. The notes were posted on a wall and then arranged by those categories. Notes relating to similar issues were then clustered within each category, for example, notes about citation management were grouped together, as were notes about convenient online access, etc. When all notes had been arranged, group members discussed and revised their organization to paint a picture of what online library services participants valued and what hurdles they encountered in using those services. The notes were transcribed in a spreadsheet.

Part 2 - Individual transcript analysis

Interview transcripts are a very rich source of data, and after our post-it note exercise we felt there was more to be learned from them. Drawing from Kuniavsky (2003)², one group member enriched our analysis by combing the transcripts for participants' goals, mental models, tools, terminologies, methods, values, and roadblocks.

- Goals: what were participants trying to accomplish?
 In this case our definition of 'goals' was a little broader, encompassing not just their immediate goals in visiting the site, but also their larger goals in interacting with the website. For example, this list of goals included one participant's desire to make her students see the value of library services as well as perform her own research.
- Mental models: How do they picture the organization of library systems?
 Here we were interested in participants' conceptual model of the site. For instance, did participants know the difference between the website and Mirlyn? 7FAST and ILL?
 MGet it and Get This?

² Kuniavsky, M. (2003). Observing the user experience: A practitioner's guide to user research. San Francisco, CA: Morgan Kaufmann Publishers.

- Tools: What services and programs do they use to accomplish their goals?
 These tools included not just the most valuable services, but all of them, including non-library tools like citation management systems and software on their own personal computers.
- Terminology: What words do they use to describe their work?
 Here we were interested in whether participants used system terminology to describe what they were doing, or if they systematically used other language that we should consider incorporating.
- Methods: What techniques do they use to accomplish their goals?
 'Methods' in this case included anything from 'following tips from their professor' to 'clicking the 'Export Citations' link from the MGet It screen to export their citations to Mendeley'. We were interested in the specifics of how participants interacted with the site.
- Values: What qualities and services are important to them?
 We interpreted values more broadly here. In addition to valued library services, we also included more abstract values like 'speed' and 'convenience'. By doing this, we hoped to gain insight into why certain services were valued.
- Roadblocks: What gets in the way?
 As before, we wanted to get a picture of what obstacles participants encountered in trying to achieve their goals. In this case, just as we were looking at services outside of the library, so we were also interested in obstacles outside of the library.

Part 3 - Modeling the research process

We also wanted to see how all these individual interactions fit into participants' larger research process. In order to do this, we adapted an exercise from Indi Young's book *Mental Models* to model participants' overall research process. One group member combed the transcripts to isolate individual tasks performed by participants as part of their process, and wrote a post-it note for each task. The post-it notes were then clustered into groups, similarly to the initial post-it note exercise, except this time the organization was created from the ground up rather than having categories imposed on it. Each post-it note cluster was given a label describing the activity, and each cluster was then grouped into a larger category. The categories together formed a model describing the research process of our participants.

Findings

Participants interacted with library services in different phases of the research process, from choosing where to work in the first place to managing citations of papers they had selected.

Overall, participants valued services that helped them conduct their work with speed, convenience, and comprehensiveness. However, participants also encountered a number of obstacles in using library resources. Many valuable services were not linked from the home page and were not easily discoverable in the current interface. At other times, the names or labels of services obscured their purpose. Our findings suggested a number of areas for improvement to the website and catalog. See Appendix D for a table of which participants mentioned using which services.

I. Searching

A. Eight participants expressed that they value discipline-specific databases when searching for articles

Eight participants made extensive use of subject-specific databases, for a variety of reasons.

Four participants stated explicitly when and why they preferred subject databases:

- P8 made a point of searching EconLit after Google Scholar and JSTOR so that she could be sure of searching all the relevant economics articles from the last few years.
- P9 used subject-specific databases when she didn't know what keywords to use because the database's subject-focused scope helped her find the most relevant results within her discipline.
- P4 preferred databases to Google Scholar because in Google Scholar, "when you click...anything could come up." She preferred ISI Web of Science for its consistent availability of abstracts.
- P10 said she uses databases when she needs scholarly information for a course or when she needs specific facts.

Three participants expressed that subject-specific databases were difficult to find on the website:

- P2 said explicitly that it was "really difficult to find [databases] just from the MLibrary homepage". She also believed that a subject list of databases no longer existed, despite the fact that she had used it before, and described having to refer to a step-bystep guide each time she wanted to access a research guide for her class.
- P5 said he would not have found a music database he needed if his teacher had not physically shown him how to reach it through the music library website.

• P10 asked if there was a topic-based list of databases on the site and complained that relevant databases often did not turn up in her library website or Mirlyn searches

Interestingly, knowing which databases to search seemed to be a matter of academic reputation for two of our participants. P9 felt that researchers should know the main sources in their field, commenting sternly, "if you don't [know the major databases] you need to inform yourself." P7 spoke intensely about her anxiety over whether she was searching in the right places and the social hazards in asking colleagues for advice, recounting her experiences "feeling stupid ... [asking other grad students] 'What do we ... where do you look? What do you read?' ... they would be like, 'You don't know?!'" In her experience, knowledge of where to search was "so taken for granted that it doesn't need explicating".

Recommendations:

- Make links to databases more explicit from the homepage
- Consider directing people to specific databases at different points in the search process - Currently, Articles Plus sometimes suggests particular databases based on what the user has searched. We should explore expanding this function both within Articles Plus and outside it.
- Consider expanding database metadata to include more keywords about what it
 includes Currently, a search for "anthropology database" on the library website does
 not turn up AnthroPlus. Expanding the metadata of each database could help users
 who conduct such searches find the resources they need. One possibility for monitoring
 database metadata would be to encourage subject specialist librarians to make sure
 the metadata for databases in their subject area is complete.

B. Ten participants expressed value for "broad" (interdisciplinary) search tools like Google Scholar, Articles Plus, World Cat, and the MLibrary multisearch

All participants expressed appreciation for some broad search tool which would cover a greater span of resources than more targeted databases. Nine participants mentioned using Google Scholar, three mentioned using WorldCat, three mentioned using Articles*Plus*, and eight mentioned using the MLibrary multisearch. These broad search tools were for the most part used in conjunction with subject-specific databases: only two participants said they generally used Google Scholar as their only source.

Participants said the following about **library-supported** broad search tools:

• P7 started with Articles*Plus* because "there's so many databases, and [she] might not know that they're doing special things." P7 also praised MLibrary multisearch as a discovery tool that could turn up unexpected sources

- P3 used ArticlesPlus to find a specific article without having to choose a database to look in
- P9 used Articles*Plus* when she "couldn't really find anything anywhere" on her topic and was able to put together a "relatively impressive list of references on the topic that no one's studied"
- P2 used WorldCat over Mirlyn because she found it more "cohesive" and because it contained books from both the University of Michigan and elsewhere

Some participants encountered obstacles in using these resources. For example:

- P5, P6, P8, and P10 did not know what ArticlesPlus was or had never tried it
- P5 was frustrated with search result rankings on the MLibrary multisearch
- P4 had trouble accessing abstracts in ArticlesPlus

Broad-based search tools were a major theme in our study, as all participants indicated use of at least one broad-based tool. We should devote more thought to finding ways to remove the obstacles participants encountered when using them.

Recommendations:

- Consider ways to make ArticlesPlus more convenient from the homepage Minimally, this might involve giving ArticlesPlus more exposure, perhaps by making the
 tab more prominent. Another option would be to incorporate ArticlesPlus into the
 MLibrary multisearch. As this is potentially a large discussion, more thought must be
 devoted to the matter before specific design decisions can be made.
- Make abstracts more easily accessible in Articles*Plus* This may augment the utility of Articles*Plus* for users who depend on abstracts to find relevant articles.
- Explore ways to improve the relevance ranking in the MLibrary multisearch

C. Four participants mentioned using facets to narrow their search

In our study, four participants described using at least one kind of facet and seemed to consider them valuable tools.

The following participants mentioned using facets during their interview sessions:

- P10 mentioned using facets to narrow her Mirlyn result sets by language, format, or year.
- P7 evangelizes to her students about the "panels where you just click a couple buttons and you have restructured a whole search..."
- P3 mentioned using Mirlyn facets to narrow his results by subject, format, date, language, or building.
- P2 mentioned using facets in Mirlyn when not doing an advanced search

One participant, P4, explained that she didn't use subject facets on any site because "the subjects either don't match what [she's] looking for" or her topic is interdisciplinary and crosses over more than one field. It is unclear if subject facets are unsuccessful for her because the system terminology does not match hers, because the facets draw from too large a result pool and thus are not relevant, or for some other reason. Note that P4 said she did use format facets on Amazon. Another participant, P9, did not use subject headings in the facets, but did click subject headings from individual articles in AnthroPlus to find additional related items.

Recommendations:

- Explore ways to help users discover more relevant resources, perhaps by better utilizing subject headings
- Explore how to improve visibility and usefulness of facets

II. Browsing

A. Four participants valued the features that allow them to more easily browse MLibrary resources to find individual items

Four participants mentioned using MLibrary services to browse our collection. Participants who mentioned using MLibrary services said they did the following:

- P1 conducted a subject search in Mirlyn and the MLibrary multisearch in order to browse holdings on that topic
- P3 described using the Askwith DVD lists to select a DVD for leisure viewing because he "often [doesn't] know what [he's] looking for when [he goes] to pick up a movie." P1 and P5 also used the Askwith DVD lists.
- P7 mentioned browsing shelves near the books she wanted to find other interesting items or new areas for research. P4 also mentioned browsing nearby shelves.

No participants mentioned using other browsing tools, like the Shapiro Browsing Collection or the new items tool.

On the other hand, one participant, P4, didn't think that "a giant academic library like this is helpful for browsing" and did her browsing on sites like Amazon instead, then looked up the item she wanted in Mirlyn. Browsing and sampling were a significant part of P4's research process: when browsing through search results on ISI Web of Science, for instance, she depended on skimming article abstracts to select articles. She used this process in selecting listening materials too, browsing for music on Naxos Music library and sampling it to determine whether she wanted to listen to it or even buy it.

Despite the importance of browsing to her process, however, P4 did not mention using library services that support browsing, like the Shapiro Browsing Collection, and did not mention searching Mirlyn with the intent of browsing. She also did not mention using the LibX toolbar, which would allow her to search Mirlyn for books directly from her browser from any page on the internet, like Amazon. P4's dependence on external sites like Amazon and the Naxos Music Library for browsing may be due to the fact that these sites provide metadata that we do not, like opportunities to sample the book or music in question. Amazon further provides reader reviews, publisher summaries, and links to other related items, which are not available in Mirlyn.

Recommendations:

- Promote the LibX toolbar to support users who browse elsewhere
- Give more online exposure to existing browsing services like the Shapiro Browsing Collection and the Askwith DVD recommendation lists
- Explore offering publisher summaries where available
- Explore possibilities for a book recommender system
- Explore options for augmenting available metadata

B. Two participants expressed value for the Browse tool on the library website to find resources

P2 and P7 mentioned using the Browse tool on the library website to find resources in unfamiliar subject areas. Both participants seemed to value it:

- P2 used the browse tool to find databases on biology (her main research area is anthropology).
- P7 said she used the browse tool to find databases on topics she's not familiar with, and showed her students how to use it as well



Browse tool where it appears in the library website header

Although the browse tool was valuable for the two participants who used it, it was mentioned by only two participants. However, the high value for subject-specific databases and the positive response of participants who were shown the Browse Tool at the end of their interview sessions (P5, P10) suggest that this tool could be valuable for a wider audience than it currently reaches.

Recommendations:

 Explore ways to promote the browse tool and make it more visible on the library website

III. Access to Resources and Items

A. Seven participants expressed that they value or desire shorter routes to frequently used databases or journals

Participants did their research from a variety of locations, from their office at U-M to international locations like India. Since much of participants' research was conducted on Google Scholar or subscription databases, logging in to the library proxy was a required step if they were working from a non-university IP. However, linking to the database from the library website seemed unpopular and/or troublesome among several of our participants due to the many steps involved in searching, finding, and linking to the database. Some of the participants discovered shortcut techniques that they valued for the convenience they offered.

The following participants mentioned shortcuts to databases as something they value or desire:

- P4 memorized the URL for the proxy and typed it in each time.
- P8 set her Zotero preferences to go directly to the proxy and accessed articles that way. Her desire to avoid the library website was so strong that she made a point of doing her literature reviews from her office until she developed a workaround to access the proxy without going through the library website.
- P3 and P9 bookmarked individual databases in their browsers.
- P6 described forgetting about the proxy entirely, going directly to PubMed and then having to go back to the Taubman Library page to access it through the proxy.
- P1 said his magic button would grant him access to the journals he wanted without having to log in through a third party site (i.e. the library website).
- P9 enjoyed the proxy bookmarklet, which enabled her to reload pages through the proxy with a click of her mouse.
- P7 seemed to value the libX browser toolbar to search for books and articles in MLibrary from any site. She enthusiastically described hearing about it from a fellow graduate student who "'love[d] it'".

Recommendations:

Although we cannot eliminate the necessity of login, there may be ways to make logging in to the proxy less cumbersome for users. Possibilities include:

 Make it more clear that the current "Stable URL" link in Search Tools can be used to bookmark that database in a browser.

- Encourage use of the Favorites functionality and provide more explicit & faster routes to your Favorites list.
- Reduce the number of times people are asked to log in -- if the proxy login never expired, users would only have to log in to the proxy server more than once if they changed browsers or cleared out their cookies.
- Promote the bookmarklet and toolbar -- although these services currently have low usage, our findings suggest they might be useful for a much greater number of users.
 We should also investigate whether we can support these tools for a greater variety of browsers. Note that these tools could prove especially useful for undergraduates and other users who have no offices on campus and thus are more likely to be accessing library resources from non-university IPs.

B. Nine participants expressed value or need for document access services like MGet It, Get This, ILL, and 7FAST

Participants conducted much of their research using databases or Google Scholar, and valued the easy access to articles provided by MGet It (MLibrary's article linker that also links to ILL and 7FAST services), ILL (Interlibrary Loan), and 7FAST (MLibrary's free document delivery service for Graduate students and Faculty)³ from both library and third-party interfaces. 7FAST was also useful for participants who worked in offices distant from the library.

The following participants mentioned their use of MGet It and Document Delivery Services:

- P1, P3, P4, P8, and P9 mentioned using the 'Availability at UMichigan' link in Google Scholar
- P1, P2, P3, P4, P7, P8, and P9 used ILL to obtain documents not available in our holdings
- P6, P7, P8, and P9 used 7FAST to have articles or books sent to them. P8 called the service "magic"
- P9 placed 7FAST/ILL requests for articles she wanted as a shortcut for finding and downloading them herself
- P1, P2, P3, P4, P6, P7, and P9 all mentioned using MGet It to access documents
- P7 also evangelized on the easy of obtaining articles through MGet It to her students.

Participants also described some of the obstacles they encountered when using MGet It and Document Delivery Services:

• P1, P3, and P4 did not understand what 7FAST was for. P4's comments were especially striking: she did not understand why she would want 7FAST even though she had herself said earlier that she wanted "an easier way to just go to the library, get the journal you want, and scan the pages out and send it to yourself by email."

³ 7FAST is free for staff as of July 1, 2012 (after the study was conducted). ILL is free for all categories of users with rare exceptions.

- P6 told us that she hadn't realized she was eligible to use MGet It until near the end of her first year.
- P6 did not know that MGet It could be linked through Google Scholar by accessing Google Scholar through the library website or proxy.
- P4 found MGet It "extremely confusing," complaining that she "[had] to go through 8 different screens of MGet It to finally get to what [she was] looking for."
- P8 requested items through 7FAST from Mirlyn by clicking the ILL link at the top of the screen and manually entering information, missing the more efficient 'Get This' route to 7FAST which would autofill the item information for her.
- P10 did not seem to understand ILL.

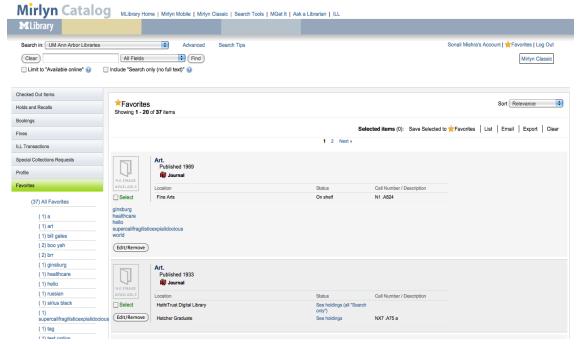
The 'Get This' feature offered through the Mirlyn catalog (provides delivery from one library to another, option to recall a checked out book, and 7FAST delivery service options) was also popular among participants. P1, P2, P4, P6, P8, and P10 mentioned using Get This during their interview sessions. Although there were times when Get This was not fast enough for them, on the whole they commended its speed and convenience. One participant conflated MGet It and Get This. While describing how "wonderful" she found the service, P8 referred to "the MGet It where some poor kid has to go hunt it down and bring it to the front desk." Although this conflation did not prevent her from accomplishing her goals, it does demonstrate that even experienced users selected for having good command of system terminology cannot be assumed to have a complete understanding of system jargon.

Recommendations:

- Simplify the end-user experience for document access services Services like MGet It, Get This, and even Document Delivery Services serve similar purposes for end-users, and could potentially be unified in the interface.
- Clarify the purpose of 7FAST in MLibrary and MGet It interfaces
- Explore ways to streamline the MGet It interface
- Explore ways of exposing 7FAST and ILL requests directly from records in Mirlyn
- Further investigate how to make process of finding and retrieving articles easier so users like P9 don't have to use 7FAST as a workaround to getting what they need.

C. Two participants used Favorites as shortcuts to Mirlyn items

Currently, Mirlyn allows users to select items in the catalog and add them to their 'Favorites' list, which is attached to their account.



Favorites List, also showing persistent 'Favorites' access link under the header [this might just be a placeholder image]

Two participants described using Favorites to mark out books in Mirlyn that they wanted to return to.

- P3 used Favorites as an easy path to reach electronic resources.
- P4 used Favorites to mark out books that were still in processing so that she could check their status later.

The two participants who used Favorites appreciated them as shortcuts, but mentioned that they do not necessarily revisit their Favorites list very often. One interpretation of this usage pattern is that while Favorites are at times a useful shortcut to resources, they are currently too out of the way to be as noticeable and convenient as they could be.

Recommendations:

- Provide more explicit and faster routes to your Favorites list
- Explore making the MGet It functionality within the Favorites interface more explicit to help users connect to hold, recall, and delivery services

D. Four participants expressed a value for visiting the open stacks

Three participants confessed to going out of their way to pick up books from the stacks themselves, whether to experience the library atmosphere or to find new resources or areas for research. One participant who did not use the stacks much herself still liked that she could go into the stacks if she wanted.

The following participants who expressed a value for the open stacks:

- P1 said he liked coming down to Hatcher from North Campus and getting books himself.
- P3 "secretly enjoy[ed] going through the stacks [him]self".
- P7 liked browsing the nearby shelves to find new resources or new openings for research
- P9 found it "really sad" when students at other institutions were not allowed to go into the stacks, though she herself felt too "lazy" to visit the stacks here.

E. Four participants explicitly valued our large collection

While all participants benefited from our large print and online collection, three participants commented explicitly on how the size of the collection impacted them.

- P9 considered library quality as a factor when choosing a graduate program
- P7 cited our collection as one reason she stayed here for both undergraduate and graduate work
- P3 told us that the DVD collections at Askwith and AADL had saved him money on movies

One participant, P4, more indirectly expressed her appreciation for the library's collection and services when she wished for alumni access privileges, saying she was "so sad" that after graduation she would lose access to all our "wonderful things."

Recommendations:

• Inform graduating alumni of their remaining library privileges – This is already done to some extent at other graduation activities, but it may be useful to spotlight alumni access privileges near graduation time

F. Nine participants expressed a value for librarian and staff assistance

Participants benefited from librarian and staff assistance when finding articles, managing citations, and printing posters. P7 went so far as to say that "one of the best things that works is having a librarian."

Participants who expressed a value for librarian or staff assistance mentioned the following:

- P7 and P8 mentioned learning about new resources from their subject librarians
- P8 was pleased with staff assistance when printing a poster at the TechDeck and with librarian assistance in legislative research
- P4 and P6 mentioned getting librarian assistance in managing citations

- P6 specifically asked for an additional orientation for her department that would include library training.
- P2, P3, P6, P7, P9 consulted Ask a Librarian for help finding articles
- P10 said she went to the reference desk for directions to particular sections of the library
- P5 mentioned going to the reference desk for help finding particular items and to check out calculators

One participant, P4, expressed confusion about the reference librarian system, saying she "[didn't] really know where the right librarians [were] to ask random questions."

Recommendations:

- Give more exposure to the subject specialist list online
- Continue to promote Ask a Librarian services and other outreach efforts

IV. Citation Management

A. Four participants mentioned devoting time and energy towards citation management

Participants with research-heavy work invested a large chunk of time in citation management, frequently exploring new programs and discussing options with their peers in the hopes of finding cost-effective ways to make their research and citation management more efficient. P4, P6, P8, and P9 participants mentioned using programs like Zotero and Mendeley; P6 and P9 further mentioned using the 'Export Citation' feature from Mirlyn or MGet It.

The two engineering undergraduates, P5 and P10, copied and pasted links to their resources instead of using citation management programs. Although P10 seemed dissatisfied with this technique and wished for a tool that would generate citations for her in multiple formats, she did not use library resources like RefWorks which could potentially help her.

Recommendations:

- Increase awareness of library-supported citation management tools like 'Export citation' links and RefWorks
- Explore ways to continue/augment our support of citation management needs

V. Other Findings

A. Two participants desired longer rental periods at Askwith

P3 and P4 requested longer rental periods at Askwith, disliking how the short rental periods forced them to plan in advance what DVDs to watch when.

B. Magic Button responses

Towards the end of their interviews, participants were asked to draw a circle on a piece of paper and imagine it was a magic button⁴. When pressed, that button would do whatever they wanted it to do with regards to library services—whatever would help them most in their work.

Participants gave the following responses to this question:

- Direct access to journals, without having to log in through the library website (P1)
- Direct link to databases or an easier way to search (P2)
- The catalog would pop up (P3)
- Alumni access privileges (P4)
- Faster delivery of items to the library of your choice (P4)
- Finding exactly what you need from one search (P5)
- Finding one spot that has all the technical resources and how-tos he needs (P5)
- Linked citations within articles (P6)
- An easier way to generate citations (P6)
- Something that tells her all the places she should look for sources on her topics (P7)
- Wireless access from anywhere (P8)
- The ability to log in only once to have access to all Michigan holdings (P8)
- "It searches every database in the world for exactly what I am looking for and exports all of the relevant references into Mendeley and copies it into a Word document and prints it out for me. And it 7FASTs and ILLs all of them at once." (P9)
- Automatic generation of citations in a variety of formats (P10)

Discussion

General Themes and Next Steps

General Themes

Our findings give us a holistic view of experienced users' goals and how they interact with the library website at multiple stages of the research process, from choosing a place to work to gathering documents and managing citations. In general, participants valued services that let them do their work conveniently, regardless of their location, and that made their searching

⁴ Question inspired by <u>Nancy Fried Foster</u>, Director of Anthropological Research at the University of Rochester Libraries.

more comprehensive or efficient. Participants also valued services that supported them when they did not have a clear idea of what they were looking for or had trouble accessing the items they wanted. In using library services, participants also encountered a number of roadblocks, including lack of discoverability of resources, uncertainty as to the nature and audience of library services, and inefficiency of process that might be due to their own methods or to suboptimal interface design.

Next Steps

Design

Our findings helped us identify several areas of improvement on the site and will inform design decisions as the website develops. Recommendations for improving the site include:

- Creating more shortcuts We recommend exploring possibilities for making site
 access and navigation more efficient. Options include streamlining proxy login,
 promoting the proxy bookmarklet and LibX toolbar, and providing explicit links to
 databases and Favorites from the homepage.
- Improving the discoverability of important resources We recommend exploring
 ways to make valuable resources like subject-specific databases, browsing aids, and
 other services more easily discovered on the website.
- Simplifying the end-user experience for document access services We recommend exploring possibilities for combining services like MGet It, ILL, 7FAST, and MGet It on the front end so that users can choose how they access items without needing to know the names of specific services.
- Continuing and augmenting our citation management services We recommend
 devoting more thought to increasing awareness of existing citation management
 services and exploring additional ways to make citation management easier for our
 users.

Research

Since this study was focused on experienced users, we would like to incorporate it into a larger study loosely inspired by the inherent value test. This would involve conducting another series of interviews, this time with novice users. This extended study would help us learn whether novice users value the same services as experienced users, what roadblocks they encounter, and how we can better meet their needs.

Benefits of the Interview Format

The open format of the interviews gave us more insight into participants' emotional reactions to library services than would have been possible in a usability study. As participants walked us through their research process, they revealed both their frustration when things did not go as planned and their warm regard for library services that met their needs. For example, participants described services they liked as "magic" (P8) and confessed to "secretly enjoy[ing]

going through the stacks" (P3). The interview format also gave participants the opportunity to articulate what they wished the library *did* offer, like alumni access privileges and a more streamlined log in.

Limitations and Lessons Learned

Limitations on the study

Throughout this report, we have given the numbers of participants who *mentioned* having used particular services or demonstrated using them in the interview session. For any service that did not come up, however, it was difficult to tell whether it did not come up because the participant did not use that service, or because the participant simply did not talk about it during the interview.

Our study was also limited by our participants. Ten participants gave us a good breadth of coverage over several different disciplines and statuses; however, we were not able to cover other possible segments, like medical students, staff, or even faculty. We are also unable to say whether a greater number of participants would have revealed a broader variety within the populations we studied.

Lessons Learned

This study has yielded very rich data about experienced users of our site. If the study is repeated for novice researchers, some time could be saved by combining phases 1 and 3 of the analysis into a single exercise. This exercise should ideally be carried out with a group and should focus on organization from the ground up, as with phase 3. Group participation will likely save time and provide insights from different departments, perhaps yielding an even better result.

Appendix A - Screening Survey and Participant Invitation Email

Screening Survey

The MLibrary Usability Group is looking for undergraduate & graduate students who are willing to be interviewed about their use of the library website.

If you are interested in being interviewed, please answer the questions below. If you are selected to participate in the study, you will receive an email within the next few days proposing a date and time for a meeting. Students who are interviewed will receive a \$25 Amazon gift card for their time.

NOTE: Any personally identifiable information collected will be kept confidential and used only to select participants for the study. It will not be shared with anyone not affiliated with the study.

Q1 What is your UM uniqname?

(free text response)

Q2 What is your student status? (graduate or undergraduate)

Options: undergraduate student, graduate student

Q3 How many years have you been at UM?

(free text response)

Q4 What is your major or area of study?

(free text response)

Q5 How comfortable are you using the library website?

(free text response)

Q6 What do you use the library website for?

(free text response)

Participant Invitation Email

Hello!

Thank you for completing our screening survey on library website usage earlier this year. If you are still interested, we would like to take the next step and interview you in person about how you use the library website. In exchange you would receive a \$25 Visa gift card.

A brief reminder that the focus of our study is to learn how experienced users, like yourself, use the library website and what you value most about it.

The interview would take **about one hour** and would ideally be **conducted in your primary workspace** -- we will come to you. This might be an office, your home, a space in the library -- wherever it is that you do most of your work. (If you do your work on a laptop in a variety of locations, we can reserve a space within the library in which to do the interview, if that is more convenient.)

There will be both an audio and video recording of the interview; these recordings will not be shared outside of our research group, and all the information you provide will be confidential.

Please let us know if you would like to go ahead with the interview, and we can arrange the date and time. Thanks, and we look forward to hearing from you!

Best,

[librarian name], on behalf of the MLibrary Usability Group

Appendix B - Summary Table of Participants and their Survey Responses

Full survey responses are not given to ensure participants' anonymity.

Participant Description	How comfortable are you using the library website?*	What do you use the library website for?*
Undergraduate in Social Sciences	Very comfortable	I do a lot of research [] (mainly I use the databases and journals the library has). I also use it to do research for my classes, specifically using the class websites that were created by librarians as well as the search tools on the site. I also use it to look for DVDs in Askwith.
Graduate student in Engineering (phD)	I can manage to search and find books I want. I know how to get books sent to the Duderstadt from other libraries. One time I figured out how to get access to old magazine articles; my plan was to circumvent the need for a subscription [] This was even the main reason I bought a netbook. I got lazy about it though, and I don't exactly remember how to do this now.	By far, the most useful thing I use the library website for is getting articles through interlibrary loan. I think I've done this ~10-15 times since starting at U of M. Of course, I also use the library subscriptions to various academic [] journals as part of my research, but I don't directly use the website to do this (google scholar or pubmed or webofscience are my go to sites for that).
Graduate student in Urban Planning (master's)	Very comfortable	Searching for books and other materials through the catalog. / Accessing search databases such as ISI Web of Knowledge. / Requesting ILLs of papers I can't access. / [] / Looking up library hours.
Undergraduate in Computer Science	Very comfortable.	As an engineer, I'll use it for any research in my humanities/social science classes.

Graduate student in Physics (phD)	Very	Several times a month: / Search catalog for books / Articles Plus search / Manage Mirlyn Account (checked out items, favorites, etc) / / Less frequently: / "Get This" / Ask questions / Access university-licensed materials from off campus / Look up libraries, hours, etc. / Get movie recommendations from AskWith /
Graduate student in Social Sciences (phD)	Far more comfortable as a grad student than I was as an undergrad. There are still some things I don't know, but now not only do I use it to do my own research, but I teach a class [], but I also feel like I know where to go and who to ask when I run into a task that proves difficult or challenging.	Searching databases / Articles+ / aggregators for research materials / 7-Fast & ILL / Mirlyn searching / Managing my checked out items / AskALibrarian when I am away from campus and stumped on how to find something / Check out workshops and handouts on things like InDesign, Dreamweaver / Finding appropriate librarians to contact with specific research concerns or areas of study / Etc.
Undergraduate student in Engineering	Comfortable. Not an expert, but certainly able to use all the functions I need.	Accessing online databases and books, researching books I need, placing holds.
Graduate student in Social Sciences (phD)	pretty comfortable	export references to endnote, find books and articles, interlibrary loan, 7-fast, library proxy to get articles i find while surfing other websites (eg google), check library hours, have used the chat with a librarian in the past for quick questions, recall books, i'm sure other stuff i'm not remembering off the top of my head.
Graduate student in Social Sciences (phD)	Very comfortable - I use it frequently	Requesting books for ILL or 7-fast delivery; accessing online databases [], renewing books, finding resources for literature reviews
Student in Public Health (master's)	I took me a while before I get comfortable with our library website.	Mostly use MGet it and Catalog(Mirlyn) to find articles, journals, or books. Quite often the "7FAST" service. Sometimes chat with "Ask a Librarian" for help.

^{*}These columns are the participant's own responses. Some parts have been excised to protect confidentiality and have been replaced with "[...]"

Appendix C – Setup Documents and Interview Protocol

Setup Instructions

BEFORE:

Bring:

- camera fully charged
 (charge for 3 hours connected to your computer -- see the manual)
- · digital audio recorder fully charged
- bring gorrilla tripod and full sized
- · copy of participant's survey responses (moderator)
- 2 copies of interview questions
- subject's contact info (in case we can't get in)
- note-taking materials (notetaker)
- consent form
- incentive receipt form

Leave early to account for travel time PLUS 15 minutes or so to make sure you can find the right place in the building.

TO SET UP CAMERA:

- Set up the flip cam on the tripod and turn it on.
- Make sure it's capturing the computer screen. It should be pretty close to the computer screen enough that at least some of it is legible -- but even though it'll still be tiny on the camera
 screen, at that distance it should be pretty clear once you watch the video on film.
- Press the big red button to record.
- Press the big red button to stop recording.
- You can watch the recording on the camera by pressing the play button. You can delete something by clicking the trash button and then following the prompts on screen.
- To retrieve the video later, plug the camera into a USB port on your computer. Go to the DCIM folder. There should be one folder inside that one, called something like 100VID. The video should be in there. Be sure to change the filename so that it has the participant number and the date.

TO START AUDIO RECORDER:

[[I haven't seen the recorder yet]]

ON ARRIVAL:

Moderator does intro and makes chitchat while notetaker sets up camera

AFTER:

- Write up notes
- download files from devices to our individual computers label with date & participant # (we'll later compile & get Caitlin to do transcripts)
- remove video from camera to your desktop & delete from camera (they'll later go on server, password protected)
- recharge camera & audio recorder

Consent Form

(formatting has been slightly altered to fit page)

Usability Evaluation Participant Consent Form

Project: Inherent Value Test, Experienced User Interviews

Project Team: MLibrary Usability Group

Contact: Suzanne Chapman (suzchap@umich.edu | 734-763-0246)

Your participation in this study is completely voluntary. You will receive a \$25 Amazon gift certificate via email on completion of the interview session.

Any information we gather during this study will be kept confidential. We may report and/or publish our findings and results of the study but it will not be associated with your personal information. The session today will be recorded with video, audio, and/or screen capture.

I am at least 18 years of ag by the MLibrary Usability G	e and agree to participate in the study conducted and recorded roup.
	rding technology and understand that the information and research purposes only and my name and image will not be s.
I understand that I can leave	e at any time.
Participant Full Name	
Signature	
Date	UMID

Thank you for your participation!

Interview Protocol

Phase 1 - "Experienced" users

[45 minutes is a good time goal but ok to spill over a little. If it starts to hit 1hr mark we'll need to wrap up or offer to keep chatting if they're enthusiastic]

Introduction

- 1. [Introduce yourself and the note taker & thank them for agreeing to participate]
- 2. [DESCRIBE PURPOSE OF SESSION]:
 - a. Our primary goal for this study is to learn about how experienced users, like yourself, use the library website and what parts of the website you value most. And we're interested in all aspects of the library website anything from finding contact information to conducting research.
 - b. We are not evaluating you or your skills but rather how well our website responds to your needs. We did not design the current site so feel free to be candid!
 - c. [GIVE CONSENT FORM & **EXPLAIN**]
 - d. [GIVE VISA CARD AND HAVE THEM SIGN RECEIPT]

[HAVE PARTICIPANT'S SURVEY RESPONSES HANDY] [START RECORDING AUDIO & VIDEO]

Soooooo - what we're going to do now is ask you a series of questions about how you do your research and ask that you show us each step as you're talking about it.

Main Questions (#2 & #4 are vital! skip #3 & 5 if session starts going long)

- 1. Why don't you start by telling me a little about your work/research.
- 2. Do you have a topic that you currently need to research? (class assignment, or just information you need to find)
 - a. [IF yes] Would you mind showing me how you'd go about searching for it?
 - i. What would you do next? (spend some time encouraging them to go into great detail)
 - ii. Is this typical for how you do your work? (like, do you ever start at Google or Wikipedia?)
 - iii. How is this working for you? [if they haven't volunteered evaluative statements along the way]
 - iv. [ask about specific features (facets, help, favorites)]
 - b. [IF no] Do you remember the last thing you came to the library website for? Could you show me?
 - i. What would you do next? (spend some time encouraging them to go into great detail)
 - ii. Is this typical for how you do your work? (like, do they ever start at Google or Wikipedia?)
 - iii. How is this working for you? [if they haven't volunteered evaluative statements along the way]

- iv. [ask about specific features (facets, help, favorites)]
- 3. [if time] Is there anything else you use the library website for regularly but haven't shown us yet?
 - a. [USE screening survey to prompt if needed, could point to any major tools they haven't mentioned]
- 4. [redirect to website if needed] What tools or parts of the website do you value most or find the most useful? Could you show me?
 - a. why are they important to your work?
 - b. is there anything about them that you would change?
 - c. anything you'd miss if it wasn't there?
- 5. [magic button] If there was some magical resource, service, or tool that would make your research process easier, what might it do?
- 6. Is there anything else you'd like to tell us about?
- 7. [optional instruction moment/follow-up opportunity] While we were talking, it occurred to me that you might find _____ useful... (ask them to pull it up)... is this something that would be useful to you?

Again, thanks so much!

Is it alright if we contact you if we have any quick follow up questions later?

Optional Questions

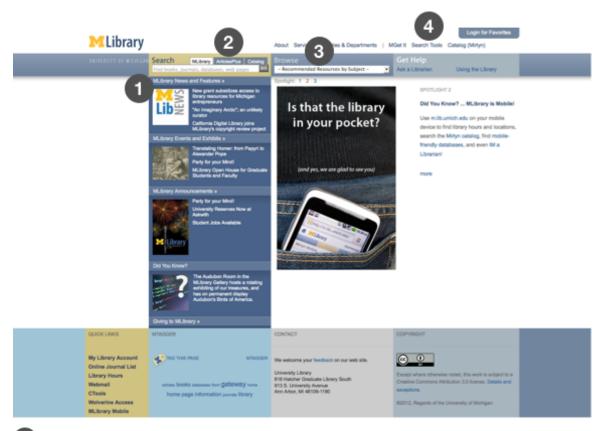
- 9) (if applicable) Is there anything that you could do at your previous institution that you can't do as easily here?
- 1) If they've only shown us Mirlyn, ask them if they've used the MLibrary site (and show them the site if necessary)
- 4) We should check if they use these (maybe by observation instead of asking):
 - 1. do they bookmark?
 - 2. library website multi search (main search box)
 - 3. Ask a Librarian (IM, text, phone)
 - 4. Catalog (Mirlyn)
 - 5. ArticlesPlus
 - 6. SearchTools/Databases
 - 7. Online Journals tool (the one outside search tools)
 - 8. ILL
 - 9. 7Fast
 - 10. MITS
 - 11. KNC (offline but involves software instruction which could be worth asking about)
 - 12. Browse tool on the website
 - 13. Hours/Calendars
 - 14. Online room reservation form
 - 15. Staff directory
 - 16. Mirlyn/Search Tools favorites
 - 17. Deep Blue (we can probably cut this since use is really low)
 - 18. Online Exhibits
 - 19. Droplist from the MLibrary search box

Appendix D - Services Mentioned by Participants

Service	Participants who mentioned using it
LibX toolbar	P7
Proxy bookmarklet	P9
Google Scholar	P1, P3, P4, P5, P6, P7, P8, P9, P10
Subject-specific databases	P2, P3, P4, P6, P7, P8, P9, P10
MLibrary Multisearch	P1, P2, P5, P6, P7, P8, P9, P10
WorldCat	P2, P3, P9
ArticlesPlus	P3, P7, P9
Facets	P2 (subject?), P3 (subject, format, date, language, building), P7 (not specified), P10 (format, language, year)
Askwith DVD lists	P1, P3, P5
Askwith Media Library	P1, P2, P3, P4, P5
'Availability at UMichigan' link in Google Scholar	P1, P3, P4, P8, P9
ILL	P1, P2, P3, P4, P7, P8, P9
7FAST	P6, P7, P8, P9
MGet It	P1, P2, P3, P4, P6, P7, P9
Get This	P1, P2, P4, P6, P8, P10
Favorites	P3, P4
Physical stacks	P1, P3, P7; P9 voiced appreciation
Ask a Libriarian	P2, P3, P4, P5, P6, P7, P8, P9, P10
'Export Citation'	P6, P9
Citation management programs (Zotero, Mendeley)	P4, P6, P8, P9
Mirlyn	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10
Advanced search	P2, P3, P4, P7
Browse tool on the library website	P2, P7

Appendix E - Screenshots of library services

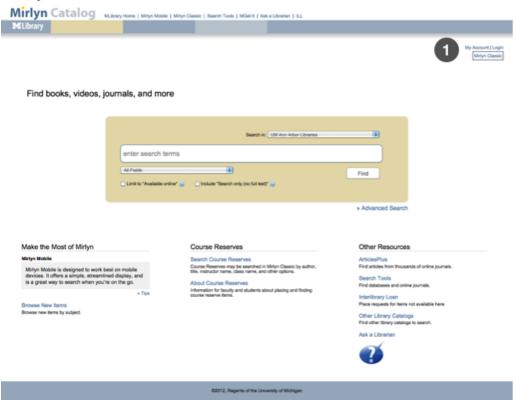
Library Homepage and search results



- MLibrary Multisearch
- ArticlesPlus tab
- Browse tool (to find databases by subject)
- Search Tools link (for databases and online journals)

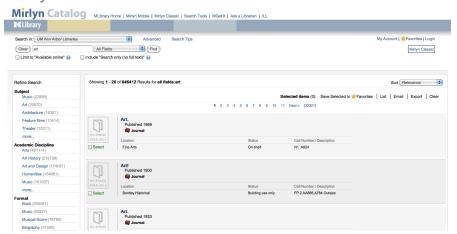
Mirlyn Homepage and search results (highlight link to favorites)

Mirlyn Home



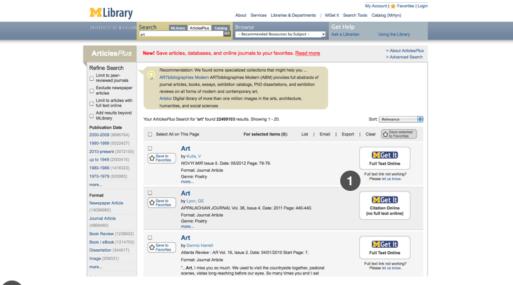
1 Link to Favorites and My Account

Mirlyn Search Results



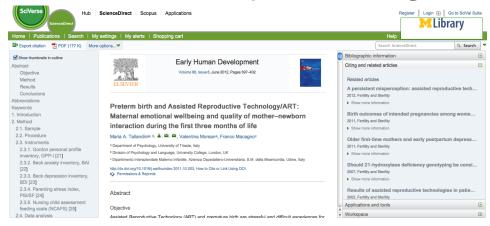
MGet It -- through Articles Plus (series of screenshots)

MGet It in ArticlesPlus results

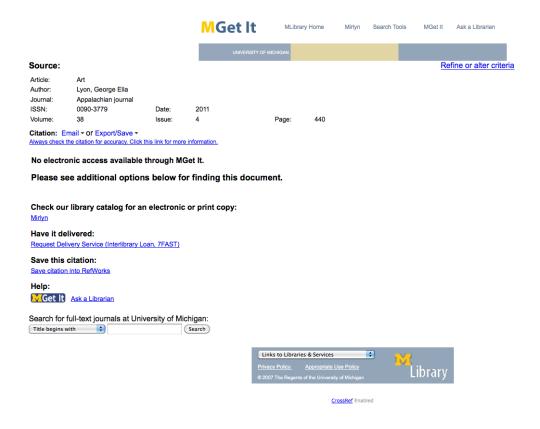


Link to MGet It

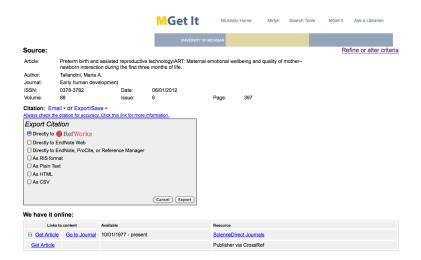
Full Text Article Successfully Retrieved through MGet It



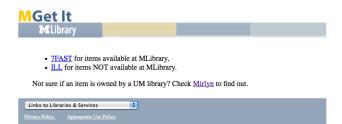
Citation Only Article through MGet It



MGet It - Export Citation expanded

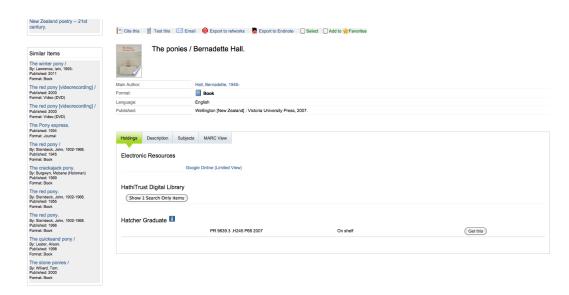


MGet It - Request Delivery



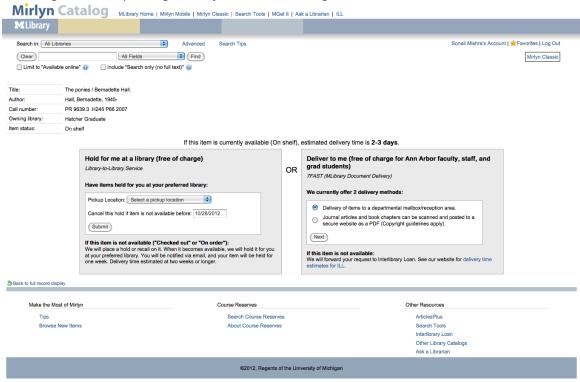
Get This

Get This button in Mirlyn record



Get This main screen

The option on the left is for placing a hold or having the book delivered to a library (Get This); the option on the right is for requesting delivery of the item through 7FAST.



LibX Toolbar in Firefox



The LibX UM dropdown lets you search the following options:

- UM Libraries Home (the MLibrary multisearch)
- Mirlyn Library Catalog
- Online Journals & Newspapers List
- ArticlesPlus
- List of All UM Libraries
- Library Subject Specialists
- Ask a Librarian!
- LibX UM Information

The Search Databases dropdown lets you search the following options:

- Mirlyn
- Online Journals
- ArticlesPlus
- Databases
- Library Web Pages
- Deep Blue
- Google Scholar

It is currently available here: http://www.lib.umich.edu/mlibrary-labs/libx