



User Testing Report

An Analysis of METRO.org

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Executive Summary

This report details the results from a user test performed on the Metropolitan New York Library Council website, and recommendations for improving the site based on those results. METRO is an organization that serves a large population of students and professionals in the library and information science field in the New York City metropolitan region. METRO's website must be easy to navigate, so that both members familiar with the organization and non-members new to the site can easily find the information they seek.

The team performing the usability test was made up of three evaluators, and each of the evaluators moderated two user tests. The platform used to compile and run the tests was UserZoom. Using this platform, the evaluators created pre-test, post-task, and post-test questionnaires in order to assess the users' experience with the interface both qualitatively and quantitatively.

The METRO website performed well functionally, and users found it visually appealing, but users encountered some consistent challenges with navigation to the information they sought. Based on the results of the user testing, here is a summary of the recommendations detailed in the report:

- *Recommendation #1*
More prominent top navigation / larger search bar
- *Recommendation #2*
Clarify 'Member Services' and 'Members' menus
- *Recommendation #3*
Clarify internship information
- *Recommendation #4*
Add quick-jump links to Special Interest Groups page
- *Recommendation #5*
Standardize the name of the 'mailing list' on all pages
- *Recommendation #6*
Add Special Interest Group names to a drop down menu

Introduction

The purpose of this study was to carry out a usability test for the Metropolitan New York Library Council website (<http://www.metro.org>). The METRO website has a wide audience, including members, organizations looking to join, non-members interested in the field, and students or people new to the library field.

The usability test used for this report was user testing, in which each user is directly observed while using the interface. It was conducted by a group of three evaluators, and each evaluator moderated two user tests for a total of six participants. The users completed a series of tasks and questionnaires through the platform UserZoom; these results were then collected by the evaluators and analyzed. Various other tools were used in order to assess both the users' abilities to navigate the interface and to assess their emotional reaction to the experience. The consent form, moderator checklist and script, and emotional assessment tools can be found in the appendices. Based on the results from user testing, the evaluators have put forth six recommendations to enhance the usability of the METRO website.

Methodology

User testing is a way of testing usability by observing specific users in a controlled setting, with users performing specified tasks specifically selected for the test process. (Barnum 2011). The controlled setting most often consists of a laboratory of sorts, allowing the user to sit at a computer terminal accompanied by a moderator, and permitting observer(s) to watch either from a point not visible to the user or next to the user. Just as the setting is controlled, the tasks to be performed by the user are also controlled, and may consist of specific functionalities that the website designer is concerned are not working smoothly, or of random tasks intended to see how the user reacts to the website.

User testing can include audio/video recording of the user, use of a Think Aloud protocol allowing the observer or the A/V recording to record the users' thought process while working on the task, and the use of surveys or questionnaires at various points during the user test. It allows testers to provide quantitative (data-based) as well as qualitative (observation-based) analyses of the results of the user test.

For this user test of the website for the Metropolitan New York Library Council (METRO), the full interface is being evaluated through specific tasks suggested by METRO staff. The evaluation is a formative assessment of specific areas for possible improvement on the site. The evaluators spent some time looking at the METRO website, and based our planned tasks on specific requests from the client.

The evaluators recruited users who are intending to become librarians and archivists and who are currently students at Pratt Institute's School of Information and Library Science program. Six students participated in the test process. The evaluators

identified a new software platform called Userzoom (www.userzoom.com) to support the user testing. Userzoom works to provide a full range of user testing in one product:

- integrated pre-test informational questionnaires to help define characteristic users
- automated task assignments accompanied by audio/video recording of the user
- additional recording of the “clickstream” followed by the user in performing tasks
- integrated post-task questions to validate answers and assess task difficulty
- integrated post-test questionnaire to generate usability metrics (the SUS test, described below)
- data analysis tools.

In addition, the evaluators planned to incorporate a separate post-test qualitative test to explore user emotional reactions, the Affect Grid. An Affect Grid is an emotion chart that categorizes people’s emotions by high energy, low energy, pleasant and unpleasant feelings. (Killgore, 1998) The four main feelings are frustration, excitement, boredom and relaxation. (See Appendix E)

Based on the given tasks, the team designed questionnaires on Userzoom for pre-test questions, post-task validation and assessment questions, and post-test evaluation tests. The evaluators created a checklist for the moderator to use to ensure each had all the elements required for a smooth testing environment, including a user consent forms, a moderator script, and Affect Grid forms. In addition, the evaluators programmed Userzoom to record users’ reactions and thought processes so the Think Aloud method results could be replayed and reviewed.

The evaluators designed the post-test qualitative questions to provide a comparative data set for the client using a standardized post-test questionnaire called the System Usability Scale, originally designed by John Brooke in 1986. The SUS allows quantitative assessment of a website’s ease of use, and enables comparisons to the SUS scores of other websites. (Brooke, 2013). The evaluators felt that combining a data-based assessment tool like the SUS with a qualitative tool like the Affect Grid would present a nuanced picture of the website’s usability to the client.

After creating all the elements of the user test, including a Consent Form allowing evaluators to record the users during the testing process, a checklist for preparations, a moderator script to standardize the testing process, and copies of the Affect Grid, the evaluators ran a preview run of the user test using the embedded functions in the Userzoom software. Once the preview ran smoothly, the evaluators completed individual user tests.

Findings & Recommendations

Our pre-test questionnaire revealed some important information about the users, and their previous experience with the METRO website. Over half of the users tested were under the age of 30, with the remaining two users over the age of 45. All of the users were students, with 33% currently working as librarians and another 17% working as interns in the field. Over half of the users, or 67% had used the METRO website before. See Appendix F for UserZoom generated charts of this data.

All of the users completed the four tasks successfully, with varying degrees of ease. Most of the users had positive reactions to the site, placing an 'X' in the upper right quadrant of the Affect Grid. Only User # 4 placed her 'X' in the upper left corner of the grid to indicate her frustration, and specified that this reaction pertained only to Task #3 (finding the Reference SIG Listserv). The Affect Grid provides qualitative data that the users had mostly positive reactions, with some complaints about certain aspects of the site. (See Figure 1)

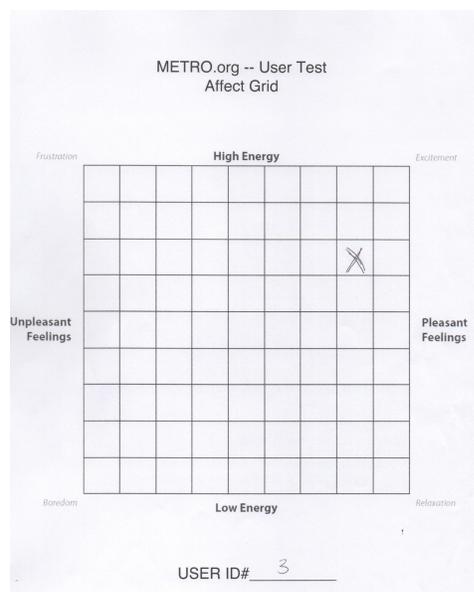


Figure 1

The raw SUS score for the site was 72.1, ranking higher than 65.3% of other websites. This score gives an average, or acceptable grade to the website and uses the adjective 'good' to classify the site. This average quantitative score coincides with the overall reactions users gave verbally after the tests.

Recommendation #1: More prominent top navigation / larger search bar

A couple of the users commented on the small font of the main navigation menu, and User #3 did not notice this menu immediately when performing Task #1. She spent some time exploring the homepage, but had no luck finding anything to do with the first task and eventually found her way back to the main menu at the top. Two of the users required more than ten clicks to achieve the goal, and one of those two took 15 clicks. While we understand that the five option menu is fixed, we recommend making the font larger and adding a border to make the menu more prominent. (See Figure 2) Increasing the visibility of the search menu function in the same way would help prevent user frustration if that is their preferred way of finding information on the site.

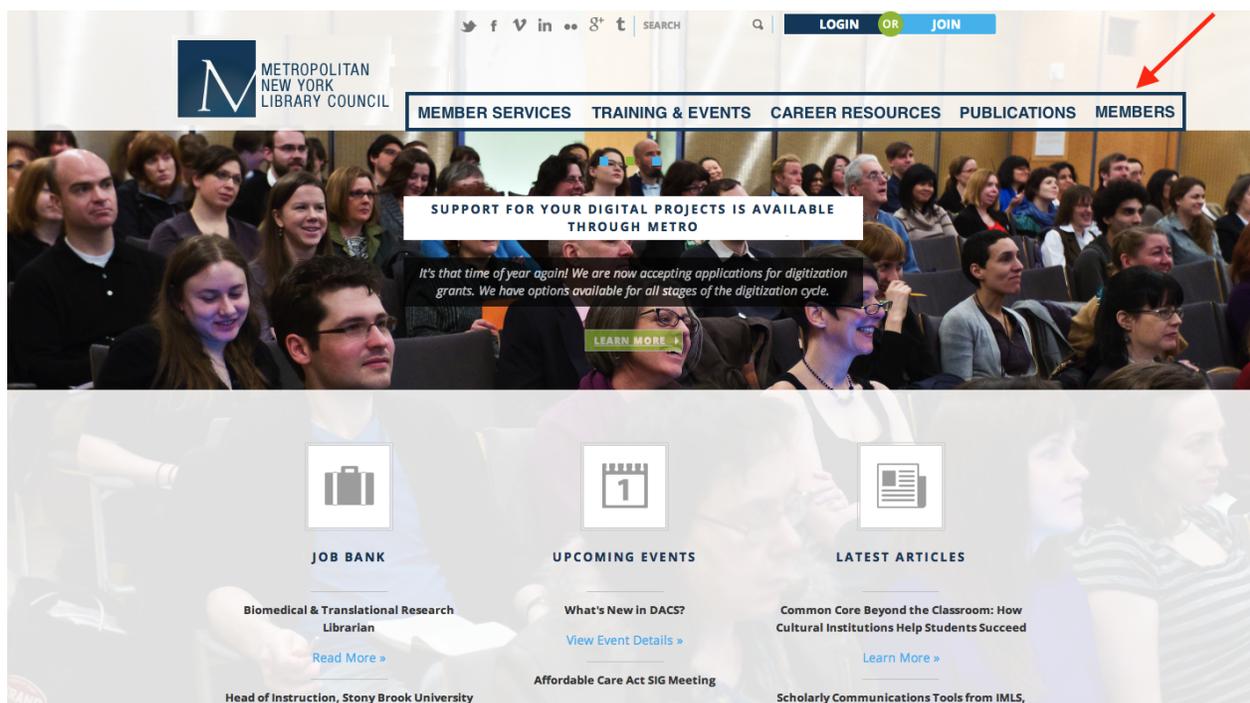


Figure 2

Recommendation #2: Clarify ‘Member Services’ and ‘Members’ menus.

Many of the users vacillated between these two menu options during both Task #1 and Task #4—the first task asked users to find out if an institution was already a member, and the second task asked about pricing information to become a member. User #3 wrote that the most frustrating part of this experience was “not knowing the difference between the two Members menu items. Which one had which types of things I was looking for? Still not sure what the distinction was.” And User #5 wrote that the most frustrating part was “finding if my institution was a member – the tabs at the top were a little unclear.” Both menu items seem directed towards current members, so when looking to find information about how to join the users did not know where to click. While User #2 immediately clicked ‘Join’ at the very top, no one else chose this; if users are

only looking for pricing information they may not be inclined to click 'Join' without first reading further information on what joining entails.

Tracking the click streams of four of the six users, it is clear that the presence of two headings relating to Member topics was a source of confusion. (See Appendix G) We recommend that the headings and subheadings for member-related menus be clarified.

Recommendation #3: Clarify internship information.

All of the users found the internship menu for Task #2 under 'Career Resources' with little difficulty, but many hesitated once on the 'Internships through METRO' page. The first two lines of text describe two programs, but only one program is listed below: the METRO Innovative Internships. We recommend taking the reference to two programs out, unless more content about another program is added.

All of the users eventually clicked on the link to the Innovative Internship Program page, but it was not immediately obvious to the users (ex. User #5 while thinking aloud, said that clicking the link "seemed like the right thing to do for some reason"). We recommend putting this text in bold and using a directive phrase, such as 'Click here' to ensure users know where to click for further information. The line dividing this information from details about past internships below may help users compartmentalize information relevant to them. (See Figure 3)

Once on the page, users found the appropriate information, but spent some time deciphering the wording of the award details. Several never noticed the matching award information. User #5 commented that she did not like the large blocks of text and was disinclined to read through it. We recommend clarifying the details of the awards, perhaps by bolding the text relevant to the actual funds awarded:

- **Interns will receive \$1500 in funding.**
- If the host institution agrees to contribute **\$500 or more** to fund the intern(s)/project(s), the Innovative Internships Program will award **\$1750 in addition to the institution funding.**

Or providing an example of how the matching works would also be helpful:

- (Example: If the institution agrees to contribute \$500, the intern(s)/project(s) will receive a total of \$2,250 [\$1750 + \$500] in funding.)

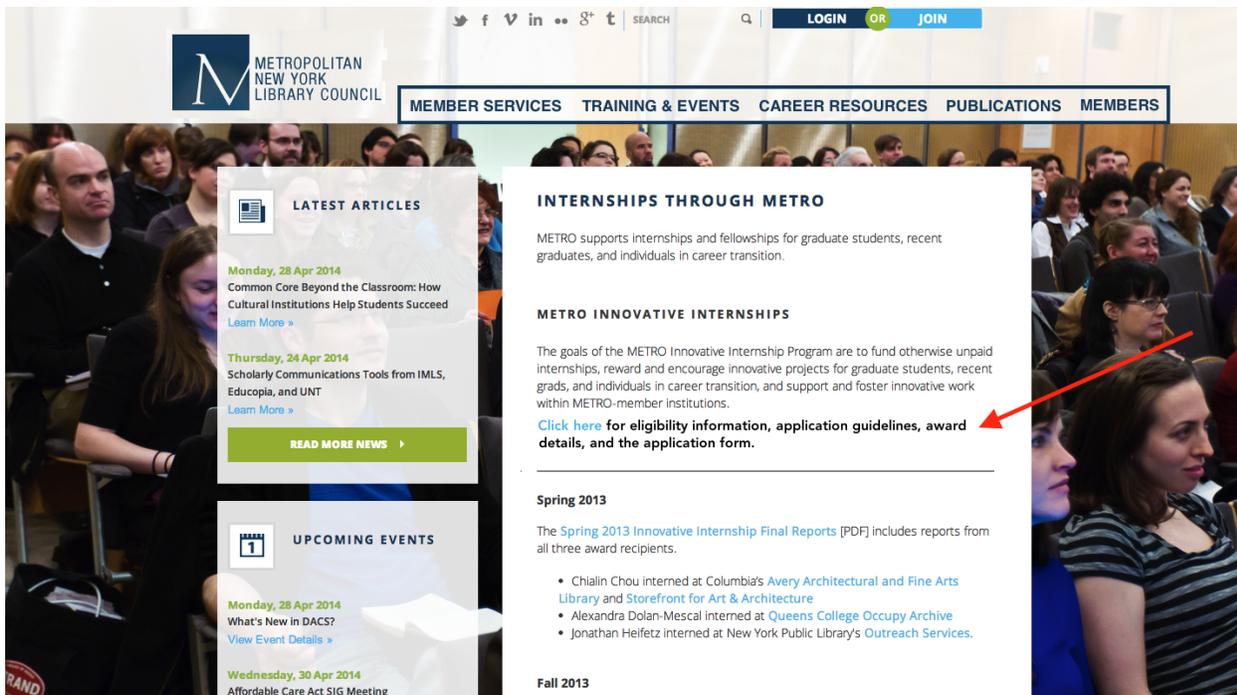


Figure 3

Recommendation #4: Add quick-jump links to Special Interest Groups page.

A few of the users commented on the annoyance of scrolling down a long webpage to find the appropriate information. Task #3 required users to find the Reference Special Interest Group, located at the bottom of the SIG webpage. Once on this page, all of the users knew they were on the right track, but since the information was not in sight they had to search through the text on the page. Users eventually realized the list was in alphabetical order, but some took longer than others. One user took 44 clicks to reach the information. (See Appendix G) User #1 commented “it’s too much scrolling down” and other users made similar remarks about the need to scroll. We recommend listing all of the Special Interest Groups at the top, each hyperlinked to jump down to the appropriate spot further down on the page. (See Figure 4) Users will be able to see all the groups available without having to scroll through. Or by clicking SIG Listservs, users can see all of the available groups that have listservs.

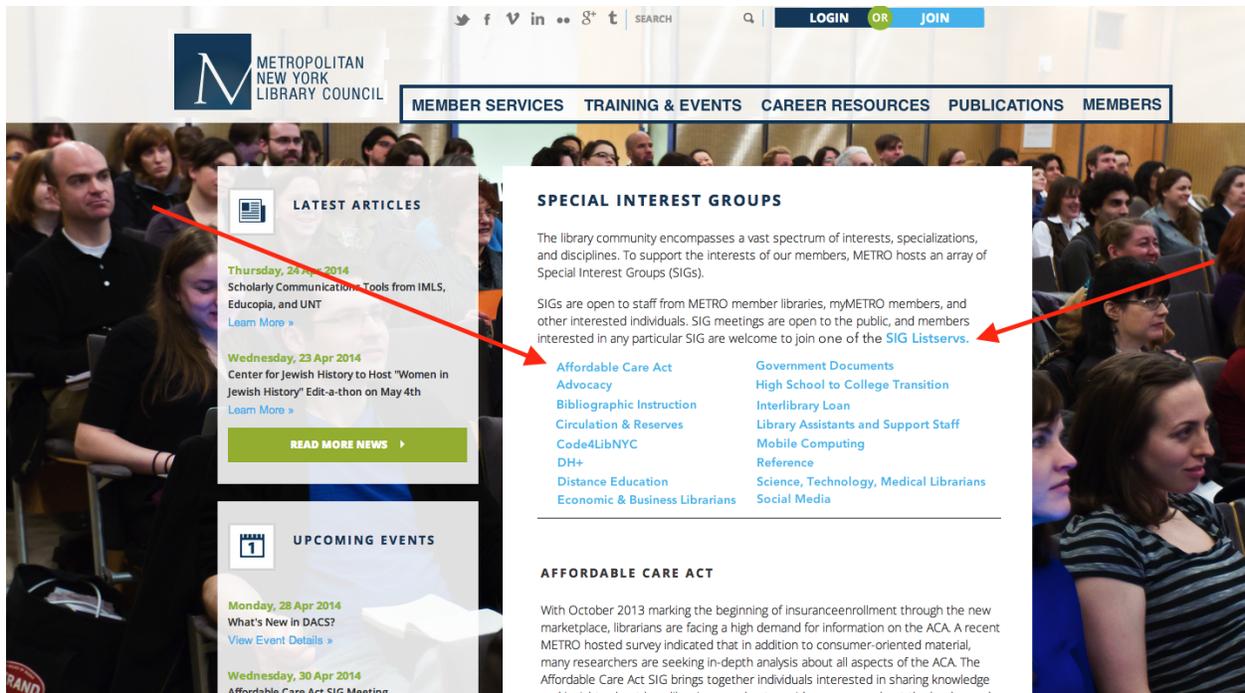


Figure 4

Recommendation #5: Standardize the name of the 'mailing list' on all pages.

Once users found the Reference SIG, they were unsure which of the two links to click. Thinking aloud, User #2 asked "Do I want to do Discussion List or LibGuide, I don't know." He ended up clicking LibGuide just because he knew it had to be one of them, and spotted the Mailing List link right away. User #2 said "I'm not sure about getting on the listserv, maybe it's Discussion List?". While both of these links eventually lead to the listserv form, the Discussion List link goes directly there, while the LibGuide link takes users to a page where they must click Mailing List to get to the same listserv form. This feature should have a consistent label throughout the site. (See Figure 5) In the mock-up below we used Listserv, and Mailing List would also be fine, but it seems the Discussion List label was unclear to users.



tablet PCs). Through meetings, events and other shared-learning opportunities, members explore innovative ways libraries can use these technologies to enhance staff workflow, provide patron services, and support users. You may also want to check out the Mobile Computing in Libraries Libguide for more resources.

[LibGuide](#) | [Listserv](#)

REFERENCE

The Reference Special Interest Group is connects librarians interested in the issues related to the provision of reference services, including the similarities and differences between "reference" and "virtual reference." Our SIG meets quarterly at the offices of METRO to hold informal discussions on issues of our choosing.

[LibGuide](#) | [Listserv](#)

SCIENCE, TECHNOLOGY, MEDICAL LIBRARIANS

The Special Interest Group (SIG) for Science, Technology and Medical Librarians is composed of individuals from libraries with substantial collections in the physical, life or natural sciences. Through meetings and other events, members work to identify and develop effective strategies to promote the interests of professionals working in this area and their library organizations.

[LibGuide](#) | [Listserv](#) | [Facebook Group](#)

SOCIAL MEDIA

The Social Media SIG is for those who are involved (and those who would like to be!) with their organization's social media channels and social media strategy. This SIG will serve as a means of sharing ideas, learning about new social media channels and tools, sharing best practices, and hearing social media success stories. The social media SIG is a great way to stay on top of current changes and challenges.

[Libguide](#) | [Listserv](#)



Figure 5

Recommendation #6: Add Special Interest Group names to a drop down menu.

Most of the users had difficulty finding the Reference Special Interest Group information, and more than half of the users opted to use the search bar to find the page after looking through the menus. User #6 said, "What I'm trying to find is the Special Interest Group landing page or some place to find it." She ended up accidentally clicking My Community right before she began typing into the search bar. The My Community menu item was not clear to the users, and none of them thought to click there. One user required 18 clicks to find the information. In addition to clarifying the information in the member-related headings as detailed above in Recommendation #1, we recommend adding Special Interest Group names to a drop down menu. These groups and their listservs are open to anyone (even non-members) interested in learning about the topic, and should be displayed more prominently on the site for easy access.

Conclusion

In conclusion, it is the hope that these recommendations will be useful to the webmasters when trying to improve METRO.org. It is generally a good website, but the fairly simple changes mentioned in this report can make a big difference in improving the usability of the METRO website. While based on only six users, these results and recommendations reveal a lot about the way people view the website.

The recommendations include a more prominent navigation menu, a better distinction between the 'Member Services' and 'Members' menus, clearer internship information, quick jump links on the Special Interest Group page, standardization of the label 'Listserv' on all pages, and the addition of Special Interest Groups to a drop-down menu (or a clearer label for 'My Community').

Making these changes will enable users to navigate the site to find the appropriate information with more ease. With these changes, METRO.org will greatly increase usability and will be easier and more efficient for future users.

Appendix A

Consent Form



CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Title Of Study: Metropolitan New York Library Council (METRO) User Experience

The purpose of this usability study is to evaluate the Metropolitan New York Library Council website (METRO.org). We are interested in determining whether or not people can accomplish common tasks and easily find information using this website. The session will not 'test' you or your ability, rather, the session will test the METRO.org website to provide information on areas that might need to be improved. Please be advised that there are no risks associated with participation in this session.

Procedures: I have been told that, during this session, the following will occur ...

- I will complete brief online questionnaires; pre-test, post-tasks and post-test
- I will be given tasks using the METRO.org website. While completing these tasks, I will be asked to "think aloud" to verbalize my thought process.
- Members of the Pratt UX Team will observe and take notes. In addition, the session will be captured on video for future review.
- The session will last no longer than forty-five minutes.

If for any reason you are uncomfortable during the session and do not want to complete a task, you may say so and we will move on to the next task. In addition, if you do not want to continue, you may end the session and leave at any time.

Approximately six people will participate in this study. Results from all sessions will be included in a usability report. Your name will not be included in the report nor will your name be associated with any session data collected unless disclosure is required by law.

I, _____, have read and fully understand the extent of the study and any risks involved. All of my questions, if any, have been answered to my satisfaction. My signature below acknowledges my understanding of the information provided in this form and indicates my willingness to participate in this user testing session.

Age: ____ (Note: Must be 18 or older to participate in this study) ID

Signature: _____ Date: _____

Thank you for your participation!

Appendix B

Moderator Checklist

Before participant arrives

- Be sure Userzoom is loaded properly and ready for the first user test

Welcome

- Introduce yourself, thank participant for participating
- [Offer refreshment]
- Setup participant at computer console

Consent form, pre-test questionnaire, instructions

- Explain the purpose of the test
- Review consent form, allow participant time to read and sign, collect form
- Ask participant if he/she is comfortable being recorded
- Give a run-through of the questionnaires and tasks in the study
- Ask for questions/concerns
- Explain the process of using task scenarios while participant thinks aloud
- Start pre-test questionnaire

After each task

- Offer reassurance that there are no wrong actions/answers
- Give feedback on quality of the think-aloud procedure. If necessary, review task to elicit more feedback
- Guide participant through post-task questionnaire if necessary

Upon completion, post-test questionnaire

- Guide participant to post-test questionnaire
- Thank for participation
- Provide thank you treat to participant

Appendix C

Moderator Script

Hi, my name is _____, and this is _____. Thanks for agreeing to take part in our research study today. We are two of three members of a team of usability design students. We are doing a user study of the website METRO.org. Your feedback will give us valuable information which will be used to assess the usability design of the METRO website.

Introduction to the testing environment

During the rest of our session, I'll be working from a script, just to make sure that our instructions to all the participants are the same. Before we start, please take a look around the room. We will spend the next 30 minutes using this computer in front of you to conduct our study: this includes a pre-test questionnaire, a series of four tasks to be completed on the METRO site, very short post-task questionnaires, and a post-test questionnaire. During this process, a software program called Userzoom will run in the background of the computer. It will record sound and a video of your mouse moving on the screen, to help us get a sense of your process in completing the tasks. We won't be sharing the recording outside the evaluation team, although we may review it with our professor. Are you comfortable with that? [If not, place sticky paper over the camera.]

_____ and I will also observe while you complete the tasks and will be taking notes. One of us may ask you questions from time to time and we can also try to answer questions if you have them. It will be most helpful to us in working to assess the site's usability if you can speak aloud your thoughts and reactions to each scenario that you encounter during your work on the tasks. Before we start, do you have any questions for me?

Consent Form

Before we start, please read through this Consent Form. It reviews the points we've already discussed, and outlines the kinds of tasks you will be asked to complete during this user test. When you've read it, feel free to ask me any questions you have. Once you feel comfortable, please sign it with your full name and the date.

Did you have a chance to read through the Consent Form? Do you have any questions? I'll take it now please. Thanks.

Pre-test Questionnaire

To begin, so we can learn a bit more about you, please fill out this short questionnaire to help us understand your background and any prior experience with the METRO site.

[Click to Pre-test questionnaire]

[Make sure participant clicks "Send form"?]

Introduction to Tasks

We have three tasks for you to work through. We aren't testing you during this process -- we are testing the website, and we are very interested in your reactions to it, so please remember to think out loud. There is no such thing as a wrong action or a wrong answer. And neither of us had anything to do with the website design, so you won't offend us -- just give your honest reactions. When you are finished with each task and click the task completion box, I may ask you a couple of follow-up questions before you move on to the next task.

Userzoom will give you an introduction to the task and then open the METRO website for you to work on. There will be a brief summary of the task in a window open under the METRO website, just so you can remind yourself. Do you have any questions before we start?

Task 1

For the first task, please use the METRO website to find out if your organization is a member of METRO and therefore eligible for a discount on registration for a METRO workshop. You can use whatever way you want to search for the information - just be sure to talk about your process out loud.

[end Task 1]

[Do you have any suggestions or observations based your experience with this task?]

Task 2

The second task is to find out details about METRO's funding for student internships.

[end Task 2]

[Do you have any suggestions or observations based your experience with this task?]

Task 3

The third task is to find out how to join the Reference Special Interest Group listserv.

[end Task 3]

[Do you have any suggestions or observations based your experience with this task?]

Task 4

The last task is to find out what the membership cost would be for an organization with a budget of approximately \$350,000.

[end Task 4]

[Do you have any suggestions or observations based your experience with this task?]

Post-Test Questionnaire

Thanks. Now please fill out the post-test questionnaire. Do you have any thoughts about the METRO website in general?

Debrief

Thank you so much for all of your insights and feedback on the METRO website. We really appreciate your taking the time to be a participant in our user test. All the information you provided will be anonymous and confidential. We will take the screencast and review it and combine it with our other user test results to create a report evaluating the usability of the METRO website. Do you have any further questions or final thoughts for me? Feel free to contact us later with any feedback.

Thanks again for participating!

Appendix D

Notes Template

Note taker: _____
Date: _____
Participant #: _____

Pre-test Questionnaire

User Success	Notes and Observations
0: Not completed	
1: Completed with difficulty or help	
2: Easily completed	

Task 1

User Success	Notes and Observations
0: Not completed	
1: Completed with difficulty or help	
2: Easily completed	

Task 2

User Success	Notes and Observations
0: Not completed	
1: Completed with difficulty or help	
2: Easily completed	

Task 3

User Success	Notes and Observations
--------------	------------------------

0: Not completed	
1: Completed with difficulty or help	
2: Easily completed	

Task 4

User Success	Notes and Observations
0: Not completed	
1: Completed with difficulty or help	
2: Easily completed	

Appendix F

User Data (from pre-test questionnaire)

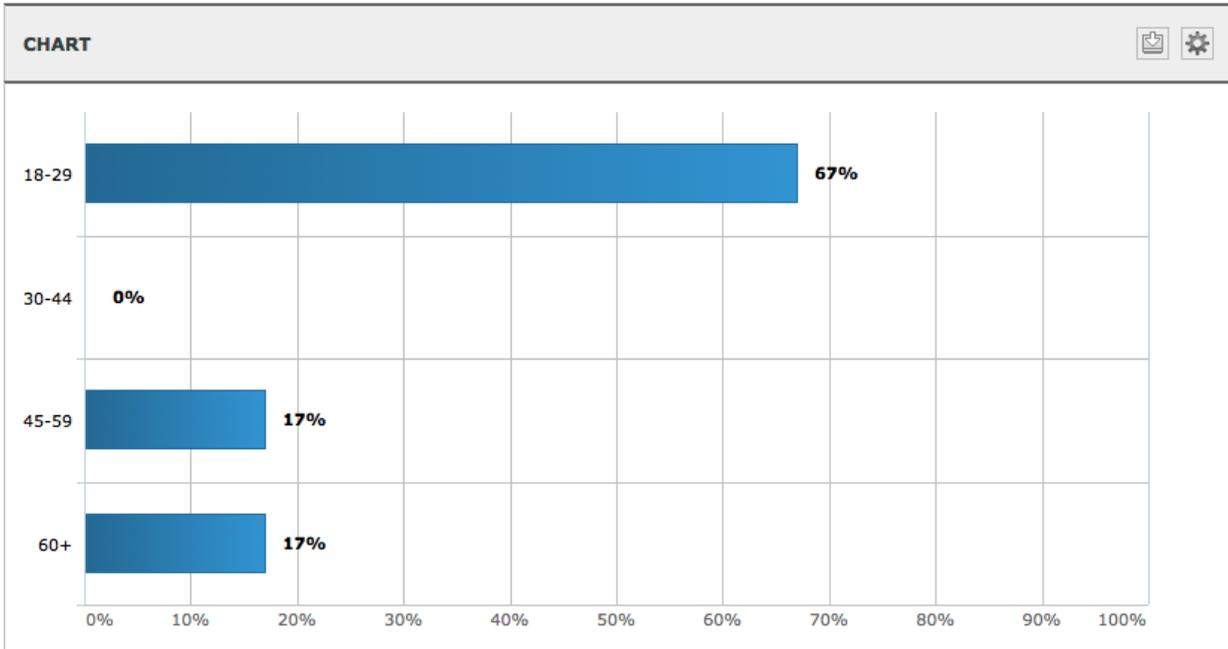


Chart 1: What is your age group?

Chart 2: Are you currently employed as a librarian?

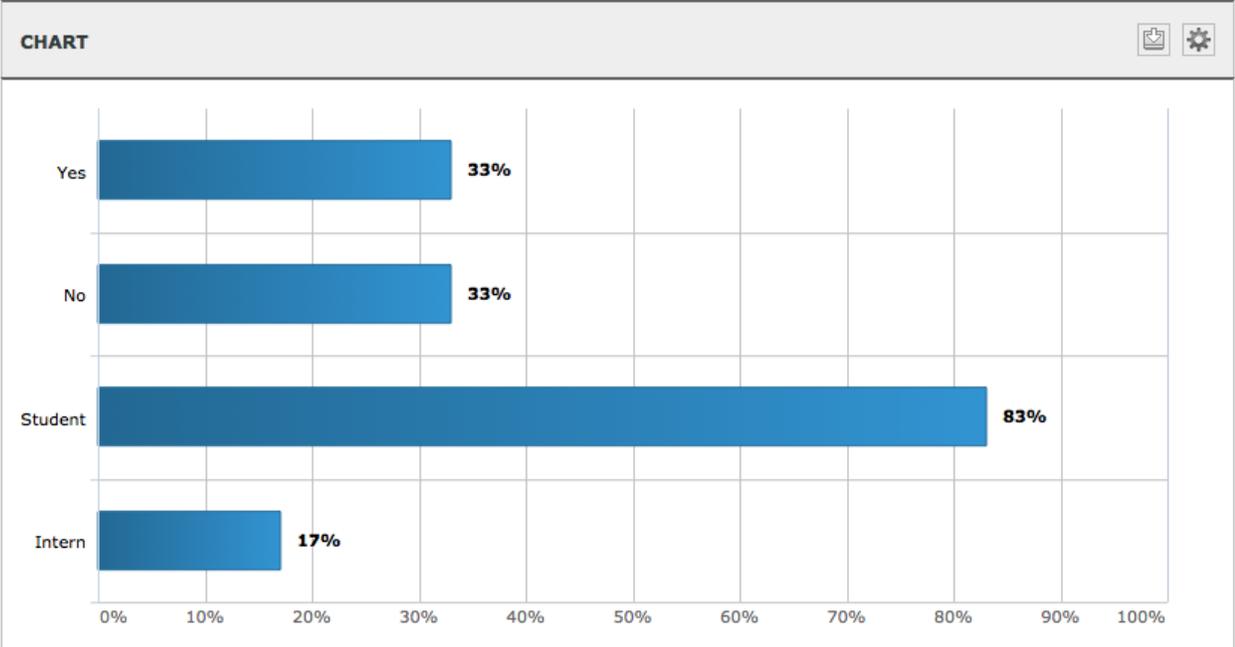
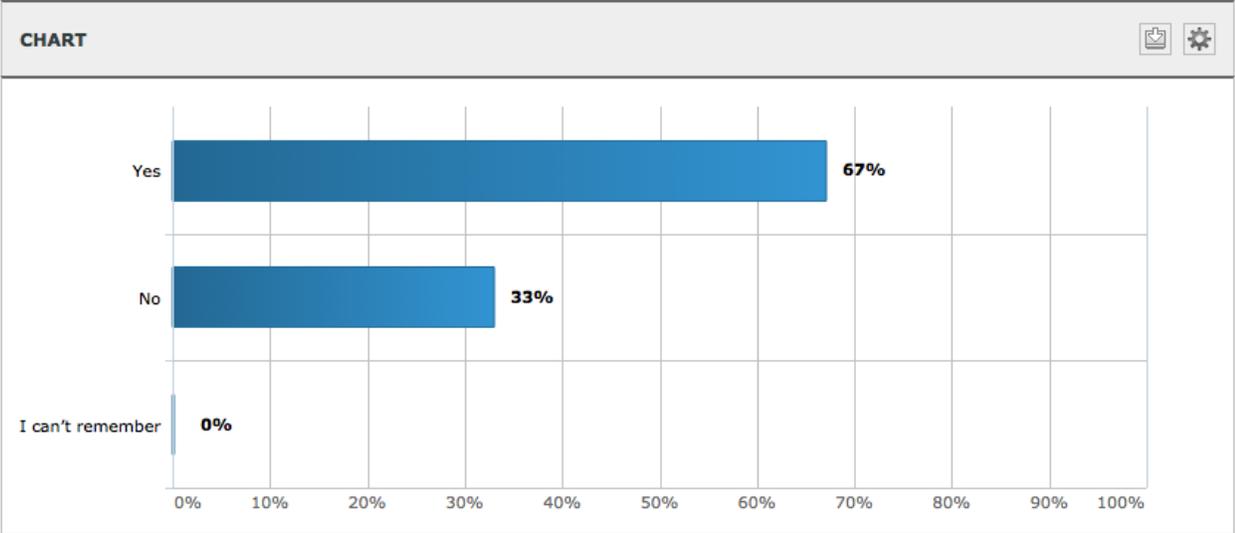


Chart 3: Have you used the METRO website before?



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