

E4: User Testing

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Executive Summary

New York Art Resources Consortium (NYARC) is a collaboration between the libraries of three world-class institutions in New York City: The Brooklyn Museum, The Frick Collection and The Museum of Modern Art. As a consortium, these three libraries work together to develop programs that expand access, increase the sharing of resources and provide leadership in the development of innovative programming. Although NYARC is a leader in art resources programming and access and a model for effective collaboration, the website content and design could be improved to convey this more effectively. Because NYARC does not have a central physical location, the website serves as the face of the consortium and needs to accurately reflect its unique goals and purpose.

User Testing was performed on nyarc.org in order to assess its effectiveness at conveying its goals and reaching its intended audience. Four moderators conducted eight user tests, which allowed participants to browse freely on the website, while avoiding the Arcade library catalog. Following the processing and condensing of subsequently gathered insights, three recommendations emerged as actions to improve user experience the NYARC website. These are:

- 1. Clearly explain "What is NYARC?"
- 2. Remove dates from blogs or other areas of the site where content is not updated regularly.
- 3. Clarify opportunities for participation with other institutions and internships.

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Introduction

Formed in 2006, the New York Art Resources Consortium seeks to improve resource sharing, access and programming through collaboration. In addition to the collaboration between the three member libraries, NYARC works with other archives, libraries and service providers on a number of projects.

NYARC is greater than the sum of the three institutions and their website should reflect this. Nyarc.org can serve as a portal to the larger community served and visibly promote the innovations produced through this collaboration. Because The Brooklyn Museum, The Frick Collection and The Museum of Modern Art each have unique collecting policies and research specializations, it is a challenge to distinguish between the individual libraries and the consortium. For this reason it is imperative that NYARC's website effectively convey the identity, purpose and goals of the consortium. As a model of collaboration, it should be anticipated that others will want to participate in NYARC projects.

Methodology

Protocol Selection

This study adopted the user test format for usability research, which entails the recruitment of outside participants for controlled study in a laboratory environment. Of the range of possible study techniques, user testing is the most time- and resource-intensive. While other methodologies rely on professional expertise or remote user study to capture usability impressions in a more rapid fashion, user testing is lauded for the superior richness of data that it can collect when deployed effectively. In the case of the NYARC study, the researchers felt that user testing was the appropriate course of action because of the need to suggest a target demographic for the site required the participation of actual users. The allotted timeframe was also sufficient to develop the methodology, recruit participants, conduct tests, analyze data, and prepare a report with the most extensive range of study data possible.

Methodology Development

The four-member research team began to develop the study by browsing its interface to assess its layout, content, and functionality. With the exception of the Arcade search function that was outside the scope of this project, the team reviewed each section of the interface with the intention of finding the most essential information-seeking pathways. Through the lens of usability expertise, the team finalized four user tasks to comprise the test portion of the protocol, with the intention of capturing issues that would be encountered most frequently and pose more severe problems. The tasks can be summarized as follows:

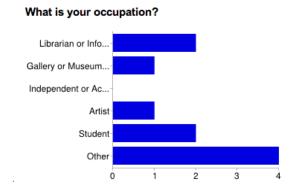
- 1. Browse the site what is NYARC?
- 2. Find out the projects that NYARC has done, and name three.
- 3. Explore internships and find available ones.
- 4. Find opportunities for institutional partnerships with NYARC.

These tasks were developed with the intention of taking the users through multiple sections of the website, capturing diverse use cases, and eliciting specific interaction observations as well as general, open-ended feedback.

The next stage involved the creation of pre- and post-test questionnaires that could aid in interpreting the results of the main task set, as well as the necessary materials to conduct impartial and consistent sessions. The questions solicited a mix of multiple-choice and openended responses. The pre-test focused on demographic data, past use of the NYARC site, and online information-seeking habits. The post-test questionnaire gathered subjective responses regarding the user interface and site content as well as more extensive reactions to the user tasks. Furthermore, an attempt was made to capture the emotional experience of using the site, honoring the necessity of studying not only usability deficiencies, but excitement indicators that affect overall user experience (Zirkler & Ballman, 1994). Finally, the team consulted professional literature to create the consent form requisite to any study involving human subjects, as well as a session script to ensure proper sequencing and verbiage for the moderator. This aspect of the study was treated with particular care, as studies of usability tests have suggested that uniformity of instruction and study design is widely regarded as essential among professional evaluators (Norgaard & Hornbaek, 2006). The forms and any applicable results for each of these components are available in the appendices of this report.

User Recruitment and Demographics

Each of the four research team members were responsible for recruiting two participants for the study and conducting the sessions for these users. This resulted in a total of eight user tests, with a portion being supervised by two researchers. The overall character of the subject pool was driven by convenience sampling: participants were recruited on the basis of availability and perceived appropriateness to the NYARC study. Our pre-test questionnaire revealed somewhat of a spread in terms of profession (fig. 1), and only one participant could confirm a prior visit to the NYARC site (fig. 2).



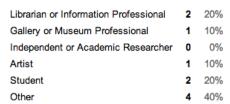
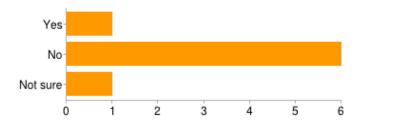


fig. 1

Have you used nyarc.org?



Yes 1 13% No 6 75% Not sure 1 13%

fig. 2

Study Protocol

The laboratory portion of the study was conducted in several locations, as decreed by the scheduling logistics and preferences of the test subjects. The time allotted for each session was 30-45 minutes, and the majority fell into this range. Moderators prepared the study materials and testing environment, and then welcomed the participants to the study. In order to ensure the most complete documentation of the tests, each computer used in testing used Silverback, a user testing software that records the on-screen movements and interactions of participants, in addition to capturing session audio and webcam footage. Participants were advised to use the "think aloud" approach to study participation, a common format that encourages vocalization of the thought process during task completion to help capture robust and candid qualitative data (Nielsen, 2012). Prior to completing the study, each participant reviewed and signed a detailed consent form. Questionnaire responses were captured via Google Forms, and the user testing portion was captured by Silverback. The full details of the user testing process are available as part of the consent form and moderator script in the appendices.

Analysis

Immediately after conducting each test, researchers completed a debrief by reviewing any notes taken during the session as well as the video captured on Silverback in order to organize and clarify immediate impressions while still fresh in mind. This was of particular emphasis due to neglect of this practice observed by auditors of other usability studies (Norgaard & Hornback, 2006). The researchers subsequently reconvened to discuss individual findings and assess encountered problems with regard to frequency and severity. This discussion resulted in three major conceptual findings, with specific methods for associated improvements in the overall usability of the interface. These findings, in addition to impressions of the appropriate target audience for the platform, are described in the findings and recommendations section of this report.

Findings and Recommendations

Although all but one participant had never visited NYARC before, the overall impression of the site was positive and browsing piqued participants' curiosities. While participants reported having a positive experience, only 13% (1 user) said they were highly likely to recommend the

site to a friend. Participants expressed confusion about what the site's function was and said they would probably go directly to the individual institution sites instead of visiting nyarc.org. Working from the list of four tasks, as well as requested "think aloud" browsing, the impressions of the site from the eight users were broken down into three main findings (outside of aesthetic issues) through consolidation or similar language. The following are the three main issues that provide NYARC with opportunities for improvement and our recommendations for user clarity.

Finding #1: It is unclear what the purpose & goals of NYARC are.

For the User Test of the NYARC website, client representative Lily Pregill emphasized that only the website was to be tested, and not the Arcade Search tool. Her challenge to the team was to figure out *whom* the audience is that the site is serving: libraries, the public or both?

Of the four tasks given to our participants, the first was to browse the site and give initial impressions of: What is NYARC? And who do they think the target users are? A majority of the participants responded with the following list: *Students, Researchers, Librarians, Historians and Artists*

However, when asked "what is NYARC?" the impressions were often a verbal reading of the sites goals or "About" page. The identity or purpose of the site was noted as unclear. In the post-test questionnaire, participants were asked if they thought, "nyarc.org appropriately reflected the goals of NYARC?" While we had some responses that just stated, "yes", other participants' answers ranged from:

Participant 1: I'm not sure I know what the goals of NYARC are. It's clear what the organization's purpose is, but the goals are not apparent.

Participant 3: The goal is a little unclear. It seems that research is the main goal but there is no direct portal right to the research tools or catalogs. A lot of really cool things are buried under less important things.

Participant 7: I think the goals could have been explained a little more clearly.

Our findings suggest that the identity of the NYARC homepage is at best a little "unclear." The goals listed on the homepage are not explained within the "About" or "FAQ" pages, which led participants in the study to wonder aloud why NYARC was important, and why would they choose to use that site – instead of visiting the individual institutional websites.

Recommendations

If the New York Art Resources Consortium is unclear with who its audience is - it is because the site is unclear to its users. From the feedback of the eight participants of the user study, the following recommendations should be considered:

On the NYARC site:

1) The "Goals" stated on the homepage should be well described on the "About" page.

For example: if a Goal is to "Improve access to art research resources through technology," then it should be explained how NYARC plans to improve access. This along with the third goal of "Provide leadership in the development of innovative and model information services programs," is lost when the participant is looking for exactly how that is being done.

Again, the homepage is the where the site meets its user. If NYARC is going to say that it has a goal be a leader in information service, who is improving access to art research, then it should be stated how that will be accomplished in "About" page. Currently the "About" page is a long format version of the "Goals" section under the explanations "NYARC Objectives." This repetitive language does not let the user gather any new information. In order to learn more, the user must click on "Press & Publications" to find further information about NYARC's initiatives in the development of model information services.

On the other Institutions sites:

2) Better Branding.

In NYARCs "About" page it says, "NYARC seeks to collaborate with other libraries, archives and information service providers to engage in projects that benefit the research community." Over half of the studies participants were in the library or fine art fields, and were surprised to have never had heard of NYARC, even when exploring the sites for the three named institutions, finding the link with NYARC may be challenging.

- The Frick Collection lists NYARC under "Online Resources" on its main research page.
- The Museum of Modern Art library leaves NYARC off of its "Research Resources" block, and after further investigation it is found in the drop-down search bar on the DADABASE
- And the Brooklyn Museum links directly to NYARC's Arcade through their online catalog
 but not by name.

It is this team's recommendation that NYARC seek improved brand presence on these sites. All three institutions should be building NYARC into their "Research Resources" pages, as well as the consortium as a whole should be connecting the name NYARC to images and archives, as to give the user a greater a chance for looking it up.

Finding #2: Dated content reveals how infrequently the site is updated.

When participants were browsing NYARC, there was a consensus that blog entries, internship opportunities, and twitter feeds should be updated more frequently. According to the moderator's notes for participant #1, "The internship listings are outdated." In NYARC's internship section the participants noticed how the deadline for applicant submissions was outdated or nonexistent. A similar issue was noted when browsing the blog and participant #7 mentioned that this was very little content for three years.

Recommendations

In the event that the NYARC blog cannot be updated frequently, we recommend that dates are not included on those pages. By omitting dates on the blog entries, readers will be less conscious of the amount of time between entries and will be less concerned when it is updated infrequently. The example below illustrates the above recommendation.



fig. 3

In the case of internships, rolling deadlines can be included to give potential applicants a rough timeframe. See the figure below for an example.

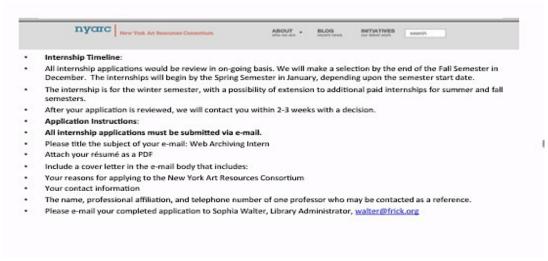


fig. 4

An additional recommendation is to update the social media more regularly. Interns could post regularly about their work or items of interest that they come across. If updating social media were integrated into the internship program, it would improve NYARC;s presence on those outlets. Social media could then advertise when blog entries have been created or updates regarding other content on the website. Furthermore, increased presence on social media would assist with the branding issue mentioned in Finding #1.

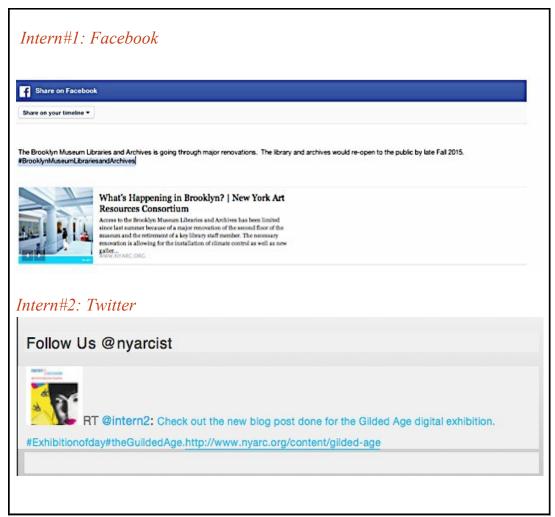


fig. 5

Finding #3: The opportunities for collaboration are vague.

In our user test, Task # 4 asked participants to imagine they worked at a fine art institution/library that wanted to find collaboration opportunities with NYARC and then find information about doing so on the site.

A group of participants clicked on the gears noting that "<u>COLLABORATION: Libraries</u> <u>Working Together</u>" brought them to the "About" page, which only told them about the current collaboration of the consortium that makes up NYARC

Other participants went to "FAQ," and clicked on the question "Can my library become a member of NYARC?" to which the answer was

"Beyond the full membership of the three NYARC partners sharing a library catalog, we are considering developing associate membership for privileged interlibrary loans and participation in a <u>Shared Print Reserve</u>."

Therefore, the answer to Task #4 was unclear to users because though NYARC was not accepting full partners, they have clearly worked collaboratively with other institutions. For example, participant #7 noted the collaboration with Hearst Archives for an online exhibition.

The groups' findings are that gears (as a symbol for) Collaboration tab, with the subheading of "Libraries working together" is confusing. The magnified glass next to Search Arcade - does take you to the Arcade page. The puzzle piece does bring you to a page explaining research services, and while the star does take you to highlights of the blog page, clicking the gears brings you back to the "About" page, where the user does not find details about collaboration.

Recommendations

While NYARC is a collaboration among three libraries, the opportunities to work with them or appropriate avenues to pursue collaborative projects are unclear. So the question becomes: How can NYARC convey their interest in working with others?

By replacing the word *Collaboration* with *Participation* (see *fig.* 6), the icon of the gears lets the user feel like there may be a place where they fit in within the parameters of this consortium. The testing group also recommends that by clicking on "Participation" it takes you to a page (see *fig.* 7) with the two most frequently asked questions regarding participation.



fig.6



fig.7

The Participation page is the denial with a soft landing. By saying that the users "institution" cannot be a part of the consortium, but that there are places within NYARC for internships for specific initiatives, it leaves room for the user to be interested and hopeful. For instance, by leading the user to the Shared Print Reserve, NYARC illustrates its desire to have a well maintained collection that you (the user) are invited to explore.

As it is currently stands the target audience for NYARC is still a little unclear. The "Research" tab in the Initiatives section reaches out to *adult researchers*, which does encapsulate the "Students, Researchers, Librarians, Historians and Artists" answer given to

us by our tested user group. However the projected "Participation" page can also be a good outlet to also reach out to specific audiences in the research community and solidify relationships with these users, thereby targeting the community they wish to serve.

Conclusion

NYARC is innovating in programming, access and resource sharing through the collaboration with Brooklyn Museum, Frick Collection and Museum of Modern Art. Because this collaboration is between three world-class institutions, it is imperative that the shared goals are reflected clearly on the website. Without a physical location that serves as a center for all three institutions the website serves as the face and point of access for the public to learn about the outstanding work being accomplished at NYARC. With a few minor changes to the website, NYARC can more effectively convey its goals, strategically feature web content and inform the community about opportunities for participation.

References

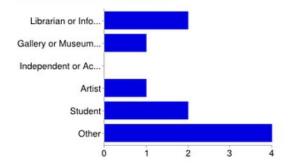
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- Norgaard, M., & Hornbaek, K. (2006). What do usability evaluators do in practice? An explorative study of think-aloud testing. Proceedings from DIS '06: *The Sixth Conference on Designing Interactive Systems*. University Park, PA. 209-218. doi: 10.1145/1142405.1142439
- Zirkler, D. & Ballman, D.R. (1994). Usability testing in a competitive market: Lessons learned. *Behaviour and Information Technology*, *13*(1-2), 191-197. doi: 10.1080/01449299408914598

<u>Appendices</u>

Appendix A: Pre-Evaluation Questionnaire and Responses

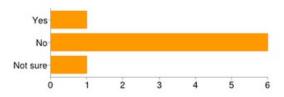
Pre-Evaluation	Questionnaire
What's your name?	
What is your occupation?	
Librarian or Information P	rofessional
Gallery or Museum Profe	ssional
Independent or Academic	Researcher
☐ Artist	
Student	
Other	
Have you used nyarc.org?	
☐ Yes	
□ No	
■ Not sure	
What are you preferred or example: Google, WorldCat, When browsing for content	
☐ Text	
☐ Video	
■ Not sure	
Submit Never submit passwords thro	ough Google Forms.
Powered by	This content is neither created nor endorsed by Google.
⚠ Google Drive	Report Abuse - Terms of Service - Additional Terms

What is your occupation?



Librarian or Information Professional	2	20%
Gallery or Museum Professional	1	10%
Independent or Academic Researcher	0	0%
Artist	1	10%
Student	2	20%
Other	4	40%

Have you used nyarc.org?

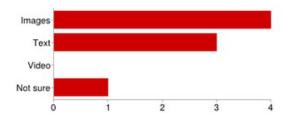


Yes	1	13%
No	6	75%
Not sure	1	13%

What are you preferred online research resources?

Library OPAC google Google, Worldcat, Bklyn Public Library NYPL, wikipedia, google Google

When browsing for content, what are you more inclined to click on?



Images	4	50%
Text	3	38%
Video	0	0%
Not sure	1	13%

Appendix B: Participant Consent Form

Purpose:

The purpose of this study is to evaluate the usability of <u>nyarc.org</u>. The study is part of the Usability of Digital Information graduate level class, under the supervision of Professor Craig MacDonald.

Procedure:

If you agree to be in this study, you will be asked to do the following four (4) tasks:

- 1. Browse the site and give a brief description of what nyarc is.
- 2. Search for projects that *nyarc* has done, and name three (3).
- 3. Find available internships.
- 4. Look for opportunities to partner with nyarc.

Benefits/Risks to Participant:

The participant will learn about the potential uses of the *nyarc* website, and help *nyarc* determine who their best target audience is in order to help contribute to the body of knowledge in usability research. There is no risk to the participant.

Voluntary Nature of the Study/Confidentiality:

Your participation in this study is entirely voluntary. At any point during the study you are welcome to tell the moderator that you would like to discontinue your participation in the study. You may also ask the moderator any questions that may arise during any part of the study. Your name and personal information is completely confidential and will only be accessible to the members of the project team. The data you produce during the study will only be accessible to again, those working on the project.

Contacts & Questions:

At this time you may ask any questions you ma questions later, you may contact your moderator	
Moderator:	email/phone:
Statement of Consent:	
I have read the above information. I have asked procedure and they have been answered to my s I consent to participate in this study.	
Name of Participant	Date:
(Please Prii	nt)
Signature of Participant	
Age: (Please Note: you must be 18 years o	of age or older to participate in this study)

Appendix C: Moderator Script

Session Introduction & Confirmation of Consent

Good afternoon, my name is *[name]* and this is *[second moderator's name]*. Thank you for agreeing to take part in our study, the feedback we gather today will give us valuable information which will be used to evaluate the usability design of the *nyarc.org* (New York Art Resources Consortium) website.

Have you read and signed our consent form, and if so may I have it?

[If they haven' t please give them a copy and to review, sign and return]

If you have not signed it is it because of any questions that I might be able to answer?

Thank you.

During this session I will be reading from a script to ensure that my instructions to all participants in the study are the same. I am here to get an idea of usability of the *NYARC* website and who the target audience may be for the features it provides.

This user test will record all of your movements on the website by using the screencast software *Silverback*. After your session is complete my team will review the data we have collected today and analyze it along side of the other session participants, this collected information will then be used in our group report.

We will spend this 30 to 45 minutes for session in three blocks.

The first block: will be a pre-evaluation questionnaire in which we find out more about you. The second block: will be a set of four (4) tasks which will be recorded by the before mentioned *Silverback* program.

The third (or last) block: will be a post-evaluation assessment in which we get more of an emotional reaction to the set of tasks asked of you.

During this session I will be asking you to "think out loud" while you are completing the tasks. If you can verbalize your thoughts as they occur, we can understand what works or doesn't work on this site.

I would also like to note at this time that we are <u>not</u> testing you - we are evaluating the website. In no way will your information seeking methods, preferences or tendencies reflect negatively on you or your contribution. There is no penalty for mistakes, or decisions to stop the session. All that we ask of your participation is that you give honest responses and detailed feedback which relate to your experience today.

Before we start do you have any questions for me?

Pre-Evaluation Questionnaire

To begin with, please fill out this questionnaire so we can get some basic information about your experience using the internet, *NYARC* or other similar websites. I want to repeat that no part of this is a test and there are no right or wrong answers.

{wait for the pre-test questionnaire to be finished & for the participant to hit 'Send' }

Intro to Tasks

Thank you, from this point as we move into the tasks we will be using a program called *Silverback*, this program will track your screen activity, as well as it records video of you as you complete the tasks. Are you comfortable with that?

{If Yes then start the Silverback recording. If No discuss concerns, or cover video recorder}

From here on as we move through our tasks, I would like to remind you to "think out loud" as you navigate the site. Again this is so we are able to better understand the decisions you are making.

Task #1: Browse the site - What is NYARC?

{Click tab to open NYARC site}

In a moment look around this website, move around the page, click any of the links or fill any of the search fields. However, please don't use the Arcade search function as it is not a part of this usability evaluation. As you explore the site I will be asking you a series of questions:

- What is *NYARC*?
- Who are the target users for this site?
- What are your initial impressions of the site?

Do you have any questions? Please begin. (GO!!!)

{Give participant time to perform the task, express thoughts & answers - record important information}

All done? Thank you for your insight. Are you ready to move on to Task #2?

Task #2: Find out about the projects that NYARC has done, and name three

Please take a few moments to browse the site and find out about the projects that NYARC has done. When you' ve located some, please name three.

{Give participant time to perform the task, express thoughts & answers - record important information}

If you are done with this task, let me take this time to ask if you would you like a drink or a quick break?

{If Yes - take a break, if No move on.}

Great, I would like to now move to Task #3.

Task #3: Explore the Internships; find and note available ones

Now I'd like to ask you to explore internship opportunities with NYARC. Please find some internship opportunities and note whether they're currently available.

{Give participant time to perform the task, express thoughts & answers - record important information}

Thank you. I would like to now move to Task #4. You're almost done!

Task #4: How would you find opportunities for partnering with NYARC?

Please take a final look around the site, this time imagine you worked for an institution interested in opportunities for partnering with NYARC. How would you find these opportunities?

{Give participant time to perform the task, express thoughts & answers - record important information}

Again, I want to thank you for spending your time today to help us learn more about NYARC.

{Close Silverback}

Post-Evaluation Assessment

So before we end this session, I would like to give you a brief post-test questionnaire to learn your final thoughts about your experience with the *NYARC* website.

{Open link for Post-Test & wait for the questionnaire to be finished & for the participant to hit 'Send'}

Debrief

Thank you for participating in our study. We appreciate your time and feedback, and want to assure you that all the information you provided will remain anonymous, and not shared with anyone outside the research team.

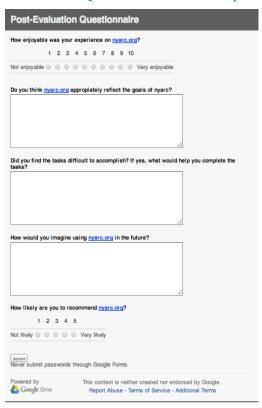
From here our team will take the recorded feedback of you performing the four tasks, review it, analyze it and combine it with other users' tests to write up our usability report for the *nyarc.org* website.

Do you have any questions at this time about today's session?

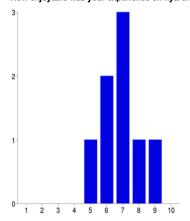
Again, thank you for your participation today and feedback on what works and what doesn't on the *nyarc.org* site.

{Moderator's chosen farewell}

Appendix D: Post-Evaluation Questionnaire and Response



How enjoyable was your experience on nyarc.org?



Do you think nyarc.org appropiately reflect the goals of nyarc?

I'm not sure I know what the goals of NYARC are. It's clear what the organization's purpose is, but the goals are not apparent. yes. The goal is a little unclear. I had actually never heard of NYARC until now, which seems weird. Maybe there could be some more social media? It seems that research is the main goal but there is no direct portal right to the research tools or catalogs. A lot of really cool things are buried under less important things. Mostly it does a good job of showcasing its initiatives and pointing researchers to its OPAC, but they don't make it clear how they can work with other institutions or hire people. It's very static it doesn't solicit participation. Not really. This could be stated more simply in one place on the website. Yes. The home page is clear. I think the goals could have been explained a little more clearly.

Did you find the tasks difficult to accomplish? If yes, what would help you complete the tasks?

A little difficult due to the top navigation bar. It wasn't very topically organized. I was glad there was a search option b/c I used it The site was easy to navigate mostly, but there was some content missing. It was hard to find information about opportunities to intern or collaborate as an institution. But it was easy to find their blog, and information about current projects. The tasks were standard and fairly easy to complete. No, the three links at the top are very helpful and easy to navigate. Also, the pages I looked at were short enough that I could see additional links at the bottom (sometimes I won't see those kind of links because I don't scroll down). No. I found some of the tasks difficult to accomplish. I think more helpful navigation links and more informative pages would help. for me, yes. because I prefer to read bullet points over long sentences. more bullet points. No. The information was easy to access, but organized in a strange way.

How would you imagine using nyarc.org in the future?

For online exhibits. To refer art students doing research. I guess I would use it as a research tool on projects or to see what types of things are going on at Moma Library, Brooklyn Library, and/or the Frick. I wouldn't because I'm not part of the organization's user base or audience. I probably wouldn't visit the site again. In my field, no. I might use nyarc for image reference searches. I would use NYARC.org to get to the OPAC so that I could look for resources. I would use it to view online exhibitions and other digital image resources.

How likely are you to recommend nyarc.org?

