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DataONE Website User-Experience Test Results
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June 28, 2016

The University of Tennessee's Center for Information and Communication Studies (CICS) conducted a standard usability study for the DataONE website (www.dataone.org). The study focused on new users to DataONE, for example, those who heard about DataONE in a presentation and want to learn more. This report discusses the finding and provides suggestions and recommendations for improvement.

METHODOLOGY

Testing

Testing was conducted June 20-28th, 2016 in the UTK CCI-ORNL User-Experience Laboratory located in the University of Tennessee's Communication Building.

Tests were recorded using MORAE Recorder. This software allows the researcher to record and analyze the participants as they complete the tasks. The researcher observed the test through a one-way mirror and MORAE Observer which mirrors the participant's screen. After the test was completed, the researcher and participant discussed the test and what the participant liked, did not like, and overall impressions.

The researcher used a standard methodology, where participants were given tasks and the researcher watched the participant complete the tasks without helping the participant. Participants were asked to verbalize their thoughts ('think aloud') as they completed the tasks.

Participants

Seven participants completed the testing. Two participants were not familiar with DataONE before testing while three participants were slightly or somewhat familiar with DataONE, and two participants considered themselves moderately or extremely familiar with DataONE. None of the participants are employed, volunteer, or are associated with DataONE.

Two of the participants are graduate students, three are faculty members, and two are research staff. Participants are in the information science or science disciplines.

Tasks

Participants completed 11 tasks on the DataONE website. Each task represented a question that a new users who had heard about DataONE and wanted to find more information would potentially ask. A list of tasks can be found in Appendix 1.

It took participants an average of 12 minutes to complete all 11 tasks. The test ranged from eight and a half minutes to over 16 minutes. The average time on task does not include the follow-up discussion at the end of the test. The discussion ranged from five to 15 minutes.

TASK RESULTS

Task One

Task one asked participants to find the answer to “What is a Member Node?” Four participants successfully completed the task. Participants looked under “About” or “Participate” and one participant found the Member Node section on the home page. The “Participate→Member Node” page does not include a definition. Participants found the definition of a Member Node under “General Requirements”, “Partnership Guidelines”, or “Benefits to Member Nodes”. Participants thought that since Member Nodes seem to be a core part of DataONE it would be easier to locate its definition. Depending on what a new user knows about DataONE, Member Node may be an unfamiliar term.

Task Two

Task two asked participants, “How many data files does Minnesota Population Center have in DataONE?” Six out of seven participants were able to complete the task. They thought the dashboard was easy to use and the graphics were clear and colorful. The one participant who did not complete the task searched for Minnesota Population Center and received a link to the MPC description page which did not provide the necessary information or a link to the dashboard (<https://www.dataone.org/minnesota-population-center>).

Task Three

Task three asked participants the date of the next DataONE users group meeting. All participants were able to locate the information. Five participants saw the information on the home page. Two participants went to ‘Participate→DataONE Users Group’.

Task Four

Task four asked, “You are an individual researcher, find out how you can preserve and make available your data through DataONE.” Participants struggled with this task. Most participants went to “Participate”. Only one participant completed the task because he was the only participant to look under the “data” tab. One person went to “Find it Fast→Data” but that is not the same link as the main navigation “data”. Participants said they expected to find the information near the Member Node information. In addition, they did not look under “Data” because they expected to see a search or because the word “data” is so abundant on the page the link does not stand out.

Task Five

Task five asks, “You heard DataONE did a webinar on research computing skills, please find the recording session.” All participants were able to complete the task. There were no major issues. One participant was confused by the different series of webinars. The participant was not sure if date, experience, or level of expertise distinguished the series.

Task Six

Task six asks, “Find the events calendar.” All participants completed the task. Most participants looked under “About” or on the home page first but easily found it under “participate”. They thought the calendar made sense under all those categories. They liked that it is included in the Find it Fast links.

Task Seven

Task seven asks, “Find the Data Life Cycle and identify three best practices in the describe stage.” Five of seven participants were able to complete the task. Participants looked under “education” and “resources” for the information. Overall there were no major issues with this task. One participant found the data life cycle but did not realize she could click on the image to go to the different stages. It may be valuable to include a brief instruction for clicking on the stages for more information.

Task Eight

Task eight asks, “You are the administrator of a data repository. Your repository would like to join DataONE. What are the four phases associated with joining?” All of the participants were able to complete the task. Half of them used the main navigation menu (Participate→Member Nodes→How to Become a Member Node) and the other half went to the Become a Member Node link on the home page. Participants thought the steps and their graphics were easy to follow and made the process look easy.

Task Nine

Task nine asks, “Go to the Ask DataONE page. Find the answer to “what is the investigator toolkit?” All the participants completed the task. There is no link to the Ask page from the home page. A user has to go to the incorrect page to see the Find it Fast pages that includes Ask DataONE. The Ask DataONE page should be accessible from the home page (either on the home page or in the navigation). Participants liked the overall design and layout of the Ask page; however, they thought the cartoon images for contributors made the site seem less serious.

Task Ten

Task ten asks participants to return to the home page and then, “You’re submitting a grant and need a data management plan. Use the DataONE website to help learn about data management planning.” Participants thought the DataONE logo on the Ask page would return them to the main website, but it does not. It would be useful to include a link to the main website from the Ask page. All of the participants were able to complete the task. There were no major issues with finding the data management plan. Most participants used the “Find It Fast: data management planning” link, and two participants used the ‘Education→Data Management Modules’.

Task Eleven

Task eleven asks participants to sign up for the DataONE Mailing List. They could stop before submitting the form. Six of the seven participants completed the task. Most participants had difficulty locating the mailing list at the bottom of each page. Many participants expected to find the information under “About→Communication”.

USABILITY ISSUES

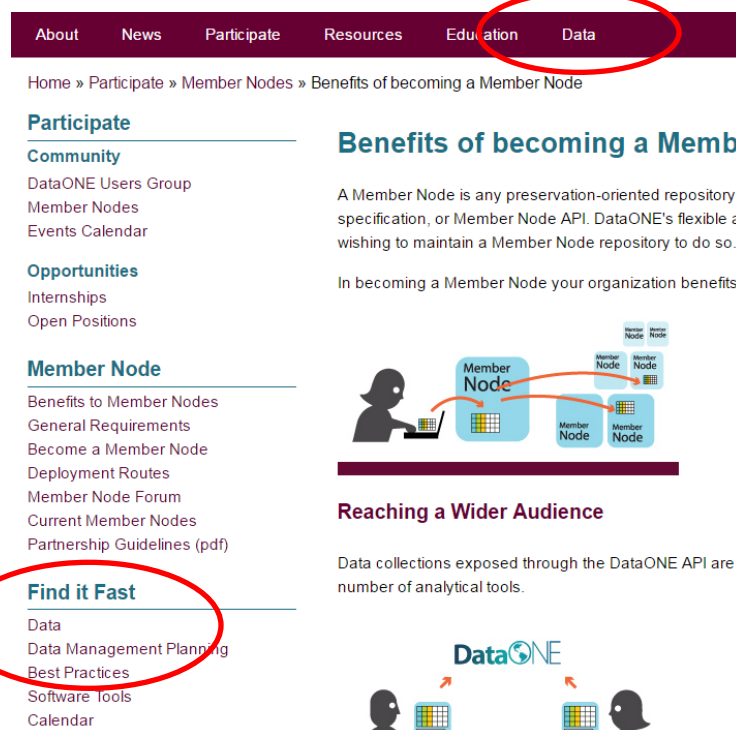
Data on Main Navigation



Issue: The Data Navigation is not often used. Participants thought the word, “data”, was profusely used on the home page and the Data menu, therefore, did not stand out. Additionally, people assumed “data” took them to the search.

Recommendation: Explore alternative titles for the “data” menu.

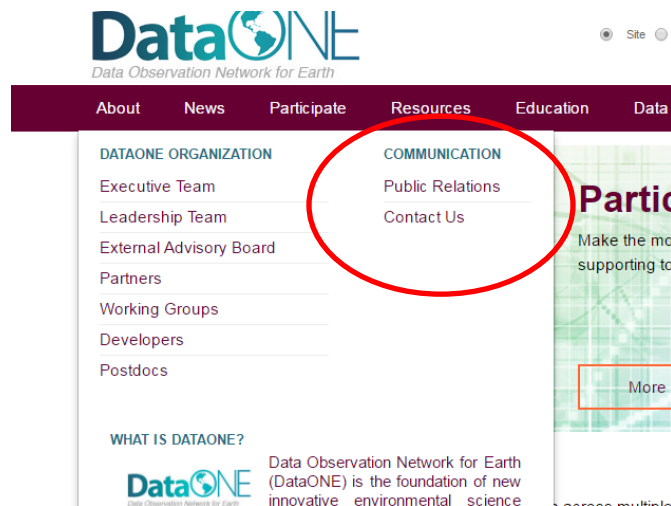
Multiple Data Links



Issue: “Data” is the title of the Find it Fast link to ONEMercury and to the Data menu. This adds to the confusion as to what to expect to find under each link.

Recommendation: Change either one or both of the link names. “Find it Fast: Data” could be renamed “ONEMercury Search”.

Location of Mailing List

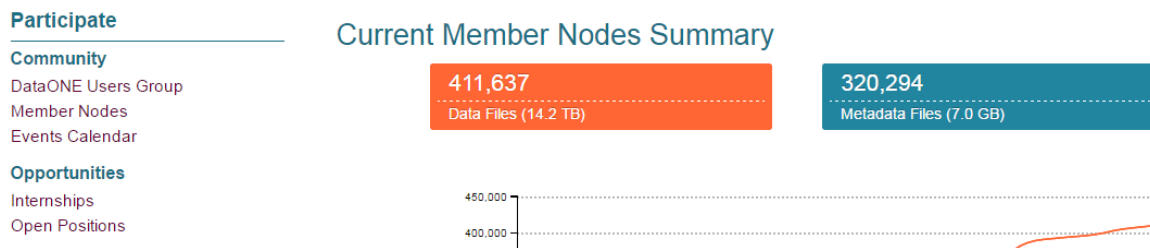


Issue: Participants had a hard time locating the mailing list. They expected to see it under “Communications” since it is a form of communication.

Recommendation: Consider adding a link to the mailing list under “Communications”.

Definition of Member Node

Home » Participate » Member Nodes » Current Member Nodes



Issue: New users coming to the website for information will not necessarily be familiar with the term, “Member Node”. The main page for member nodes is the current member node summary. While the page shows member nodes, there is no description.

Recommendation: Consider add a few sentences providing definition of member nodes. For example, the Benefits page includes the following description, “A Member Node is any preservation-oriented repository that exposes its data products through the DataONE service specification, or Member Node API. DataONE's flexible architecture and software products allow practically any organization wishing to maintain a Member Node repository to do so.”

Sorting Current Member Nodes

Status	Home	Name	MN Document
		Cornell Lab of Ornithology eBird	
		Dryad Digital Repository	
		Earth Data Analysis Center (EDAC)	
		Environmental Data for the Oak Ridge Area	
		ESA Data Registry	
		Europe Long-Term Ecosystem Research Network (LTER Europe)	
		Global Lake Ecological Observatory Network (GLEON)	
		Gulf of Alaska Data Portal	

Issue: Users have to scroll a lot to find specific member nodes in the dashboard. As member nodes continue to be added, this issue will intensify.

Recommendation: Consider adding a search, sort, or other feature to allow for easier browsing of the member node dashboard.

Names of Webinar Series

About
News
Participate
Resources
Education
Data

Home » Education » Webinars

Education

Online

- Data Management Modules
- Webinars
- Screencast Tutorials
- Data Stories

Training Activities

In Person

Webinars

- Webinar Information
- Upcoming Webinar
- Previous Webinars**
- Series Two
- Series One

Find it Fast

Webinars

[Previous Webinars and Discussion](#)

The DataONE Webinar Series

The DataONE Webinar Series is designed to engage pa environmental sciences. Please join us for discussions c innovative science through shared data and ground-bre

February through May 2015 we launched a short series series with new topics and new speakers.

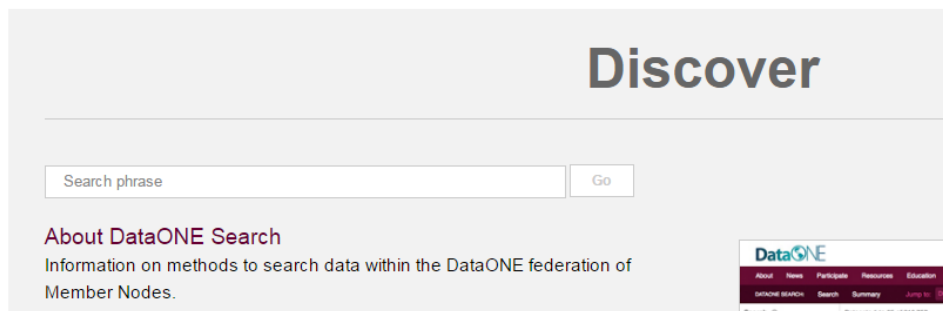
[Previous webinars](#) included:

- Bertram Ludäscher, Chris Jones, Lauren Walker -
- Jennifer Lin, Matthew Jones, Martin Fenner, John I
- Cameron Neylon - Boyle's Laws in a Networked W
- Jean-Claude Guédon - Open Data and Science: Ti

Issue: Participants did not know what the difference between Series One and Series Two of the webinars. It was not clear if the series signified date, skill level (webinar for beginners, webinar for advanced users, etc.).

Recommendation: Consider a different way of labeling the webinar series; for example, by date/year.

Labelling of DataONE Search



Issue: The “DataONE Search” search bar is not clearly labeled on the home page. A few new users tried to use the search bar to search the website.

Recommendation: Consider labeling the search bar with a description, “Search DataONE’s data holdings:” or another indicator that emphasizes the DataONE Search.

Location of Find it Fast

Find it Fast

- Data
- Data Management Planning
- Best Practices
- Software Tools
- Calendar
- Ask DataONE

Issue: the Find it Fast links are not really fast. Ask DataONE is only located in the Find it Fast side navigation. If a user comes to the home page and wants to find the Ask DataONE page, it is not clear where to go. The user has to go to a wrong page before finding the correct link.

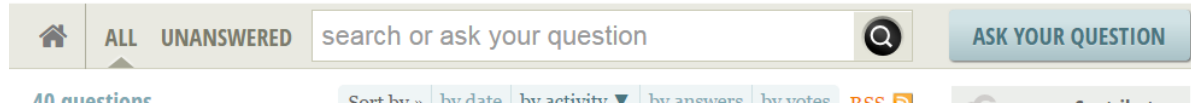
Recommendation: Consider adding the Find it Fast links to the home page. Also, add the Ask DataONE page to the top navigation.

Link to Ask DataONE



tags people & groups badges

Hi there! Please sign in help



Issue: There is no link from Ask DataONE to the main DataONE website. Participants expected the DataONE logo to return to the home page.

Recommendation: Include a "Back to the main website" button to the page.

Contributor Icons



Issue: Participants thought the cartoon images took away from the serious, expertise tone of the page. The icons made the page feel like a social media site rather than an informative site.

Recommendation: Use an alternative picture for the contributors who do not have a personalized picture.

CONCLUSION

Overall, new users were able to navigate the DataONE website to find needed information. Participants thought the design and layout of the website, including the homepage, were clean and clear. Most of the usability issues discovered during test are minor.

One issue participants encountered was accessing the Ask DataONE page. Since the link is not located on the home page or in the navigation (only in the Find it Fast bar) participants struggled to find the page. They had to go to the wrong page in order to get to the right page. Adding the Ask DataONE page to the main navigation or on the home page will alleviate this issue. Overall, participants liked the design of the Ask DataONE pages.

Another issue that was discussed during testing with the exclusiveness or inclusiveness of the DataONE Users Group. Many of the participants were not familiar with DataONE and thought the Users Group felt exclusive, like they could not join. Changing the wording on the website (<https://www.dataone.org/dataone-users-group>) to seem more inclusive (e.g., “everyone is welcome to join”) could help new users become a part of DataONE.

An important aspect of DataONE is its member node framework; however, new users could be confused by the term. If a new user searches for Member Nodes, he will most likely go to the Current Member Node Summary. Participants thought the current member node summary was easy to understand, but they thought the page should include a definition of a member node since it is the first page the user lands on if they are looking for information on member nodes. They also thought a way to sort or search the current member nodes could be helpful as the number continues to grow. They also thought it would be interesting to see the member nodes on a map to see how global DataONE is.

The usability testing showed a website that is friendly to current users and new users. As DataONE continues to grow the website needs to maintain its usefulness to new users who may be coming to the website with little information. Continued annual usability testing can ensure that the website continues to meet the needs of its growing user base.

APPENDIX 1

DataONE Website UX Test

Tasks:

- 1) What is a DataONE member node?
- 2) How many data files does Minnesota Population Center have in DataONE?
- 3) When is the next DataONE Users Group Meeting?
- 4) You are an individual researcher, find out how you can preserve and make available your data through DataONE.
- 5) You heard DataONE did a webinar on research computing skills, please find the recorded session.
- 6) Find the events calendar.
- 7) Find the Data Life Cycle and identify 3 best practices in the describe stage.
- 8) You are the administrator of a data repository. Your repository would like to join DataONE. What are the four phases associated with joining?
- 9) Go to the "Ask DataONE" page. Find the answer to "What is the Investigator Toolkit?"
- 10) Return to www.dataone.org. You're submitting a grant and need a data management plan. Use the DataONE website to help learn about data management planning.
- 11) Sign up for the DataONE mailing list (You may stop before submitting the form).