

Dataverse Usability Evaluation: Findings & Recommendations

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Agenda

- Introduction
- Scenarios
- Findings & Recommendations
- Next Steps

Introduction

Scenarios

Scenario One

- Data Users: Individuals who are exclusively **searching** for specific datasets, studies, collections, dataverses. Individuals who **access and use** datasets provided by other people.

Scenario One

Dataverse Feature	Task Number
Searching (Basic and Advanced) and Refining	1, 2, 3a, 3b, 5a
Browsing dataverses	4a, 4b
Downloading Files (single & multiple), Subsetting, Restricted Access	5b, 6a, 6c, 7
Citing Data	6b
User Guide	8
Icon Use	9

Scenario Two

- Data Creators: Individuals who **upload, store, share and publish** their own datasets, studies, collections

Scenario Two

Level	Dataverse Feature	Task Number
Account	Dataverse Creation	1
Dataverse	Settings- Editing Description	2
Account & Dataverse	Studies – Study Creation	3
Study	Entering Cataloging Info	4
Account & Study	Studies – Uploading Files	5
Study	Permissions – Restricting File Access	6
Study	Release study	7
Dataverse	Collection – Collection Creation (Static & Dynamic)	8a, 8b
Dataverse	Settings – Publishing Dataverse	9
Homepage & Study	Re-access Dataverse	10
Dataverse	Settings- Unrelease Dataverse	10

Findings & Recommendations

Pre and Post Test Survey

- Twenty-one users were involved in testing, two of them were pilot participants
- 12/19, 5/19, 2/19
- 4.2/7
- 13/19

Basic & Advanced Search

- Users understood where to locate the basic search function well
- Advanced search was more problematic
 - Users were frustrated that when they received no search results they could not go back and edit what they already had
 - They were not aware of what would happen when they hit enter on the advanced search page
 - The advanced search fields were hard for users to grasp

Browsing dataverses

Dataverses

[Create Dataverse](#)**528** Dataverses

i A **Dataverse** is a container for research data studies, customized and managed by its owner.

BROWSE DATAVERSES BY FILTER BY ORGANIZATION

Association, Society (37)	Business, Industry (5)
Government (24)	School (Harvard) (101) ▼
School (Other) (194)	

BROWSE DATAVERSES BY FILTER BY TYPE

Institutions, Depts, Centers (74)	Journal Replication Archive (30)
Large Collections (33)	Research Projects (114)
Scholars (265)	

RECENTLY RELEASED DATAVERSES

Test Dataverse JN	May 16, 2013
open	May 10, 2013
Heppler, Michael	May 3, 2013
gpd	Apr 23, 2013
es_test_34	Apr 19, 2013

[View More >](#)

Accessibility

- Participants commented on font size being too small
- Red and green asterisks denoting required vs. recommended fields on forms hard to either see or differentiate
- Recommendation:
 - Work towards creating a version of Dataverse that follows accessibility guidelines
 - Harvard's University Disability Services recommends following the W3C's Web Accessibility Initiative Guidelines

Identifying specific studies & data files

- Data & Analysis Tab
 - Font size issues
 - Difficulty distinguishing between files
 - Loading more files on the page
- Downloading subsets of variables
 - Ability to sort variables
 - Downloading options
 - Citing a data file

Identifying specific studies & data files














[Cataloging Information](#) **DATA & ANALYSIS** [Comments \(0\)](#) [Versions](#)

i Use the check boxes next to the file name to download multiple files. Data files will be downloaded in their default format. You can also download all the files in a category by checking the box next to the category name. You will be prompted to save a single archive file. Study files that have restricted access will not be downloaded.

! Due to the large number of files associated with this study, only 25 files are loaded at a time.

☐ Select all files

Showing **25** of **218** Total Files Total Downloads: **14408**

<input type="checkbox"/> 1. Data and Documentation		
<input type="checkbox"/> SAP 1996-2000 Pupil Questionnaire, 1997-1999 Pupil Interview.zip Zip Archive - 4 MB - 197 downloads	 Download Download	Files in original formats, zipped file
<input type="checkbox"/> SAP Class Observation, Teacher Questionnaire, 1996-1999.zip Zip Archive - 1 MB - 153 downloads	 Download	Files in original formats, zipped file
<input type="checkbox"/> SAP School Committee [1996-2000], Textbooks [1999].zip Zip Archive - 1 MB - 123 downloads	 Download	Files in original formats, zipped file
<input type="checkbox"/> School Assistance Program in Rural Kenya 1996-2000 Part 1 1996-1998.zip Zip Archive - 1 MB - 131 downloads	 Download	Files in original formats, zipped file
<input type="checkbox"/> School Assistance Program in Rural Kenya 1996-2000 Part 2 1999-2000.zip Zip Archive - 377 KB - 111 downloads	 Download	Files in original format, zipped file
<input type="checkbox"/> School Assistance Program in Rural Kenya Test Scores I 1996-2000.zip Zip Archive - 2 MB - 139 downloads	 Download	Files in original formats, zipped file
<input type="checkbox"/> School Assistance Program in Rural Kenya Test Scores II 1996-2000.zip Zip Archive - 3 MB - 120 downloads	 Download	Files in original formats, zipped file
<input type="checkbox"/> 2a. SAP 1996-2000 Pupil Questionnaire, 1997 -1999 Pupil Interview: Data Files		
<input type="checkbox"/> 96pupil1_2.tab Tab Delimited - 4 MB - 131 downloads + analyses <div>TABULAR DATA 7425 Cases 219 Variables</div>	 Download as...  Access Analysis + Subsetting	 View Data Citation [+]
<input type="checkbox"/> 96Pupil2_2.tab Tab Delimited - 3 MB - 74 downloads + analyses <div>TABULAR DATA 11411 Cases 100 Variables</div>	 Download as...  Access Analysis + Subsetting	 View Data Citation [+]

Identifying specific studies & data files

☐ 99Pupint3.tab
Tab Delimited - 515 KB - 73 downloads + analyses

TABULAR DATA

2531 Cases

76 Variables

Download as...

Access Analysis + Subsetting

View Data Citation [+]

☐ 99PupQ1.tab
Tab Delimited - 758 KB - 82 downloads + analyses

TABULAR DATA

2530 Cases

131 Variables

Download as...

Access Analysis + Subsetting

View Data Citation [+]

☐ 2a. SAP 1996-2000 Pupil Questionnaire, 1997 -1999 Pupil Interview: Other Associated Materials

☐ Pupint97.doc
MS Word - 18 KB - 76 downloads

Download

☐ Pupint98.doc
MS Word - 40 KB - 69 downloads

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☐ QU_PUP99.DOC
Plain Text - 43 KB - 70 downloads

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☐ 2a. SAP 1996-2000 Pupil Questionnaire, 1997 -1999 Pupil Interview: Variable Descriptions

☐ 96pupil1_2.pdf
Adobe PDF - 364 KB - 79 downloads

Download

☐ 96Pupil2_2.pdf
Adobe PDF - 198 KB - 66 downloads

Download

☐ 97pupint_2.pdf
Adobe PDF - 135 KB - 46 downloads

Download

☐ 97pup_T101.pdf
Adobe PDF - 394 KB - 70 downloads











Download

Show All Files

Showing 25 of 218 Total Files

Load Next 25 Files

Identifying specific studies & data files

Variable Information Table << < 1 2 3 4 > >> >I				
<input type="checkbox"/>	Type	Name	Label	Summary
<input type="checkbox"/>	Continuous	schoolid	ID Number of school	
<input type="checkbox"/>	Discrete	studid	ID Number of student	
<input type="checkbox"/>	Continuous	std	Standard student is in	
<input type="checkbox"/>	Discrete	day	Day of the interview	
<input type="checkbox"/>	Discrete	month	Month of the interview	
<input type="checkbox"/>	Discrete	year	Year of the interview	
<input type="checkbox"/>	Character	language	Mother tongue	
<input type="checkbox"/>	Character	religion	Religion	
<input type="checkbox"/>	Character	religoth	Religion if 'other' option mark	
<input type="checkbox"/>	Character	nursery	Nursery class before std1	

Creating an account & dataverse

- Multiple participants expected clicking on the create an account box would link them directly to the create account page
- Error messages would sometimes occur off screen and participants would not know where they had made an error

Creating studies & uploading files

- Participants noted the asterisks on the create study form as being difficult to differentiate
- The instructions at the top of the page blended into the rest of the content
- Using “upload” instead of “save” when uploading files

Settings & Permissions

- Restricting Access for Files
 - Participants weren't sure which section accurately restricted files
 - Participants weren't confident in the terminology used for restricting access

Settings & Permissions

STUDY

hdl:1902.1/20852

Save

Cancel

MANAGE STUDY PERMISSIONS

i Restrict or permit access to this study, all files uploaded to the study, or selected files only. You can restrict all users, or permit selected users to access the study or files.

ENTIRE STUDY PERMISSION SETTINGS

Cataloging Information and File Settings

Public



If this setting is public, files can still be restricted below

User Restricted Study Settings

Username/Group:

Add

Enter username/group to allow restricted study access.

FILE PERMISSION SETTINGS

Restricted File Settings



Allow users to request access to restricted files for this study (you will get an email notification for each request).

INDIVIDUAL FILE PERMISSION SETTINGS

Restricted File User Access



Select file and enter username/group to allow restricted file access, or set the file permission. (The single update button works for either field.) Select multiple users/groups by checking the boxes under User/Group Restricted File Access.

Username:

File Permission:

Choose permission...



Update

Remove

View All Files

<input type="checkbox"/>	Category Name	File Name	Found In Version(s)	Permission	User/Group Restricted File Access

Save

Cancel

Settings & Permissions

- Releasing a dataverse or study
 - Participants weren't confident they had actually released their dataverse
 - Participant stated it would be nice to have a confirmation pop up appear to confirm releasing of study
- Streamline Permissions
 - Condense permissions pages for studies and dataverses into one page
 - Users will no longer click around looking for the separate permissions pages

Collections

- Participants had difficulty locating the Collections tab
 - User guide was not helpful as path to tab was not included
- Participants had easier time creating dynamic collection after static collection creation
 - Familiar with process and had located Collections tab
- “Child” and “parent” terminology caused confusion
 - Participants were not familiar with terminology
- Collections tab is labeled “Sub-Collection” once it is clicked on
 - Caused participants to think they were in the wrong tab

Collections

- Static collection creation
 - Participants didn't notice list of studies at bottom of page

i A collection, by default, contains all studies in its sub-collections, if any exist. To add additional studies, you can browse or search in your and other dataverses, then select studies to add to the static collection. Or you can change the collection type from static to dynamic and define a query using the examples provided.

Type ☒ Static ☐ Dynamic

Name

Parent

Description

Selected Studies

Studies to Choose From

Find studies by [Browse](#) or [Search](#)

Dataverse

Collection

hdl:1902.1/20852	Study	Usability Dataverse
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Homepage

- Dataverse home link is hard to identify
 - Users often tried the “IQSS” link in the top left corner first, followed by the “Powered by the Dataverse Network” on the right side
 - Users often did not identify the Dataverse homepage link as a link

User Guides

- Users liked text in the guides as opposed to screen shots or videos
- The guide content does not currently match Dataverse's content in all cases
- Users did not like that the guide pops up in a different window

Icons

- Tested with both scenarios
- Search and user guide icons easy to identify
- Report a problem icon not very intuitive
 - Participants thought it was a cartoon bubble or chat icon
- Plain text rather than icons
 - “It would be more straightforward than the icons”-participant

Icons

- Settings icon
 - Does not appear on Dataverse homepage once a user is logged in
 - Takes 3 clicks before it appears
- Recommendation:
 - Persistent settings icon

Icons



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The Harvard Dataverse Network is open to all scientific data worldwide. Includes the world's largest collection of social science research data. Learn more about the [Dataverse Network](#).

Dataverses

[Create Dataverse](#)

528 Dataverses

A **Dataverse** is a container for research data studies, customized and managed by its owner.

BROWSE DATAVERSES BY FILTER BY ORGANIZATION

Association, Society (37)	Business, Industry (5)
Government (24)	School (Harvard) (101)
School (Other) (194)	

BROWSE DATAVERSES BY FILTER BY TYPE

Institutions, Depts, Centers (74)	Journal Replication Archive (30)
Large Collections (33)	Research Projects (114)

Studies

[Create Study + Upload Data](#)

51,816 Studies, **720,988** Files, **770,537** Downloads

A **study** is a container for a research data set. It includes cataloging information, data files and complementary files.

RECENTLY RELEASED STUDIES

Usability Study	May 16, 2013
open_st	May 10, 2013
wiki	May 10, 2013
Notification Test by Heppler, Michael	May 3, 2013
Restricted File Access	Apr 29, 2013

[View More >](#)

Icons



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Network™** PROJECT
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Liz Quigley

Log Out

ACCOUNT FOR QUIGLEYE

Studies

Dataverses

[Update Account](#) | [Change Password](#)

Username quigleye
Full Name Liz Quigley
E-Mail elizabethaquigley@gmail.com
Institution
Position Student
Phone Number

Icons



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Liz Quigley Log Out

Account for quigleye

Studies

DATAVERSES

i You have permission to work in all dataverses listed on this page. Click the dataverse name to go to that dataverse's homepage.


Create Dataverse





Dataverse Name	Role
Usability Dataverse	admin

Icons

Harvard Dataverse Network >

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[Usability Dataverse Dataverse](#) 

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testing

Usability Dataverse

[Advanced Search](#) [Tips](#)

Sort By: 

Studies: **1** | Downloads: **0**

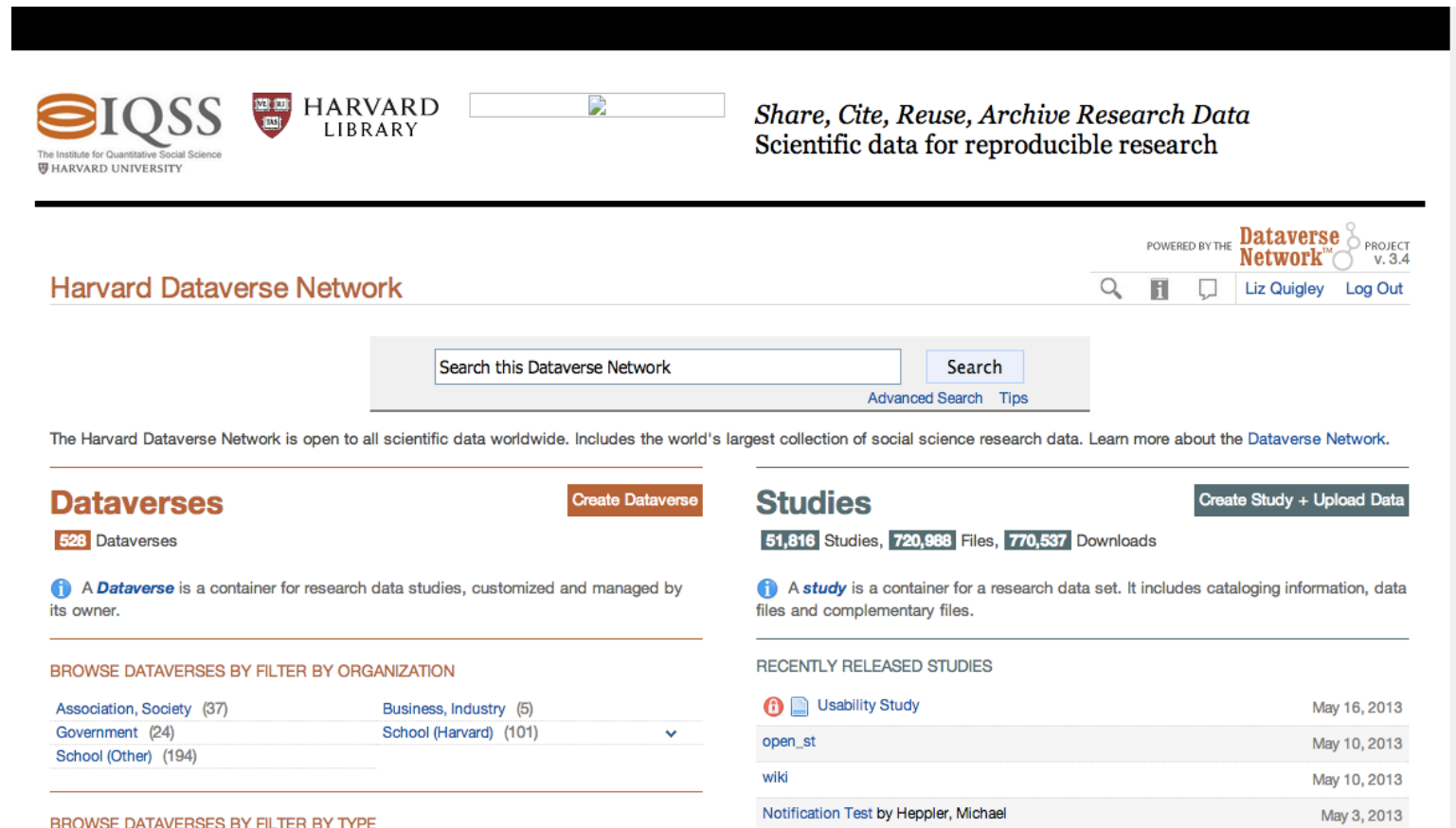
Study	hdl:1902.1/20852 Last Released: May 28, 2013
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Hierarchy of Dataverse

- Users had difficulty visualizing and explaining hierarchy
- Confused by how collections fit in Dataverse
- Recommendation: add a visual representation of Dataverse
 - Content uploaders can easily tell where they are in Dataverse
 - Content uploaders can easily access different levels of their content

Accounts

- Differences between administrator account and basic account



The screenshot shows the Harvard Dataverse Network homepage. At the top, there are logos for IQSS (The Institute for Quantitative Social Science, Harvard University) and the Harvard Library. A search bar is present next to the Harvard Library logo. To the right of the logos, the text reads "Share, Cite, Reuse, Archive Research Data" and "Scientific data for reproducible research". Below the logos, the text "Harvard Dataverse Network" is displayed. On the right side, there is a navigation bar with a search icon, an information icon, a chat icon, and links for "Liz Quigley" and "Log Out". Below the navigation bar, there is a search bar with the text "Search this Dataverse Network" and a "Search" button. Below the search bar, there are links for "Advanced Search" and "Tips". Below the search bar, there is a paragraph of text: "The Harvard Dataverse Network is open to all scientific data worldwide. Includes the world's largest collection of social science research data. Learn more about the [Dataverse Network](#)." Below this paragraph, there are two main sections: "Dataverses" and "Studies". The "Dataverses" section has a "Create Dataverse" button and shows "528 Dataverses". Below this, there is a description of a Dataverse: "A **Dataverse** is a container for research data studies, customized and managed by its owner." Below the description, there is a section titled "BROWSE DATAVERSES BY FILTER BY ORGANIZATION" with a list of categories: "Association, Society (37)", "Government (24)", "School (Other) (194)", "Business, Industry (5)", and "School (Harvard) (101)". The "Studies" section has a "Create Study + Upload Data" button and shows "51,816 Studies, 720,988 Files, 770,537 Downloads". Below this, there is a description of a study: "A **study** is a container for a research data set. It includes cataloging information, data files and complementary files." Below the description, there is a section titled "RECENTLY RELEASED STUDIES" with a list of studies: "Usability Study" (May 16, 2013), "open_st" (May 10, 2013), "wiki" (May 10, 2013), and "Notification Test by Heppler, Michael" (May 3, 2013).

Harvard Dataverse Network

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Search this Dataverse Network **Search**

[Advanced Search](#) [Tips](#)

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Dataverses

Create Dataverse

528 Dataverses

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Association, Society (37)	Business, Industry (5)
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School (Other) (194)	

BROWSE DATAVERSES BY FILTER BY TYPE

Studies

Create Study + Upload Data

51,816 Studies, 720,988 Files, 770,537 Downloads

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open_st	May 10, 2013
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Accounts



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Dataverses

[Create Dataverse](#)

528 Dataverses

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[School \(Harvard\)](#) (101) [▼](#)

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i [Usability Study](#)

May 16, 2013

[open_st](#)

May 10, 2013

[wiki](#)

May 10, 2013

[Notification Test](#) by Heppler, Michael

May 3, 2013

Next Steps

Further Analysis of User Testing Sessions

- Our analysis is based primarily on qualitative data
- A thorough analysis of time on tasks, user difficulties, and user failures would flesh out our observations

Analytic Data Evaluation

- Dataverse currently keeps analytic data on site usage
- Analytics would show what browsers are most commonly used, how long users spend on pages, and how often the account creation page is accessed
- This information will help guide developers in the future

Persona Development

- What is a persona?
 - Includes: age, fake name, hobbies, work environment, etc
 - Helps to understand how users are interacting with Dataverse
- Data creator and data user current user profiles
 - Need to be expanded, i.e.-staff, faculty, students? Who are they?
- Usability method: survey

Faceted Search Competitive Analysis

- Faceted search for next iteration of Dataverse would benefit from a competitive analysis
- Competitive analysis of databases featuring faceted search used by Dataverse users
 - How is their faceted search set up?
 - What filters do they use?

Dataverse & Research Site Linking

- Users commonly use Google Scholar or HOLLIS to locate studies with data sets contained in Dataverse
- Linking Dataverse studies to their finished products in commonly used search engines would help the site's traffic

Further User Testing

- Dataverse creators were underrepresented in this user testing run
- Remote testing would allow Dataverse to solicit more information from data creators