The Dataverse Project

Usability Testing Driven Redesign
of Dataverse - *an open source data repository*

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Purpose:
This study focuses on improvements in the usability of the Dataverse data repository open source software over the course of development of the latest version, 4.0, through iterative usability testing.

Subjects:
Current and potential international users of Dataverse comprised of researchers, librarians, and data archivists.

Method:
- Users were selected to participate after either volunteering or being recommended by a member of the Dataverse development team.

- Users participated either in person or remotely (via Skype, Google Hangout or join.me) and sessions lasted for around 45 minutes.

- Each session involved a user completing specific tasks in Dataverse 4.0 to validate design decisions made for workflows.

- Each session was recorded with Morae software in order for the data to be later analyzed.

- Qualitative and quantitative data were collected through observation and surveys.

- To identify patterns in workflow issues, affinity diagrams were used to determine which usability issues happened most frequently and when workflows were interrupted.
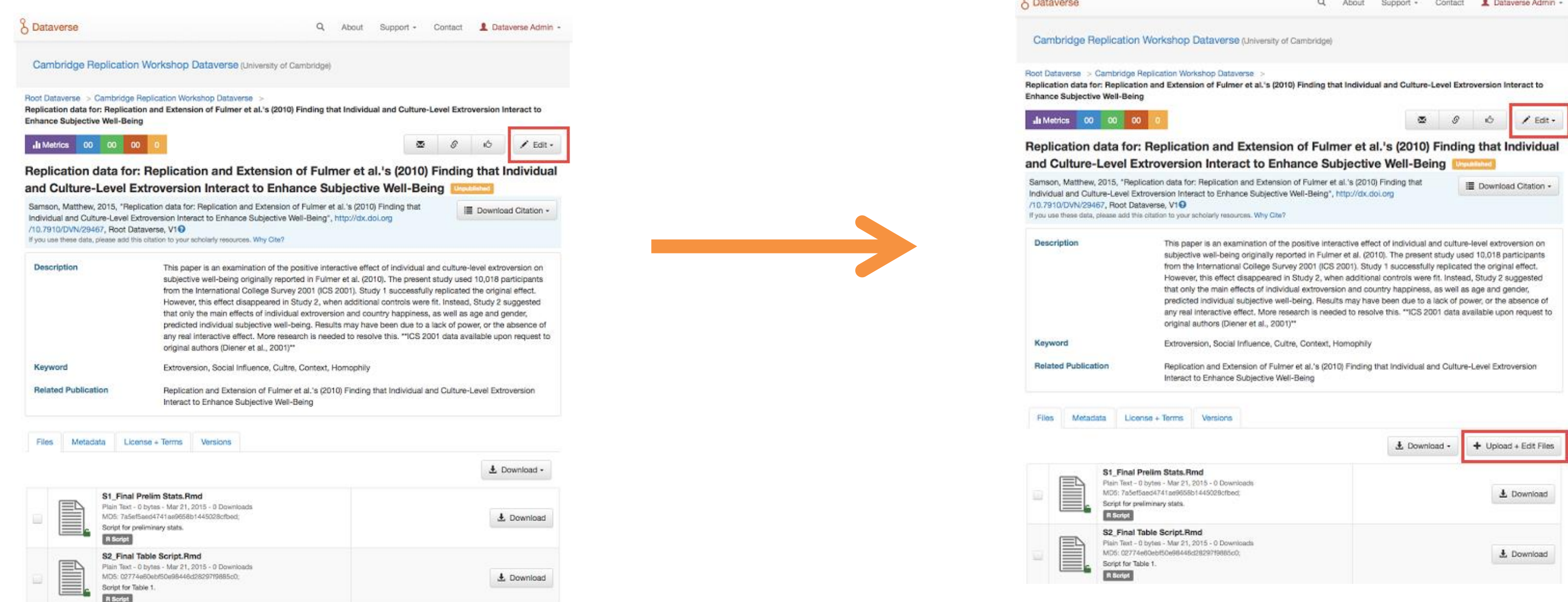
Remote Testing Tools

Affinity Diagram Example

Results:
- Began in December of 2013 and concluded in February 2015
- Lasted throughout the development of Dataverse 4.0 to test various pieces of functionality or features that were being developed
- With iterative usability testing:
  - The taxonomy for Dataverse 4.0 was able to come straight from users not understanding labels that had been used and suggesting labels that were more logical to them
  - Ways to provide users with multiple entry points to editing datasets was added based off user feedback
  - Faceted navigation for searching dataverses, datasets, and files was improved to allow users to narrow down to only one type easily
  - And many other changes

Editing Dataset Buttons

Facet Revisions

First Sketch   End Result

Conclusion:
Overall, Dataverse 4.0 was able to quickly be tested and designs were able to be validated when they were developed rather than waiting months for users to interact with them. Most importantly, the Dataverse development team was able to release a product that had already been through extensive user review therefore eliminating potentially large issues that could or would impact a user being able to find or add data to Dataverse.