You Are Not Your User
Dispelling Usability Myths with Harvard’s Dataverse

Gustavo Durand + Elizabeth Quigley
Institute for Quantitative Social Science
Harvard University

dataverse.org
Session Description

All of us have experience in developing Java applications, but how many of us know how best to make them usable? UX is a team effort, not just one person’s role. This presentation goes over some common UX myths and how a developer and a UXer can work together to improve the UX of an application. Reviewing examples from the development effort of Harvard’s Dataverse Project, it shows how this project has dispelled some of these myths and solved them with Java techniques. It also shares some simple ways to incorporate UX practices into your product development cycle.
Dataverse Team

- Began in 2006
- Number of developers has varied over years
- Currently:
  - 4 dedicated developers
  - 1 lead
  - shared QA
  - shared UX specialist and UI designer
- Initially, involved internal users for UI design /reviews
- In 2013, hired students from Simmons College to do a Usability Review
  - afterwards, brought UX specialist (Elizabeth) on full time
Dataverse Technology

Glassfish Server 4.1

Java SE7
- plan to upgrade to Java SE8

Java EE7
- Presentation: JSF (PrimeFaces), RESTful API
- Business: EJB, Transactions, Asynchronous, Timers
- Storage: JPA (Entities), Bean Validation
Software framework for publishing, citing and preserving research data (open source on github for others to install)

Provides incentives for researchers to share:
• Recognition & credit via data citations
• Control over data & branding
• Fulfill Data Management Plan requirements
What is a Dataverse or Dataset?

Schematic Diagram of a Dataverse in Dataverse 4.0

Container for your Datasets and/or Dataverses*

* Dataverses can now contain other Dataverses (this replaces Collections & Subnetworks)

Schematic Diagram of a Dataset in Dataverse 4.0

Container for your data, documentation, and code.

Data files
Documentation
Code

Descriptive Metadata

Image created by: Eleni Castro
What are UX myths?
“UX Myths collects the most frequent user experience misconceptions and explains why they don't hold true.” - uxmyths.com

Created by Zoltan Gocza and Zoltan Kollin

“Our goal is to provide evidence in user experience design that can help stakeholders move away from design decisions that are based merely on beliefs and personal opinions. But you should still do your own research, check how your design performs.”
UX design is a step in a project & UX design is about usability
UX Design is a step in a project

Many think that user experience design is confined to sketching the interfaces. However, UX design is a much broader process that - ideally - starts at the strategy level and affects the whole lifecycle of a project or a business.

UX Design is about usability

Usability allows people to easily accomplish their goals. UX design covers more than that, it’s about giving people a delightful and meaningful experience. A good design is pleasurable, thoughtfully crafted, makes you happy, and gets you immersed.
How UX solves problems

- Content strategy
- User research
- Usability
- Interaction design
- Information architecture
- Visual design
User research delivers insights, not answers.
priorities:
1. useful
2. usable
3. desirable

somethings never change.

Functional Requirements Document

UI Workflows:

- Log In->Account Page->Data Related to Me Tab
- Log In->Account Page->Data Related to Me Tab->click on facet to narrow down to only dataverses
- Log In->Account Page->Data Related to Me Tab->click on facet to only see datasets
- Log In->Account Page->Data Related to Me Tab->click on facet to only see files
- Log In->Account Page->Data Related to Me Tab->Add Data->New Dataverse->Pop up saying, “This dataverse will be created under the Harvard Dataverse.”
- Log In->Account Page->Data Related to Me Tab->Add Data->New Dataset->Pop up saying, “This dataset will be created under the Harvard Dataverse.”
The importance of content

- Be open to changing terminology, labels, and help text
- Be aware of robot terminology in UI
- Have a connected experience:
  - Links to guides in the application
  - Don’t make users hunt for what they are looking for
Usability testing is expensive
In fact, usability tests can be **both fast and relatively cheap**. You **don’t need expensive prototypes**; **low-tech paper prototype tests** can also bring valuable results. You don’t need a lot of participants either, even 5 users can be enough to test for specific tasks, and the recruiting can also be done guerilla-style. For many projects, you can even use **remote and unmoderated tests**.
Remote Moderated Usability Testing

- Connect with users around the world
- Reduces cost of incentives
- Easier to manage
- Shows me how our products work on other computers and browsers
Remote Moderated Usability Testing Tools

For connecting:
- Google Hangouts
- Skype
- join.me
- Go to Meeting

For recording:
- Morae
- Quicktime
- Silverback
Usability testing = focus groups
When it comes to collecting feedback from users, **usability tests and focus groups are often confused although their goals are completely different.**

*Focus groups assess what users say:* a number of people gather in order to discuss their feelings, attitudes and thoughts on a given topic to reveal their motivations and preferences.

*Usability testing*, on the other hand, is *about observing how people actually use a product*, by assigning key tasks to users and analyzing their performance and experience.
But what if your boss or the stakeholder doesn’t want usability testing done?
Contextual Inquiries

- No scenario or tasks planned

- Takes place in the user’s office, home, wherever they are comfortable and where they use the product most

- Sit there and watch the user interact with the product as they complete tasks they normally do
If you are an expert, you don’t need to test your design
When it comes to evaluating the usability of an interface, user testing is often considered unnecessary if an expert has already reviewed it. Since people rarely behave the way you expect, *an expert can find major usability problems, but usability tests always reveal surprising issues.*

*Usability testing and expert reviews are both useful and tend to have different findings,* therefore it’s usually recommended to combine the two in order to get the most comprehensive analysis of the interface.
Inherit Roles + Permissions
- Inherit all the roles and permissions from the parent dataverse to this dataverse.

### Users/Groups
- Invite User: Invite a user to create a Dataverse account, and assign them a role to your dataverse.

#### Filter
- Filter:

#### Select All / Revoke Selected
- Showing 10 of 220 Role Assignments

<table>
<thead>
<tr>
<th>User/Group</th>
<th>Role</th>
<th>Object</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guest (n/a)</td>
<td>Non-Registered (Root Dataverse)</td>
<td>All</td>
<td></td>
</tr>
<tr>
<td>Pete Privileged (<a href="mailto:pete@malinator.com">pete@malinator.com</a>)</td>
<td>Admin (Root Dataverse)</td>
<td>All</td>
<td>Revoke</td>
</tr>
<tr>
<td>Uma Underprivileged (<a href="mailto:uma@malinator.com">uma@malinator.com</a>)</td>
<td>Curator (Root Dataverse)</td>
<td>All</td>
<td>Revoke</td>
</tr>
<tr>
<td>Carrie Contributor (<a href="mailto:carrie@malinator.com">carrie@malinator.com</a>)</td>
<td>Contributor</td>
<td>All</td>
<td>Revoke</td>
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<tr>
<td>Carl Contributor (<a href="mailto:Carl@malinator.com">Carl@malinator.com</a>)</td>
<td>Contributor</td>
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<td>Revoke</td>
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<td>Carson Contributor (<a href="mailto:carson@malinator.com">carson@malinator.com</a>)</td>
<td>Contributor</td>
<td>1 Dataverse</td>
<td>Revoke</td>
</tr>
</tbody>
</table>
 Beta Dataverse

Permissions

Here is the current access configuration to your dataverse.

Who can add to this dataverse?

Anyone with a Dataverse account can add sub dataverses and datasets

What should be the default role for someone adding datasets to this dataverse?

Curator - Edit metadata, upload files, and edit files, edit Terms, Guestbook, File Restrictions (Files Access + Use), Edit Permissions/Assign Roles + Publish

Users/Groups

Here are all the users and groups that have access to your dataverse.

<table>
<thead>
<tr>
<th>User/Group Name (Affiliation)</th>
<th>ID</th>
<th>Role</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dataverse Admin (Dataverse.org)</td>
<td>@dataverseAdmin</td>
<td>Admin</td>
<td>Remove Assigned Role</td>
</tr>
<tr>
<td>Anyone with a Dataverse account</td>
<td>:authenticated-users</td>
<td>Dataverse + Dataset Creator</td>
<td>Remove Assigned Role</td>
</tr>
</tbody>
</table>
Edit Access

Who can add to this dataverse?

- Anyone adding to this dataverse needs to be given access
- Anyone with a Dataverse account can add sub dataverses
- Anyone with a Dataverse account can add datasets
- Anyone with a Dataverse account can add sub dataverses and datasets

What should be the default role for someone adding datasets to this dataverse?

- Contributor - Edit metadata, upload files, and edit files, edit Terms, Guestbook, Submit datasets for review
- Curator - Edit metadata, upload files, and edit files, edit Terms, Guestbook, File Restrictions (Files Access + Use), Edit Permissions/Assign Roles + Publish

Save Changes  Cancel
Design has to be original
Many designers would rather attempt reinventing the wheel than to adapt conventional user interface design patterns. It should be considered, however, that such design conventions are well-working because they’ve already been introduced and tested for usability. Since the users know them well, you don’t need any explanation or instruction manual. As users appreciate usability over novelties, standard patterns will eventually benefit your audience.

It might occur that a new approach is needed, but you must be 100% positive that your solution is better than the existing pattern.
Do not want.
But what if you don’t have standards to follow?
United States Digital Services + 18F

- Two groups in the U.S. government working towards improving websites and applications produced by the U.S. government

- Jointly created the [U.S. Web Design Standards](#)
  - Includes code available on Github to download for UI components
Icons enhance usability
Many researchers have shown that **icons are hard to memorize and are often highly inefficient**. The Microsoft Outlook toolbar is a good example: the former icon-only toolbar had poor usability and changing the icons and their positioning didn’t help much. What did **help was the introduction of text labels next to the icons**. It immediately fixed the usability issues and people started to use the toolbar. In another study, the team of UIE observed that **people remember a button’s position instead of the graphic interpretation of the function**.

In most projects, icons are very difficult to get right and need a lot of testing. For abstract things, icons rarely work well.
People always use your product the way you imagined they would.
Even if a product was *designed to fulfill specific and known user needs*, customers don’t always use it the way and for the purpose the product was originally intended.

In many cases, *users don’t care or don’t understand how a product works*, and once they find a way to use it, they’ll stick to it. Many people, for example, type URLs into the Google search bar instead of the browser’s address bar.

You should, therefore, *never take your design for granted and always collect feedback on how your product is actually used to reveal the real user needs and to get ideas of innovation.*
Please confirm and/or complete the information needed below in order to download files in this dataset.

- Name *
- Email *
- Institution *
- Position *
- Additional Questions: How will you use this data? *

[Accept]  [Cancel]
You are like your users
When designing a website, it’s easy to assume that everybody is like you. However, this leads to a strong bias and often ends in an inefficient design.

You evidently know a lot about your services and your website; you’re passionate about them. Your users, on the other hand, are likely to not care that much. They have different attitudes and goals, and just want to get things done on your website.

To avoid this bias, you need to learn about your users, involve them in the design process, and interact with them.
WE INTERVIEWED HUNDREDS OF USERS AND TURNED ALL OF THEIR SUGGESTIONS INTO FEATURES.

AS IT TURNS OUT, EVERY USER WE TALKED TO WAS AN IDIOT, AND THEIR DUMB SUGGESTIONS RUINED OUR PRODUCT.

IN HINDSIGHT, WE PROBABLY SHOULD HAVE TALKED TO PEOPLE WHO WORK OUTSIDE THIS BUILDING.
If the user can’t use it, it doesn’t work.
— Susan Dray

Thank you! Any questions?

Contact: gdurand@iq.harvard.edu or equigley@iq.harvard.edu