THE PRESENTATION IS FINISHED. NO FURTHER EDITS, PLEASE
Report from Formal Drupal Usability Testing at the University of Minnesota Libraries

Drupalcon Boston 2008
Day 1, Monday 3 March
Documents for this presentation at:

http://groups.drupal.org/usability

Follow along online:

http://tinyurl.com/ywrb4s
(requires a Google login)
Why is the U of M interested in Drupal?

The University of Minnesota Libraries Are...
...Standardizing on a (Social) Platform
- Drupal as Library Web Applications "Glue"
- Drupal Powered Academic Community Sites
  - HarvestChoice, EthicShare

How Did This Get Started?
- Barcelona Drupalcon Keynote
  - Dries: Usability!, Usability!
- We Have a Lab, You Have a CMS
  - Helping Drupal Helps Us
Why formal usability testing?
Because none of us can unlearn how to use Drupal.
Because we can't forget what a node is.
Because we know that Post Settings, Input Format, and Display Fields, are not commands
Because the people who care most about Drupal, can never use it for the first time again.
So we asked some kind people to use Drupal for the first time in this little room.
where this lot could observe
Through the one-way glass
and on these monitors.
What to test?

Drupal is highly customizable
What to test?

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In most cases deployment of Drupal requires heavy customization of UI/modules/etc.
What to test?

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In most cases deployment of Drupal requires heavy customization of UI/modules/etc.

What do we test that will be relevant to the most users?
The short answer:

Drupal 6.x core
CCK
Garland theme
The long answer

Tasks that required users to grok:

- CCK content types and fields
- Users, roles, and permissions
- Taxonomy (we're librarians, after all)
- Menus
- Blocks
The long answer

We had to be very careful in how we worded the tasks

- Tasks had to match the evaluator's mental model and vocabulary (i.e. a page is a page, not a node type)
- Tasks had to avoid terminology that appears in the Drupal interface
Personas

Initial persona set:

- Visitor
  - Anonymous user
- Content contributor
  - Authenticated user
- Site maintainer
  - Sub-admin
  - Editor
- Site admin
  - Installer
  - DB Admin
  - Server Admin
Personas

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Evaluators

In order to find people who could succeed, the lab recruited people who had experience with the following:

Blog apps like Movable Type or WordPress

Other CMSs

but not Drupal.
These are our people
These are our people

the kind of people who we'd like to see using Drupal
These are **our** people

the kind of people who we'd like to see using Drupal

the kind of people we'd like to think **could** use Drupal
And this is what we found...
What we see

Welcome to the administration section. Here you may control how your site functions.

Hide descriptions

**Content management**
Manage your site's content.

**Comments**
List and edit site comments and the comment moderation queue.

**Content**
View, edit, and delete your site's content.

**Content types**
Manage posts by content type, including default status, front page promotion, etc.

**Post settings**
Control posting behavior, such as teaser length, requiring previews before posting, and the number of posts on the front page.

**RSS publishing**
Configure the number of items per feed and whether feeds should be titles/teasers/full-text.

**Taxonomy**
Manage tagging, categorization, and classification of your content.

**Site building**
Control how your site looks and feels.

**Blocks**
Configure what block content appears in your site's sidebars and other regions.

**Menus**
Control your site's navigation menu, primary links and secondary links, as well as rename and reorganize menu items.

**Modules**
Enable or disable add-on modules for your site.

**Themes**
Change which theme your site uses or allows users to set.

**Site configuration**
Adjust basic site configuration options.

**Actions**
Manage the actions defined for your site.
What *they* see
"Yowza!"
Task 1

Create a form with some simple fields so users can list upcoming workshops.
OK I'm building a site, so I'll start with Site Building.
Content Management probably isn't where I want to be right now, so I'll start with Site Building, then Blocks.
1. This is where they spent most of their time, but nothing on this page had anything they needed to complete their tasks.
2. They were looking for things that said "field" or "form".
If I can find anything at all about forms...
A lot of this language is unfamiliar... like content type.
1. Confusion between content, content type, and create content.
2. People don't find what they're looking for here. Next stop: Site building/Site configuration...
3. Only get here after help desk call. :(
"Story seemed very jargony to me."
1. Expecting this to be where fields are added.
2. One participant immediately backed out of here, saying "Oh, I'm back in Create content again" because of the descriptions.
3. Looking for the ability to create content and add fields here.
4. Expecting these links to be a "preview" of what the form looks like.
Eye-tracking on content types panel
I want to create the ability to add forms, but I can't see where they live.
Is a field a content type? Is a concept of a field a content type? Or is a field name a content type?
1. Several users added 'field' definitions here. They thought they could add the field forms to the 'page' they had created so that librarians could add workshops from the 'page' with the fields on it.

2. Fields tab was invisible (and empty)
1. Core fields are in submission form settings, CCK fields are hiding under a tab.
2. With all fieldsets expanded, this form is one yard long.
A page, I think I know what a page is.
A page, I'm thinking web page?
What the heck is a book page?
Am I creating a *thing* for creating web pages or am I *creating* web pages? Am I *creating* content or am I *creating a content*? Whoah, confusion.
1. People confused about page vs. story.Descriptions didn't help them to understand (and too long).
2. People thought "Page" and "Story" were the only options; didn't know that you could add more.
3. People think "Page" is a *whole* web page which they can put different things *into* (like forms).
4. "Story" term universally not understood.
Create content or content type?

1. Back and forth and back and forth between Create Content and Create Content Type.
[35 minutes later.]
I think this is what I've been wanting to do all along. I wanted to add a field.
Add field

1. Once users get here, they grok the whole concept of adding fields very well.
2. The problem is it took them **30-40 minutes to find it** at all.
3. People don't notice the data types, they focus on widgets. Participant chose "Autocomplete Text" on Node reference because it said "text."
1. Several users **thought menu settings were required** information because of its prominence in the form.

2. **Parent item was universally not understood.** People stuck menu items at random places, and then did not realize what it meant. One suggested "child" might be better.
1. **No one** understood the teaser splitter.
2. People looked here for form-related things.
3. Almost everyone understood what the HTML filter options do.
4. People didn't understand what these did either; mostly just clicked in and clicked back out again.
What happened!! Is this my form, or a preview of my form, or a page, or a story?
1. Users completely lose context here.
2. Worse, when it's a page, they can't get back to it again.
3. Some users thought this was the form they had created. Or the page they'd be putting the form into later.
Task 2

Create an account for "Nancy Pearl" and give her access to create workshops
OK this feels very straightforward.
User management. This is where I want to be.
OK. This is easy!
So I want Nancy to be able to create workshops, and edit her own workshops.
1. People understand what to do on this page, although they clicked "access rules" first.

2. Several commented that these should be sorted by content type.

3. Distinction between "edit own" and "edit any" wasn't always clear.
Task 3

Classify workshops by academic department.
This is starting to make a little more sense here.
1. One user understood *content types* from the help text here and went on to complete much of the task.
2. People want tasks underneath the help text so they don't have to scroll back up.
Oh wow I can add related terms!
I want to make a multiple level of hierarchy but I'm not sure how I would go about that.
I think I'll make this multiple select, and I'll set it to required. Not tags, that's too *bloggy*.
1. The distinction between "term" and "vocabulary" not immediately clear.

2. Looks like re-working this section was a win; immediately understood what "tags" meant.
Task 4
Task 4

No one made it to task 4.
This is where they spent their time instead.
"I am trying to get back to that screen, that had that step by step layout."
None of this looks like what I'm looking for. I guess I'll see if I can search... Oh, I can't.
1. New users read every bit of this text. **Line by line.**
2. Some also used this screen for navigation and didn't notice left hand navigation.
3. Missing overview "how does the system work" info here; users were forced to click around admin panel to figure it out. video tutorial?
4. **When this page goes away, it completely strands people**, as it's the closest thing we have to a tutorial.
It says it provides context sensitive help. But I don't see that anywhere.
Help was completely useless to me.
1. No way to search the help! One user also suggested a static "help" icon to represent contextual help on any page.
2. Users are looking for task based help topics. Drupal is overwhelmingly module-based. Users don't know what a module is!
3. Missing a glossary. One user suggested hover link on jargon in text which defines terms.
What I want to see is a simple HTML form builder.
Is my module going to be a workshop in this system?
1. Yellow box was jarring (though most wouldn't usually see it)
2. Wall of text causes rest of page to go "below the fold." Also caused one user to back out of here immediately, saying "This is too complicated."
3. One user thought this was the wrong place to be, because it says modules "extend" Drupal's functionality, and fields should be built-in.
I see a lot of CCK, what is this CCK?
Oh! Finally! Fields!
1. Some users click "CCK" here expecting it to display a definition.
2. One user's eyes jumped to the green "enabled" text and thought field was already enabled, even after having read that the checkbox was how this was enabled.
3. This is the only place in the entire admin panel where there's prominent mention of a "field"
Right. I'm just going to add them all - wow this might lock up.
[it did.]
Next stop... php.ini!

; on your server or not.
expose_php = On

;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
; Resource Limits ;
;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;

max_execution_time = 30 ; Maximum execution time
max_input_time = 60 ; Maximum amount of time each request data
memory_limit = 48M ; Maximum amount of memory a script may consume (8MB)

;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;
; Error handling and logging ;
;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;

; error_reporting is a bit-field. Or each number up to get desired error
; reporting level
; E_ALL - All errors and warnings
; E_ERROR - fatal run-time errors
; E_WARNING - run-time warnings (non-fatal errors)
; E_PARSE - compile-time parse errors
...Interesting...
Well it starts off nice and clean, but then... 0-60!
1: Universally: this page is **overwhelming**.
2: The way that people learned Drupal was by clicking around all over in this section, as there's no tutorial.
Where They Looked
In The First 5 Seconds

Red Areas = Many Eye Fixations
X's = Mouse Clicks
What was *missing*?? Probably the opposite. What wasn't there? There were so many options...
1. Users expect menus to expand/collapse like fieldsets.
2. Difference between Site Building and Site Configuration not clear enough.
Surprises
I didn't expect to feel so stupid. I don't like feeling stupid.
I need a tutorial.
I need a tutorial.
I need a tutorial.
I need a tutorial.
I need a tutorial.
I need a tutorial.
I need a tutorial.
I already lost the page I just created.
Surprises

● We take our mastery of the "suck threshold" for granted.
  Common tasks that take us 30 seconds to do can take a new user over 30 minutes to *find*.

● When users get stuck, they resort to "brute force."
  Clicking on *all* admin pages, expanding *all* fieldsets, enabling *all* modules.
Surprises

● **Tabs were invisible**
  for key tasks, even on pages people had looked at multiple times for 20-30 minutes.

● **No one clicked on "content types" without direction.**
  They hit create content, site building, input formats, actions, blocks, modules...
Surprises

- **Our help section is completely useless for new users.**
  No glossary, no search. *Module-based* help topics, rather than *task-based*.

- **Interesting workarounds.**
  One participant tried to create the workshop form by typing an HTML form into a block.
Stuff that was easy
Stuff that was easy

- **Logging in.**
  Hooray! :)

- **Permissions page.**
  Once they found it (after looking at "Access rules" first), they instantly understood what the page was for.

- **User management.**
  This section was clearly labeled and instantly found.

- **Taxonomy.**
  This was actually *shockingly easy*. 
Ummm. That's it. ;)
Usability Improvements Gone Wrong
Usability improvements gone wrong

- **Teaser splitter: huh?**
  What's a teaser? What's a summary? What does this do?

- **Menu settings look like required information**
  because of its prominence on the node add form.

- **Asking for help can kill your data.**
  Hitting the "More information on input formats" link takes you away from the node/add form, and you *lose your form data* when you go back (in IE).
Usability improvements gone wrong

- **Password security checking.**
  Several users backed out in a panic because they thought they'd caused an error condition due to **red** text.

- **Organization of administration page.**
  Users visit Site building for everything, expecting to find things like "make a form" there.

- **Collapsible fieldsets don't conceal anything.**
  People end up clicking on all of them to see what's inside.
Usability testing lessons learned

- **Give users early success.**
  Have them complete a few "easy" tasks before you destroy their confidence. ;)


Usability testing lessons learned

- Give users early success. Have them complete a few "easy" tasks before you destroy their confidence. ;)
- You'll never look at Drupal the same way again. We all are experiencing "usability flashbacks" looking at the Drupal administrative interface. :)

Usability testing lessons learned

- **Give users early success.**
  Have them complete a few "easy" tasks before you destroy their confidence. ;)

- **You'll never look at Drupal the same way again.**
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- **Usability testing is exciting, edge-of-your seat excitement.**
  Same task done by 8 different people resulted in 8 different outcomes.
Let's make Drupal 7 rock!

- Drupal 6.1 is out, so UI, text, etc. cannot be changed.
- So...
  Target improvements for Drupal 7 core and Drupal 6 contrib!
How can you help?

View the full results on http://groups.drupal.org/usability

Convert the results from groups.drupal.org into issues at: http://drupal.org/node/add/project-issue

- Title issues as "Usability UMN: <title>"
- Link to issues from the results on groups.drupal.org

Spec out solutions to the more complicated problems on the Usability group.
Q&A
Let's repeat this

**Measure! Don't Guess**

One of the best ways to measure is by Usability Testing. But we need access to resources to repeat this:

- Usability labs
- Lab facilitators
- Testing equipment
- Evaluators
- Observers
- Finances
Informal Usability Testing...

... can be just as valuable as formal testing.
  o GHOP usability tests on installer found major usability bugs

To get full value, we need tools and resources to capture and process data and user feedback.
  ● Click Heat Map module is the first of such tools [drupal.org/project/click_heatmap](http://drupal.org/project/click_heatmap)
    by boombatower, a GHOP student
  ● Watch the Usability group for more details [groups.drupal.org/usability](http://groups.drupal.org/usability)
User Experience Goals

- High level UX considerations

Why do we need User Experience Goals?
- Support developers to build good UIs
- Set a standard for evaluating UIs
- Expectations and goals for all UIs (in Drupal)
Basically, make this...
... look more like this! :)

\[ \text{[Image of a sea of Mister Rogers, with one standing out as Waldo]} \]
Brainstorming UX Goals
Brainstorming UX Goals

- Browsers' Expectations
- Post Settings
- Consistency
  - User Settings
  - Submit/tabs
- Users should be able to publish content
- Offering users informative feedback
  - Context sensitive help
  - Task based
    - Overview tutorial
    - Feedback on forms
- Terminology should not be ambiguous
  - Terms should be defined
  - Help is glossary
- Turn a feature onto Linked ↔ Glossary module
- Shortcuts Navigation
  - Work should flow
  - URL Short
  - Actions should hit the target
- Drupal feels something to explore
- Design for browser
  - We measure the user experience, we don't guess
  - Reflect the user's mental model
- Drupal should not feel overwhelming

See what I produced and what my users see.
User Experience Goals -- Draft

- Measure the User Experience.

Guessing the user interface isn't enough -- Drupal aims to *measure* the user experience. Feedback and data on users' experience and interactions with Drupal's user interfaces informs of usability issues.
User Experience Goals -- Draft

- Measure the User Experience.
- Consistency.

Consistency is a recognized property of usable interfaces. Drupal provides reusable user interface patterns for many user interface elements.
User Experience Goals -- Draft

- Measure the User Experience.
- Consistency.
- Understandable Language.

Drupal aims to use language that is understandable by its users. Help should be useful and readily accessible. Terminology should be *unambiguous*.
User Experience Goals -- Draft

- Measure the User Experience.
- Consistency.
- Understandable Language.
- Not Feel Overwhelming.

Drupal aims to not make the user feel overwhelmed. Drupal aims to make complex tasks *seem* simpler and hide unuseful or irrelevant user interfaces.
User Experience Goals -- Draft

- Measure the User Experience.
- Consistency.
- Understandable Language.
- Not Feel Overwhelming.
- Informative Feedback.

Drupal gives useful and helpful messages and details about users' actions to reassure the user, give them confidence and guide them to related tasks.
User Experience Goals -- Draft

- **Measure the User Experience.** Guessing the user interface isn't enough -- Drupal aims to *measure* the user experience. Feedback and data on users' experience and interactions with Drupal's user interfaces informs of usability issues.
- **Consistency.** Consistency is a recognized property of usable interfaces. Drupal provides reusable user interface patterns for many user interface elements.
- **Understandable Language.** Drupal aims to use language that is understandable by its users. Help should be useful and readily accessible. Terminology should be *unambiguous*.
- **Not Feel Overwhelming.** Drupal aims to not make the user feel overwhelmed. Drupal aims to make complex tasks *seem* simpler and hide unuseful or irrelevant user interfaces.
- **Informative Feedback.** Drupal gives useful and helpful messages and details about users' actions to reassure the user, give them confidence and *guide them to related tasks*. 
Let's Get Consensus

- Measure the User Experience.
- Consistency.
- Understandable Language.
- Not Feel Overwhelming.
- Informative Feedback.

This is a Working Draft.

Join the discussion and process:
- The Usability group: groups.drupal.org/usability
- This Document: groups.drupal.org/node/9252

Destined for a high level in the drupal.org Handbook
Possibly next to Drupal's mission and principles?
- drupal.org/mission
- drupal.org/principles
I wish there was a way to switch between the backend and see the results.
Conceptual Barriers
Conceptual barriers

- **Where do I start?**
  Missing step-by-step, task-based, conceptual help, tutorials, and example content.

- **Where did my page go?**
  Users often lose all sense of context.

- **What is "content"?**
  The word "content" is used ambiguously throughout user interface. Content type, Content management, Create content...
Conceptual barriers

- **How do I add a form to my page?**
  Drupal doesn't communicate its mental models well. Users thought content types were fields, content types were content...

- **Where's that key word?**
  Words like "form" and "field" are hardly used in the interface, so users resort to guesswork.

- **What do my users see?**
  No clear distinction between admin and user-level views. No way to **preview** things like node add forms as you're creating them.
1. Some users thought this was an ERROR rather than suggestion.
2. Doesn't make sense to block a new user.
3. One participant commented that this was a really nice feature. :)

1

2

3
1. Tried to change widget, but settings didn't update as expected
2a. Everyone missed the label field.
2b. Didn't grasp that this was human readable text
1. Confused by "number of values", thought it had something to do with number of options.
Manage fields

Workshop

Edit  Manage fields  Display fields  Add field

This page provides a drag-and-drop interface for controlling the order of fields in the input form. To change the order of a field, grab a drag-and-drop handle under the Label column and drag the field to a new location in the list. (Grab a handle by clicking and holding the mouse while hovering over a handle icon.) Remember that your changes will not be saved until you click the Save button at the bottom of the page.

<table>
<thead>
<tr>
<th>Label</th>
<th>Name</th>
<th>Type</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menu settings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>field_classroom</td>
<td>field_classroom</td>
<td>text</td>
<td>configure</td>
</tr>
</tbody>
</table>

1. Save button confusing.
1. Display fields? That must be where you see what the form will look like.
1. Tried to add users here.
2. Wasn't sure what clicking name would do.
1. Adding terms was easy.
2. Users like getting back to this form after submitting it so they can add another term immediately.
3. Users were comfortable with both the form layout and the jargon. (but they were librarians)
1. Lots of people clicked "Access rules" looking for permissions.
2. Some users ignored "Roles" and assumed that only admin created librarians would use the site.
3. Some clicked User settings but instantly understood that was the wrong place to be.