Usability Testing Report for the Dryad Payment System

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Dates of Testing: 08/06/2013 – 08/20/2013
Location of Testing: NESCent
Moderator: Mercedes Gosby

Prepared By: Mercedes Gosby
E-mail: mercedes.gosby@nescent.org

Summary

Usability testing was conducted to identify design and usability issues of the Dryad payment system and the general submission system. The participant pool consisted of NESCent researchers and members of the Dryad Board of Directors. In-person and remote usability testing was conducted at NESCent. Mercedes Gosby, UI/UX Designer at NESCent, moderated and scribed the usability testing sessions.

Results of the usability testing revealed that design changes are needed to make the Order Summary visible and less confusing to submitters, and to make the process of submitting data smoother, and with less errors.

Methodology

Types of Testing

Participants had the option to complete one usability testing session with the moderator in-person or remotely, or complete testing without a moderator on their own. In-person moderated usability testing took place at the Main Building of NESCent. Remote moderated usability testing also took place in the Main Building using Skype to connect with participants.

Participants

Five participants completed moderated usability testing of the Dryad payment system from August 6 to August 20, 2013. Two participants went through the non-moderated testing process and e-mailed their feedback. Demographic information is below:

Gender

Female	1
Male	6
Total participants	7

Type of Participant

NESCent researcher	2
Dryad Board member	5
Total participants	7

"Have you used Dryad?"

Yes	5
No	2
Total participants	7

"Have you submitted data to Dryad?"

Yes	3
No	4
Total participants	7

Tasks

Participants were asked to complete a pre-task interview, two tasks, and a post-task interview for each task. Copies of these documents can be found at the end of this report, beginning on page 18.

Collected Data

The following data were collected: total time of usability testing session, comments, questions, suggestions, gender, whether or not participants have used Dryad, and whether or not participants have submitted data to Dryad.

Findings and Recommendations

The findings consist of questions, concerns, and suggestions from participants before, during, and after testing. Recommendations are from the moderator.

Payment System-Related Findings

Findings	Recommendations	Impact
3 participants did not notice the Order Summary until the Add and Describe Data File page or afterwards. "I'm focused on the main content of the page. There's a lot to scroll through. The [Order Summary] box gets lost." "Box popped up after continue to checkout [button]." "I didn't pay attention until after I uploaded my data file. I don't expect it to be accurate."	Design alternatives are being created and will be tested.	High
1 participant was conflicted about when the Order Summary should display. "Why is it there? Why not just at the last screen? It's there, but not part of the workflow. But maybe you do want it. I'm conflicted. Don't need to see the box on every screen. Maybe at the beginning and at the end.	Design alternatives are being created and will be tested.	High
3 participants requested more explanatory text throughout the submission process. "What is a non-integrated journal	The Cost Recovery System Wireframes wiki page includes explanatory text and the design is currently being implemented. If needed, more explanatory/help text will be added.	High

fee?" "My total is $0, but why?" "Indicate that the voucher code and credit card is either/or [on Checkout page]." After explaining to a participant that a voucher code does not cover extra fees, they said: "Add more text explaining this."		
1 participant was unsure of when their card would be charged (after submission or after curation).	Format the block of text at the bottom of the Checkout page that explains this, differently so that it is more visible to submitters.	High
2 participants wanted a receipt after completing the submission process. "I would like an itemized final receipt at the end. I want the option to print it out on this page and get the receipt in an e-mail." "I want to download the PDF and get an e-mail."	A final receipt and an e-mail with the receipt have already been discussed and will be implemented. The option to print and/or download the receipt can be added to the final page of the submission process.	High
1 participant wanted to figure out if their journal or organization had a voucher plan or a subscription plan. "Does NESCent or Duke have a voucher plan? Whom do I ask? I hope my journal would inform me if they have a	After a journal is selected, provide text next to the journal input field stating whether or not the journal has a plan, and if the submitter will be charged.	High

plan." The participant was asked if they would like to see this information in Dryad, and if so, "where?" "Absolutely. I'd expect this information on the FAQ page. Or an extra column in the Integrated Journals table."		
1 participant, on the Submit New Content page, selected a country in the fee waiver section. "I assume I need to pay now before I continue. I expect that I need to put information in [the Order Summary], but I see a next button that is active. Confusing." The same participant later said: "There is no reason to have the voucher code and fee waiver there [in the Order Summary]. It should be static. Doesn't make sense. [Fee] waiver list is confusing and should be separated out. On the payment page, you should have the opportunity to enter the voucher and waiver."	Design alternatives are being created and will be tested.	High

1 participant liked the idea of verifying their credit card. “Novel. I like being able to verify my card before submitting the order. Does it save my information?”	Add text on the Checkout page stating that Dryad does not save payment information.	High
1 participant suggested that an alert be displayed to users if they are uploading a large data file that is subject to an extra charge.	After a short-term solution for uploading large data files is implemented, an extra charge notice should be added as well. Refer to the Large File Transfer Trello card for updates.	High
1 participant suggested removing the voucher code input field after selecting a country in the fee waiver pull-down. “Voucher code is still there after choosing fee waiver. Put a note there that the voucher code and fee waiver can be entered later.”	Currently being discussed.	High
1 participant said: “I'm not sure that the user is being made sufficiently aware of the sponsor, although I realize the designs for the payment system have changed considerably from the ones I saw.”	Currently being discussed.	High
1 participant wanted to select a card from the credit card images displayed on the Checkout page.	People are used to selecting a card type. Consider adding this to the page, whether it is selecting a credit card image, choosing from a drop-down menu, etc.	Medium

1 participant asked: "Was I finished after I paid? Didn't you need an address to verify the card?"	People are used to entering a billing address for their credit card. If this information is needed, add these input fields to the Checkout page.	Medium
1 participant asked if a submission could be finished without payment. "The credit card may belong to the lab or an administrator. Separate it out. Someone may not feel comfortable giving out the credit card information to the submitter. Some people may get stuck."	Consider the option of allowing submitters to receive an invoice.	Medium
1 participant suggested that the Order Summary update to show a $0 balance after they have verified their credit card and received the notice that says, "Your payment has been processed." "I'm nervous that my credit card information didn't go through." Upon explaining to the participant that their card is being verified, not charged at that point, the participant said: "Make it clear that you are not being charged and could be subject to extra fees. And include a link to a page explaining all possible fees. The	**Note:** This text was incorrect, and has been changed to state: "Your credit card information has been verified." Since users are only verifying the card, the Order Summary should not show a $0 balance, because their card will not be charged until after the submission is reviewed.	Medium

Order Summary box should still show a balance of $0 and text explaining the curatorial review process.”		
1 participant stated that there is a typo in the text that displays after the verify card button is clicked.	Correct the typo.	Low
1 participant asked: “Why does the Checkout page say: 'Press a button to edit the description of your publication, add or modify all attached data files, or finalize the submission'?”	The text may have been copied from the Submission Overview page. Change or remove the text.	Low
1 participant asked how the extra curation charge would be handled. “Will you go back to the submitter to confirm that they want to pay the extra charge for a submission in review?”	To be discussed.	Low

General Submission System-Related Findings

Findings	Recommendations	Impact
2 participants were confused by the removal of authors. “I checked the authors to accept them, so why do I have to enter them in again after I try to continue to the	Get rid of checkboxes and remove selected button. Wireframes on the Submission System Usability wiki page contain a design alternative.	High

next page?” 1 participant suggested: “On the Describe Publication page, put author names already added to system on top above 'add author' field. Same for other metadata fields.”		
1 participant said: “On the Submit New Content page, add a link to the Terms of Service to the checkbox.”	Add the link to the page. The Cost Recovery System Wireframes will be updated to reflect this addition.	High
3 participants were confused by the placement of the add button in the author section. “I expect the add button to be next to the last input box.” “The “add” button for authors is in an awkward spot. Unlike for the subsequent cells (e.g., keywords), the add button is above the data entry cells by the header “Authors”.”	Place the add button to the right of the first name input field. Currently being implemented.	High
1 participant pointed out that the three simple steps section at the top of every page should include a Checkout step. 1 participant suggested adding Finalize Submission to the three simple steps section.	The wireframes on the Cost Recovery System Wireframes wiki page contain a design alternative. Currently being implemented.	High
2 participants were confused with the manuscript number	Directly after choosing a journal under the accepted section on the	Medium

input field on the Submit New Content page. “I entered the journal, and as I click on the agree to license, another input box comes up. Confusing. It should just be there.”	Submit New Content page, the manuscript number input field should display.	
1 participant asked: “On Describe Publication page, why is there a DOI field for manuscripts that have been accepted but not published?”	To be discussed.	Medium
1 participant said: “Yellow 'help' text is very intrusive.”	Help text will be placed under its corresponding label. The bare minimum help text needed will be displayed, while extra help text can be found after clicking a question mark icon. Currently being implemented.	Medium
1 participant suggested: “Longer term: The DOI should be provided to the user upon completion of submission, with a note that it will work only after the data package has been reviewed & accepted by a curator.”	To be discussed.	Medium
2 participants were confused by the submit next button on the Checkout page. “What does it mean?” “Change the label. Not clear what is next. Another submission?”	Change the button label to “finalize and submit.”	Medium
2 participants did not care for the page reloading and	After the page reloads, automatically return the submitter	Medium

having to scroll back down the page. “Page goes back to the top after uploading a file. Annoying.” “Each time you click add, the page refreshes and goes to the top, so that I have to scroll down to find the cell for my next entry. It would be really helpful to just be able to enter all data not have to refresh the page until you click “continue” at the end.”	to the section they were working on.	
1 participant wanted the pre-populated data they added to the first data file to carry over to the next data file.	To be discussed.	Medium
2 participants were unfamiliar with the meaning of journal integration and how it is related to pre-populated data taken from the publication.	Briefly explain journal integration after a journal is selected, and/or link out to the Integrated Journals List page. On the Integrated Journals List page, explain journal integration, or provide a direct link to the Journal Integration page.	Medium
1 participant wanted to change the order of the authors.	Wireframes on the Submission System Usability wiki page contain a design alternative.	Medium
2 participants wanted a summary of their entire submission on the Submission Overview page “Before I pay, I’m checking to make sure things are correct. I don’t see authors on the Review page. I’m looking for the	Any important information, such as the primary contact, could be added to the page. A prototype is needed to determine if a complete summary will overwhelm the Submission Overview page.	Medium

complete reference to verify. Do they have my e-mail? I want to see the corresponding author on the review page." "I think it would be very beneficial if the "Submission overview" page would summarize all of the data entered, and not just the name of the dataset and file. The previous page is a bit messy with all of the boxes, and I can imagine it would be fairly easy for people to miss a mistake in complex page. On the summary page this information could be presented fairly compactly since you don't need to present the various boxes and instructions, just the data.		
1 participant asked if their submission information was being saved.	Display a "saving your data" notice after the submitter clicks the next/continue button. Refer to the Submission System Usability wiki page for designs.	Medium
1 participant asked about the accepted data file types.	At the top of the Add and Describe Data File page, format the text differently so that it is more visible and easily read.	Medium
1 participant suggested that an intermediary step should be added to accept the pre-	If the journal a submitter selects is integrated, briefly explain that Dryad will import the information	Medium

populated data. "Before auto-filling this information, ask the submitter if the information is OK. Highlight that this information comes from the manuscript."	from the publication.	
1 participant experienced German translation issues. "Confusing to have only some things translated."	Correct the German translations.	Medium
1 participant said: "On the Submit New Content page, it's not clear why I'm asked if the manuscript has been accepted after I have entered the journal name, because I've already selected the accepted radio button above."	To be discussed.	Low
1 participant said: "Expand the list of other repositories, I would suggest using the same list as EuropePMC + NCBI counterparts."	Expand the list of repositories.	Low
1 participant suggested: "Distinguish the information boxes for general manuscript vs. data file in some way other than the fine print text. Different color?"	None. The information entered for the general manuscript and the data files are on separate pages, and there is text in several areas that explain this.	Low
1 participant asked: "Could you not simply have multiple cells (e.g., one for each keyword) with an	The help text explains that multiple subject keywords, taxonomic names, geographic areas, and geologic timespans can be entered at once if	Low

option to add cells for additional keywords, and have them all saved when you click "continue" at the end? Or, have the keywords (or taxa, or geologic timespans) comma-separated?"	separated by a comma. The redesigned help text is being implemented.	
1 participant suggested: "I also find the need to add authors after each entry to be a bit awkward. I think it would be better to have a small set of cells here (e.g., 3 or 4 rows, one for each author) that are automatically saved when you click "continue" at the end, rather than adding each author separately. You could have a button for "add rows" for when 3 or 4 authors is not enough."	To be discussed.	Low
1 participant said: "I tried to add a second file (both files 1 and 2 that you sent to me) but was unable to do so. On the submission overview page I had the option to "Add new data file"; this implies that you can upload more than one file. I clicked this, and uploaded the 2nd file, but the new data	None. The submitter completed non-moderated testing, and the moderator was not able to recreate this problem in order to come up with a solution.	Low

file just replaced the old data file. Or, if the new data file was actually added, only one file (the one just added) showed up when I returned to the summary page (I could not see a list including both files). I did this multiple times and each time had the same result.		
1 participant was unsure of how to include accent marks in the authors' last and first names.	Dryad has the capability to add accent marks, but this capability needs to be clearly displayed in the submission system.	Low
2 participants noticed the 'Need Help?' box. "It's nice to have." "I noticed the Need Help box, but not the Order Summary box."	Keep the 'Need Help?' box in its current location on every page of the submission process.	Low
1 participant expected to see a checkbox agreeing to the release terms of CC0 on the bottom of the Add and Describe and Upload Data File page.	If agreeing to the terms of CC0 is necessary for the data files, add this checkbox to the bottom of each data file page.	Low
1 participant wanted the first step to be uploading a data file. "Some files are so big, you'd want to fill in information as the file is uploading."	Not necessary. Dryad does not have the capability to allow submitters to continue the submission while data files are uploading. Also, some large data files have to be split into smaller data files in order to be uploaded.	Low
1 participant did not see the edit button in the Add and Describe Data files section of the Submission Overview page.	None.	Low
1 participant did not	If they serve no purpose to the	Low

understand the meaning of the thumbs up and gear icons. “I don’t know what they mean. I’ll ignore this. There is a blue icon for the journal name. It’s not doing anything. I hover over the icon and based on what it says, I’ll change the journal name. Now the icon has changed to a green thumb.”	submitter, remove the icons.	
1 participant wants the delete button to look different than the other buttons on the Submission Overview page. “Change the color to red.”	Since the delete button is an opposite action from the edit button, it should appear differently.	Low
1 participant stated that the upload process is counterintuitive. “File is uploaded automatically. You don’t select a file and then click an upload button. Not how most processes work. Counterintuitive.”	Not necessary to change the upload process.	Low

Other Documentation

The following are links to related documentation:

Cost Recovery System Wiki Page:
http://wiki.datadryad.org/Cost_Recovery_System

Wireframes for Cost Recovery System:
http://wiki.datadryad.org/Cost_Recovery_System_Wireframes

Usability Improvements to the Submission System:
http://wiki.datadryad.org/Submission_System_Usability

February 2012 Usability Testing of Dryad:
http://wiki.datadryad.org/Usability_Testing_2011

Dryad Development Trello Board:
https://trello.com/b/dIAq9aSV/dryad-development

Pre-Task Interview

1. Have you ever used Dryad before?
    a. Yes
    b. No

2. If yes, have you submitted data to Dryad?
    a. Yes
    b. No

3. If yes to #2, what are your thoughts on that process?

Task 1

You have decided to upload data to Dryad for the manuscript (below) that was recently accepted in the Dryad Testing Journal*. The manuscript number is ‘test’. What do you do?

Jones, B., Smith, T., and Tester, T. (2013). Data archiving is great! Dryad Testing Journal, 25: 2501–2510.

Post-Task Interview

1. What are your thoughts about this process?
    a. What worked well?

    b. What did you find confusing or frustrating?

2. Do you have other suggestions to make this process better or easier?

Task 2

You have decided to upload data to Dryad for the manuscript (below) that was recently accepted in the Journal of Virology. What do you do?

Hamilton Jill, Lexer Christian, and Aitken Sally. (2012). Genomic and phenotypic architecture of a spruce hybrid zone. Journal of Virology, 22: 2702-2704

Post-Task Interview

1. What are your thoughts about this process?
    a. What worked well?

    b. What did you find confusing or frustrating?

2. Do you have other suggestions to make this process better or easier?

3. Do you have any suggestions for improving the Dryad web interface in general?