

Final Product Report

H-561: Meaning and Form in HCI

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EXECUTIVE SUMMARY

In continuing our design exploration into improving IUPUI library's Open Access Journal System (OJS, also referred to as "the system"), we created prototypes to test a potential solution we devised. As a refresher, the OJS is an online academic journal management system that enables faculty and professors to freely publish and distribute academic journals, as well as engage with peer reviewers and article authors, and the prototypes we created (both low and high fidelity) were geared towards helping journal editors do their work. In the rest of this executive summary, we highlight some key findings from usability evaluations that we conducted with users of the OJS and what our next steps are.

KEY FINDINGS

First and foremost, our users were thrilled with the prototype's visual design. They liked the layout and were very happy that they could interact with a lot of functionality on one screen without having to do a lot of navigation. They were also happy about the infusion of color – though mostly blue – and with a few changes in a few places would like to keep the visual design in the final product. This wish we gladly intend to grant.

Next, we noticed that our users had trouble with our search functionality, both for the global search and for searching for reviewers. With the global search, knowing what could be searched for was not immediately apparent, while the variety of things that can be found with the reviewer search made it feel ambiguous. We intend to highlight the capabilities of the global search with a bit of placeholder text inside the search box and perhaps introduce field-specific search boxes for the reviewer search.

Also, due to the limits of our prototyping software, some of our icons were not the most suitable for conveying the actions and intents that they represented. We plan to get a more universally recognizable icon set for any future work we do. In addition to using icons, we noticed that in some cases, having some text either as popovers or tooltips would be helpful in apprising our users of the available functionality.

Another issue that our users mentioned to us involves dealing with lists that could potentially hold thousands of entries, like the list of reviewers and people associated with a journal. We intend to change the present behavior by highlighting the search/filter feature as well as adding scroll bars and pagination to those lists.

We also found out that we need to work closely with the users to obtain the correct terminology for many of their tasks and processes. And looking forward, we might need to make some of the task names user configurable because a law journal might, and most likely would, use different terminology than a social work journal.

Finally, the Kanban dashboard with the lists of manuscripts needs to (1) look less like one where the cards can be dragged across lists because that feature is not supported (2) incorporate a prioritization mechanism where urgent cards bubble their way to the top of the list, and (3) add a configurable color-coding scheme with sensible defaults that allows the user to know what sub-phase of the review/edit process a specific manuscript is in.

LOOKING FORWARD

From our usability evaluations and chats with our users, we feel that it would be wise to refine our prototype and incorporate the changes that they suggested before continuing in the design process. We intend to take a hard look at the Kanban dashboard and reevaluate its usefulness because while it provides neat buckets to place the manuscripts, it appears to provide an affordance that is not supported.

From our evaluations, we also realize that so far, we have focused a lot on, and mostly worked out, the first stages of the journey to publication that involve getting the manuscript from the author, assigning editors, and contacting reviewers. But the latter stages which involve multiple back and forth interactions with the author in deciding when a manuscript is ready for publication are sorely under-designed. Some of this can be attributed to our contextual inquiries where we did not get to see the latter processes because the editors had no manuscripts in those stages, and due to the fact that they happen over several weeks. Perhaps a bit of role playing with the editors would help us refine our ideas about those latter stages.

Looking forward, we would recommend further prototyping and usability evaluations with editors to improve the design before commencing development. In fact, we do not recommend development until feedback from the editors start to change from fixes to new features, which would happen when they start to dream up new actions the improved design can afford them.

Also, keeping in mind that the system only works when authors, journal manager, readers, reviewers, and editors work together, we recommend using the prototype as a proof of concept to get other stakeholders at other journals involved so that design on other components of the system for non-editor roles can commence.

The rest of this report details some of our findings from our usability evaluations along with potential fixes for the issues that our evaluators brought to our attention.

USABILITY EVALUATION SUMMARIES

In validating and getting feedback from our intended users, we conducted three usability evaluations with a journal manager and two editors who use the existing OJS and were involved with our contextual inquiries. These evaluations followed a think-aloud protocol where the evaluators expressed their opinions and frustrations as they walked through the prototype. Although the prototype we built is geared towards editors, we decided to include the journal manager in our evaluation because the editors work closely with the journal manager and we wish to avoid creating a product that would only be useful to the editors, and not be a suitable replacement for the aging OJS that presently caters to journal managers as well. Also, we reasoned that since the look and feel of our product would be consistent across all users, it could only help to get a journal manager involved.

EVALUATION WITH A JOURNAL MANAGER

This evaluator primarily focused on the dashboard and the document viewer. They did not want to say too much or give comments about the sections that the editors worked on because while they worked with the editors, each journal conducted their processes differently than others (in some cases very differently), and being a journal manager for multiple journals, they did not feel comfortable digging into it. Below is a screenshot of the dashboard and findings from the usability evaluation. In the remainder of this report, issues raised by the users are annotated with rounded red rectangles.

ISSUES AND POTENTIAL FIXES

The screenshot shows the OJS Kanban dashboard for the journal "Advances in Social Work". The interface is divided into three main sections: "Unassigned (4)", "In-review (3)", and "In-editing (2)". Each section contains a list of articles with their IDs, titles, and authors. The "Unassigned" section has one item highlighted with a red box. The "In-review" section has two items highlighted with red boxes. The "In-editing" section has one item highlighted with a red box. The top navigation bar includes a search bar, user profile icons, and a gear icon for settings.

Category	ID	Title	Author(s)
Unassigned (4)	#21028	School Social Workers as Resp..	Author(s): Smith John, Taylor Kyle
	#21029	Lifelong learning in Social Work	Author(s): Adam Roland
In-review (3)	#21027	Moving Social Work Education..	Author(s): Jason Bourne
	#21026	Self Care and Professional Qua..	Author(s): Soonok An
In-editing (2)	#21024	Mapping Community Capita..	Author(s): Kyle Austin, Kendra Stinson
	#21023	Mapping Dual Degree Programs..	Author(s): Dory Ziperstein

Figure 1. Kanban dashboard

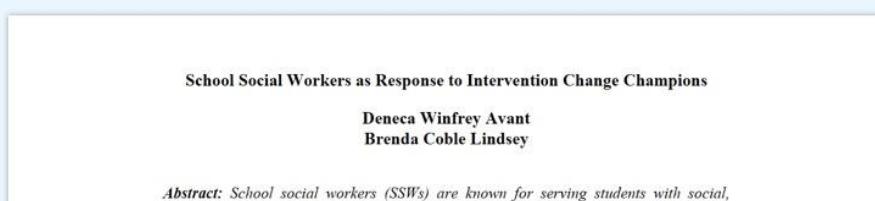
As shown in Figure 1, the range or limits of the global search functionality are not immediately apparent as it is not obvious if the search is for issues, articles, or people; or whether it extends to other journals hosted on the OJS or is restricted to the journal that the user is presently viewing. To remedy this, we intend to replace the "Search" text with something more descriptive like "Search any article, name, issue, etc."

At a glance, the cards in each list appear to support dragging and dropping across lists – in keeping with how Kanban boards work – but this feature is not supported. It is not immediately obvious how to fix this, but we imagine that making the cards look inset or flush with the surface instead of on it might help.

It is not clear who the users the icons in the top left corner represent as the journal manager was not sure if it was editors, authors, or anyone else involved with the journal. Also, the “plus” button for adding users is ambiguous because it is not obvious if it is for adding users who are already in the system or creating a new user. Fixing this might involve replacing the icons with a button that simply says “People.”

OJS READER

 Back to Dashboard



School Social Workers as Response to Intervention Change Champions
Deneca Winfrey Avant
Brenda Coble Lindsey
Abstract: School social workers (SSW's) are known for serving students with social,

Figure 2. Document viewer

On the document viewer, as shown in Figure 2, the journal manager requested that we move the “Back to Dashboard” button to the left side of the screen and simply use the text “Back” because we could have come to it from somewhere other than the dashboard.

EVALUATIONS WITH EDITORS

In this section, we have decided to merge our evaluations with editors together because there is significant overlap in the feedback that we got from both editors.

ISSUES AND POTENTIAL FIXES



Author(s): Smith John,
Taylor Kyle
Submitted on: 02-14-2016
Affiliation: Indiana University, IN
Butler University, IN
Rating:

View Manuscript

Figure 3. Manuscript Details

When viewing the details of a manuscript submitted by an author and its status, as shown in Figure 3, editors are able to view the manuscript if they want to, but we had missed adding a way to view the ancillary data such as a title page that is also submitted by the author. A button below the “View Manuscript” button that allowed the editors to see the ancillary data would be a suitable fix.

The editors did not favor the rating feature for manuscripts and found it distracting because they do not rate manuscripts. Only reviewers do that.

They also wanted to be able to edit the manuscripts directly (and not simply view it) to remove any undesired information that the author might have failed to remove by themselves.

#2102	Reviewers	REVIEWING INTERESTS	COMPLETED	LAST ACTIVE	RATING	ASSIGN
Title: Sc	NAME	Tom Heckle*	7	1 week ago	★★★★★	<input checked="" type="checkbox"/>
Respons		Interpersonal Skills, Tomorrow's Leaders				
Author(s)	Lilly Aldrin*	Environment, Power, Juvenile conduct, Justice	16	1 week ago	★★★★★	<input checked="" type="checkbox"/>
Submitt	Kevin Hui*	Leadership, Self-Identity	12	3 weeks ago	★★★★★	<input type="checkbox"/>

Figure 4. Reviewer selection

When selecting reviewers to review a manuscript, as shown in Figure 4, what the “Last Active” column symbolizes is unclear. The editors perceived it as being any of when the reviewer was last logged in, when they were last assigned a manuscript, and when they completed their most recent review. They were also skeptical about the adequacy of the “Reviewing Interests” column because some reviewers write entire paragraphs as their interests. Also, they remarked that they have thousands of people signed up as reviewers for their journal and wondered if they would have to scroll through all the names if they were looking for someone in particular. The last active problem can be ameliorated by replacing the “Completed” column with when they last completed a review and adding another column for when they were last assigned on. The Rating and Interests can be moved into a detail popover that shows when the reviewers name is clicked or hovered over.

Submissions	Issues
9	3

- Unassigned(4)**
 - #21028 School Social Workers as Resp.. Author(s): Smith John, Taylor Kyle
 - #21029 Lifelong learning in Social Work Author(s): Adam Roland
- In-review(3)**
 - #21027 Moving Social Work Education.. Author(s): Jason Bourne
 - #21026 Self Care and Professional Qua.. Author(s): Soonok An
- In-editing(2)**
 - #21024 Mapping Community Capita.. Author(s): Kyle Austin, Kendra Stinson
 - #21023 Mapping Dual Degree Programs.. Author(s): Dory Ziperstein

Figure 5. Color coding for sub-phases

When viewing the dashboard, immediately knowing what sub-phase of the review or edit process a manuscript is in is presently impossible. One way of tackling this issue is to color code the card such that a manuscript in the 1st review sub-phase of the review phase may be lavender while another manuscript in the 2nd review sub-phase could be purple, violet,

or indigo, as shown in Figure 5. Perhaps a scale from lighter to progressively darker shades the farther along a manuscript is on its journey to publication.

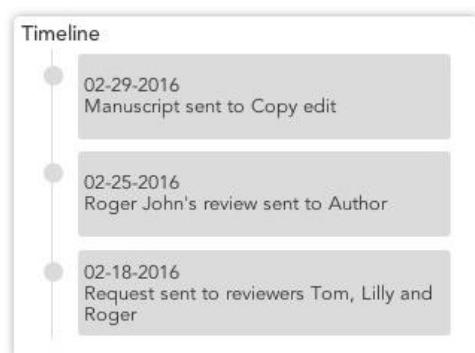


Figure 6. Timeline Pane

The editors were happy that they could see a reverse-chronological timeline (as illustrated in Figure 6) that showed them all the actions that had been taken on a manuscript because it would help them know where they are in the process and how long ago an event happened. But they complained that while knowing the past is helpful, we had not provided them with a way to prioritize a manuscript. Perhaps on the dashboard, we could make each list sortable where the urgent ones can be placed at the top of the pile.



Figure 7. Reviews Pane

Also, on the reviews pane (as shown in Figure 7), one of the editors mentioned that the “Send Reminder” functionality to remind a reviewer to “do their duty” and review the manuscript was nice, but wondered how the reminder would be sent. Since we intend to send an email reminder, we could place an envelope icon next to the Send Reminder text or replace the text with an envelope that has the text as a tooltip.

The Document Viewer interface shows a manuscript page with the following details:

- Title:** School Social Workers as Response to Intervention Change Champions
- Authors:** Deneca Winfrey Avant, Brenda Coble Lindsey
- Abstract:** A detailed abstract describing the role of school social workers in RTI/MTSS implementation.
- Keywords:** Change agents, leaders, Multi-Tiered System of Supports, Response to Intervention, school social workers
- Comments:** Two comments from Roger John are displayed:
 - Comment 1 (circled in red): Roger John, 2:58 PM Today - This argument is unsupported. Citation is invalid.
 - Comment 2 (circled in red): Roger John, 3:18 PM Today - No valid statistics about demographic of Students of current generation to support argument.
- Versions:** A sidebar shows a list of manuscript versions:
 - 21028 Author's draft
 - 21028 Sanitized MS
 - 21028 Lilly Aldrin Rev..
 - 21028 Roger John R..
 - 21028 Author's Revis..

Figure 8. Reviewer's comments in Document Viewer

Figure 8 shows a reviewer's comments in the Document Viewer and one of the editors wondered how the different versions of a manuscript got their names because presently they use a naming scheme with the manuscript id and the author's name. While we do not have a naming scheme in mind, we feel that a configurable scheme can be provided under the settings where a journal manager can choose whatever they like. Also, they wondered about how the reviewer's comments can be shared with the authors and if they could print the manuscript from the document viewer. Including a "Share with Author" button (could be authors, but they only liaise with the main author) at the top of the Comments pane might be a solution as well as including or replacing the icons in the document viewer with text.

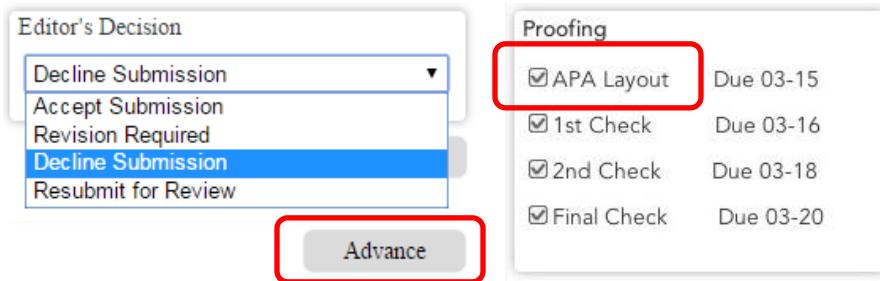


Figure 9. Editor Decision and Proofing panes

On the "Editor's Decision" pane, as shown in Figure 9, the dropdown option for "Decline Submission" is preferred at the bottom of the list, the "Advance" button, or rather the meaning of its text was not recognized by the editors, and one of the editors would prefer the "APA Layout" item on the "Proofing" pane to say "APA/Layout" or "APA & Layout." The Advance button issue could be fixed by disabling it while the checkbox items are unchecked and the Editor's Decision has not been selected and enabling it when those conditions are met to show that advancing is an action only available after all the tasks in a phase are complete.

The editors provided a wealth of feedback and were exceedingly pleased with the prototype, which is understandable considering the state of the current OJS. They also made several feature requests that we might take into consideration moving forward.

APPENDIX A – DATA COLLECTION AND SYNTHESIS REPORT

Please flip to the next page for the start of the report.

DATA COLLECTION AND SYNTHESIS REPORT

H-561: MEANING AND FORM IN HCI

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3/21/2016

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PART 1: EXECUTIVE SUMMARY

In this section, we aim to convey our thoughts and ideas from what we learned conducting several contextual inquiries as part of a user-centered design process. For our project we got into contact with people who use and maintain the Open Access Journal System (OJS) run by the IUPUI Library. The OJS is an online academic journal management system that enables faculty and professors to freely publish and distribute academic journals, as well as engage with peer reviewers and article authors. The OJS also provides an interface for the general public to freely access any journal (and articles) hosted on it. We strongly feel that applying the design methods that we are learning in class to improve a system used by members of our academic community is a worthy effort and that contributing to the easy dissemination of knowledge is a laudable goal.

WHAT WE LEARNED

Our initial contact is an IUPUI library employee who manages the OJS itself. He made us aware of some of the system's features and of its utility and importance to the university at large. He also familiarized us with some of the roles that people play in the system such as Journal Managers, Editors, Reviewers, Authors, and Readers. These roles broadly define the actions that any registered user in the system can initiate and carry out. For our purposes, the aforementioned five roles are the only ones of importance because a manuscript can complete the journey from an author's head to a reader's screen with just those five roles involved.

ROLES

1. **Journal Manager:** An administrative role that allows the user to create journals; modify the visual themes, layouts, and styles for that journal; as well assign roles to other registered users
2. **Editor:** An administrative role that allows the user to perform the duties of a journal editor – make copy-edits, proofread, assign peer-reviewers, etc. The editor can also assign another registered user as an editor. We learned that the editor is the most pivotal role in the system because they do almost all the work necessary to prepare a journal issue. Editors for a journal can also have a hierarchy of roles where there are Assistant Editors, but this is an observed phenomenon, that is not presently a feature of the OJS
3. **Reviewer:** A user whose main duty is to act as a peer-reviewer for a journal and judge the merit of unpublished manuscripts
4. **Author:** A role that limits the actions of the user to uploading articles for review and possible acceptance and publication in a journal

5. Reader: A reader is not an official role in the OJS, but rather anybody that browses any journal hosted on the OJS and reads articles or issues on it.

MAJOR ISSUES

Of the five roles mentioned above, we conducted inquiries with people in four of those roles: 1 Journal Manager, 2 Editor, 2 Readers, and 1 Author. This distribution was mostly affected by the people who responded to our invitation and made themselves available. It was also affected by what we learned about each roles responsibility and relative importance.

The editors we inquired with were the biggest fountain of inspiration as they use the OJS on an almost daily basis and have been doing so for several years. One of the biggest problems that the editors face is keeping track of what stage of the review/edit process a manuscript is in and what users are involved at the stage and time. The perceived failure of the system to properly address this need has led them to devise a custom paper/spreadsheet method. When speaking to us about her custom system, she said, "... so, I have this binder over here – let me show you – I keep all the records of who is reviewing the manuscript..." This spurred us to make a note that "She uses a big binder to maintain the flow and process."

Another issue that our inquiries with editors revealed to us is that a lot of coordination between editors, authors, and reviewers is needed in order for the journal publication process to run smoothly. We learned that sometimes their communications protocols have broken down and they have inadvertently sent misleading and contradictory messages. In one of our inquiries, our source said, "... so one reviewer said 'reject,' and the other reviewer said 'revise and resubmit.' I should have read it, but I didn't so I said 'revise and resubmit'..., that didn't go well." We made a note that she "learned from the process of organizing the peer reviewers to read the paper herself when the suggestions clash."

And although readers have a limited interaction with the system, they are quite important because if no one reads the journals, all the work everyone else does is for naught. The most important issue both readers faced was getting to the full text PDF of the articles they wanted to read. This is exemplified by what one of them said: "I don't mind about abstract, I want to read full text." The reader was lamenting that clicking the article's title did not show the text but instead a detail page with the abstract. We made the note that "It would be better if the article [title when clicked goes directly to the full text]." Another reader complained about the size of the button saying that "Why is that button so tiny? That's what I want to do... to read the PDF." In response to this complaint, we made a note that a user "suggests big PDF button." Actually, everyone we conducted an inquiry with suggested a more prominent PDF button.

LOOKING FORWARD

Considering the issues with the present state of the OJS system that our contextual inquiries have revealed and the pain that those issues are inflicting on its users, our initial design thinking is leading us to tackle the major issues we highlighted above. We feel that:

1. We need to devise a way for editors to easily know what stage of the review/edit process any manuscript is in, who is responsible for that stage, what actions need to be taken (if any), and approximately how long is that stage going to last
2. We should design an improved method of coordination between editors and reviewers working on a manuscript to reduce and possibly eliminate conflicts and confusion over the manuscript's status in order to prevent embarrassing situations
3. We need to design an intuitive, less cluttered, and up to date user interface that promotes discoverability and awareness of available features

ENVISIONING

Knowing the necessity for having accurate situational awareness and the great lengths that the editors go to in order to ensure that every journal issue is put together on time, is professionally edited, and every contributor gets credits for their work, we aim to take into account the ingenious (although paper based) system that the editors have come up with and design an improvement over the current OJS where we put each manuscript at the center of the its process and all the work done on it is easily digestible. With a manuscript being the focus, any editor for that journal can see any other editor assigned to it, a history of changes made to it by the author or another editor, the reviewers assigned to it (if any are), which reviewers have expressed an interest in it, what phase of the review/edit process it is in (reviewing, copy-editing, proofreading), how much time has elapsed while in that phase, etc. We envision that this interactive situation report will be aesthetically pleasing as well as informative.

Seeing first-hand the chaos that can ensue when communication and coordination between parties breaks down, we intend to do as much as possible to prevent future mishaps of the sort mentioned in the “Major Issues” section. We seek to design a system whereby all the communication regarding a manuscript lives with that manuscript and editors can easily tell what needs to be done, who needs to do it, and what decisions are being made.

Many years ago when the initial OJS system was designed and implemented, the technology available and the design expectations were different. As the years have rolled by, the system has not kept up to date with what people expect of their computing systems. It is sometimes said that “if it ain’t broke, don’t fix it,” but the present OJS is broken from a UI

perspective and the users are complaining about it. There is the danger that what we might consider as an up-to-date fix in 2016 will be woefully outdated and ghastly by 2021, but one thing that is certain is that doing nothing will ensure that the OJS will be awful to use by that time. Keeping these concerns in mind, we plan to design a modern incarnation of the OJS focusing on promoting features that deserve prominence while preserving discoverability of all its features.

PART 2: CONTEXTUAL INQUIRY SUMMARIES

MIHIR ABNAVE

CONTEXTUAL INQUIRY SESSION WITH OJS JOURNAL MANAGER ON 11TH MARCH, 2016

This person manages the OJS at IUPUI and helps other Editors, Reviewers, Readers and Authors. He has been working at the library for many years and has been managing the OJS for more than 4 years. The session took place in the participant's office at the IUPUI library, for about 75 minutes.

As our team's problem space is the Open Journal System (OJS) used by several people in IUPUI and other universities. The different roles played inside this system are Journal Manager, Editors, Section Editors, Reviewers, Authors, Readers and Subscription Managers.

The Journal Manager is the main admin of the whole system who grants permissions and other roles the other users of the system. By default a user is assigned the Reader's role and further upon request the JM grants the other important roles in the journal to the users.

This session helped me understand the working of OJS from an overview, as the participant showed me how each of the roles interact with each other and make the system possible. We started with the Authors role by submitting a new Manuscript and then entered the Editors role. This session was prime to our inquiry sessions because we gained an overview of the all the roles played by users of the system. All our other sessions were conducted with Readers, Editors and Authors but since JM is the main admin, this session was a mix of all and helped in laying out a clear picture of the working of OJS.

The participant walked me through OJS and showed me the problems he believes the system has. Being the journal manager he was very comfortable with the system in and out and knew his way around all the different functions in the system.

The biggest findings from this session were:

- Complete understanding of what the OJS is and what it is used for.
- Identifying the Editor role as the most important one.
- Finding some irrelevant or impertinent data or actions on the form pages.

Questions asked during the inquiry

1. Can you explain me how OJS works?
2. Who are the primary users?
3. How do they get access to these different roles?
4. Do you manage all of the journals in OJS?
5. How do Editors get notification of a new submission?

6. Can we walk through the whole process step by step?
7. Who plays the biggest role in managing all the tasks in the journal?
8. What are these things on the screen?
9. Which of these things are actually used the most?
10. How many editors does a journal have?
11. Who is a section editor?

Pictures taken during the inquiry

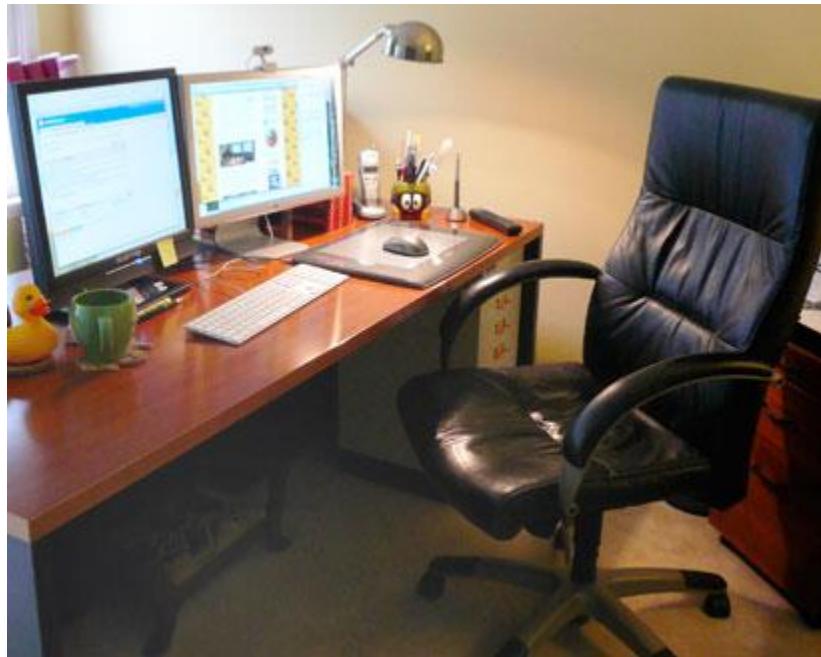


Figure 10. Picture of the journal manager's work environment

[Link to Field Notes](#)

CONTEXTUAL INQUIRY SESSION WITH OJS EDITOR ON 15TH MARCH, 2016

This person is an editor of the OJS for the Advances in Social work journal and has been in this role for quite many years. The session took place in her office at IUPUI, and the session lasted for about 80 minutes.

This session was very helpful in understanding the Editor's role. She had several work arounds, or different ways that she made use of the system, and had many other physical artifacts she referred to, to complete her work. She had 3 big file folders, which had a Paper form that was almost like a substitute to the whole system. She kept track of the actions performed on a manuscript since the day it reaches her to it being published. On the computer she used a neatly arranged file folder to save all the documents in according to the names given to each number. Word and outlook is used to edit and send the files.

The participant was one of the frustrated users of the system because she didn't understand the system and its working sometimes. Basically, how this interview gave us the most important data about what does the Editor exactly need to do their work. Watching her do these things, we were able to write down all the most important things and compared to the actual system, we could see where the OJS is redundant and fails sometimes. The participant also showed us an example of a good system called Manuscript Central that she thinks is more useful and easier to use. We went on to see MC to see what she likes about it.

The biggest findings of this session were:

- Identifying all the work-arounds in order to complete a task.
- Identifying the redundant functions that she doesn't make use of.
- Understanding the frustration areas where the user didn't understand the system.

Questions asked during the inquiry

1. How do you carry out your role as an Editor of the journal?
2. Do you rely more on the system or your email?
3. Do you use the notifications tab on OJS?
4. What do you do when you get a new notification/ new manuscript in email?
5. What do you think about the system?
6. How do you like it?
7. How do you prefer the naming of files?
8. How do you keep track of changes/edits made on files?
9. Do you feel like there should be database system inside the OJS itself?
10. How do you choose which reviewer you want to assign to a manuscript?
11. What is sanitization?
12. How do you sanitize a manuscript?
13. What if a Reviewer declines?
14. How many times to you send a request to reviewers?
15. What do you do when a reviewer doesn't respond in time?
16. Do you use the remind button in OJS?
17. What is a flagged reviewer?
18. What happens after reviewer sends a review?
19. Who does the editing? Do you do the copy-editing?
20. Would you prefer a built-in word processing software?
21. What are the other changes you would prefer in the system?

Pictures taken during the inquiry



Figure 11. Picture taken with an editor of the OJS

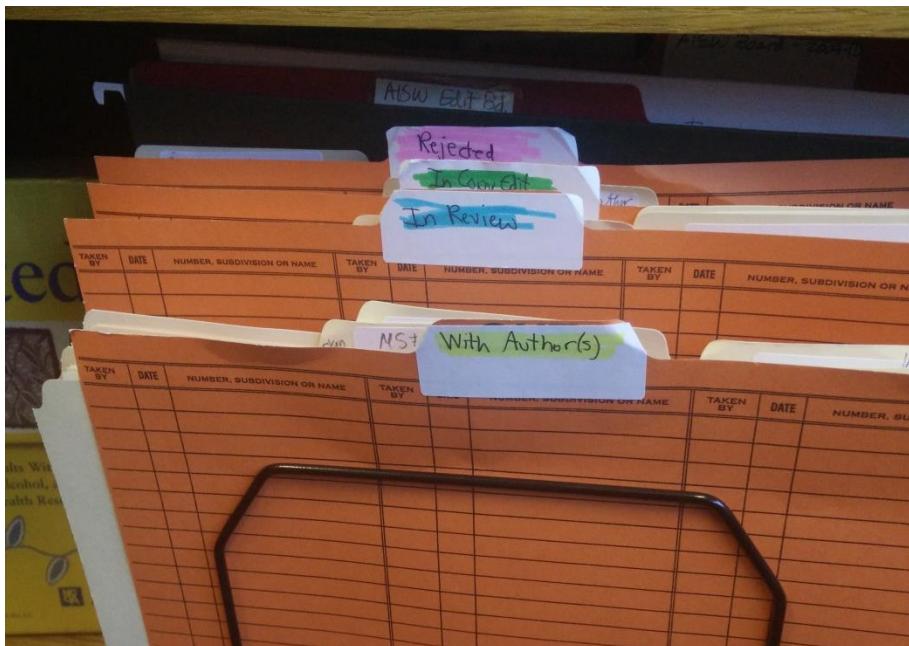


Figure 12. Picture showing a method of tracking manuscripts outside of the OJS devised by an editor

[Link to Field Notes](#)

MANALI DESAI

CONTEXTUAL INQUIRY WITH AN OJS READER ON THE 9TH OF MARCH 2016

Summary

The interview duration was about 30 minutes. The reader of the Open Journal system, I interviewed, wanted to search for an article on homeless people in Advanced Social Work journal. She did not find much relevant article. Then she looked for uploading her own article as an author. She looked through the process of "How to upload an article", and also explained peer reviewing process to me.

Experience

It was quite difficult to observe, take notes and think of questions related to the activity the user is doing all at the same time. What I realized during the interview is, it wasn't really the "Day in Life" interview experience. That was because the activity of searching for an article and reading it is not a daily activity that a reader might do, also, it takes less than 30 minutes to find the article the user wants to read. And may be due to this reason the user was not doing the activity naturally but to demonstrate me how the system functions.

Key Findings

- As a reader, the workflow of the system is not very complex, rather quite straightforward
- Apart from the inconspicuous link to the full text and the size of the pdf viewer, the reader had no complaints about the system

Quotes

Here are some quotes obtained during the inquiry: "I don't mind about abstract, I want to read full text", "Good that they have contact information so that I can ask them", and "I found something weird but that's okay."

Questions asked during the inquiry

1. How do you open the page?
2. Which article are you searching for?
3. Is the right side search box easy to locate?
4. Have you read or heard of this article before?
5. Do they provide register option for authors?
6. Is the information readable?

Pictures taken during the inquiry

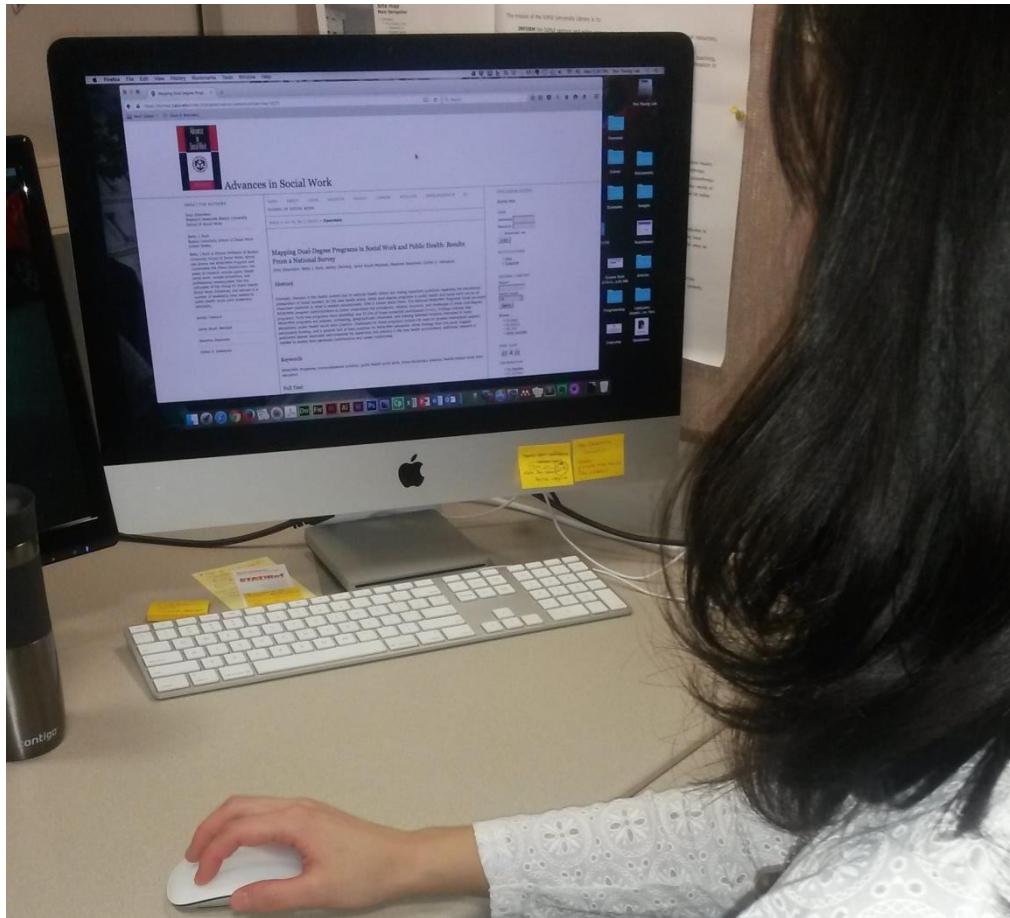


Figure 13. Reader of the Advances in Social Work journal reading an abstract of an article

[Link to Field Notes](#)

CONTEXTUAL INQUIRY WITH AN OJS ASSISTANT EDITOR ON THE 11TH OF MARCH 2016

Summary

The interview duration was about 72 minutes. The Editor of the "Advances in Social Work" journal in the Open Journal system(OJS), I interviewed, wanted to check the status of the articles assigned to her. In her introduction about herself, she mentioned what are her expertise and the organization structure she works in and how the tasks are divided between them. She assigned the new article to reviewer. She took a note of it on a piece of paper. She explained the workflow to us and showed different artefacts(software tools like excel, word, Adobe Reader, paper formats) she uses to maintain records, edit the article apart from the OJS. She arranged the articles ready to be published using Adobe reader.

Experience

This time we were a team of 2, which eased out a single person's job of taking notes, asking questions and observing at the same time. We divided the task. Again, I realized that it wasn't really the "Day in Life" interview experience and the reason being same even though the interview span was more. Also, it would be more helpful if we interview more Editors to understand how each editor used the system. We would like to find if everyone uses other paper formats to maintain the status of the activity, this will definitely help us identify if there is a flaw with the existing system and what we can do to rectify it.

Key Findings

- As an editor, the workflow of the system is major and a bit complex
- From the editor's point of view there so many pain points in the system. There is so much to rectify so as to have a better user experience. So we decided to focus on this user role of the OJS
- User is not able to comprehend the Terminologies(text) used as labels
- She wanted very well defined sections that show her the status of each article
- There is a redundant system that exists to maintain the activity status outside of the OJS

Quotes

Here are some quotes obtained during the inquiry: "Copy Editing! I do not know what that means" when referring to a button, "They don't want to burn out people", and "[The] Spring Issue is a special issue on Distance Learning."

Questions

1. How do you get to the site?
2. You go from Google directly? Do you have a bookmark?
3. Respondent: I'm in the middle of a task... Me: And this task is?
4. Is there a way to do the copy-edit in the browser, or do you have to download it?
5. Do you think if you had an editing option right in the browser, it would be good?
6. What if instead of using word docs and passing those around, there's a Google docs integration ...?
7. So, you're going to save the article with that name, the name of the authors, right?
8. Your regular editor is someone else who you work with?
9. When you say "regular," is that the person who does that most often? Or?

10. You are the reviewer of the article?
11. Can you give us a run-down of everyone who's involved in the process... a hierarchy?
12. So, there's a special layout for your journal?
13. The editor reviews your comments?
14. What's this area?
15. Okay, so that initiates it, and lets the author know that it has started?
16. Ah! So you have an excel document where you keep track of what's going on?
17. So this is some sort of an outline... a checklist?
18. Is this how everyone keeps track of their work?
19. Can you explain the process from when someone [an author] submits an article?
20. When you log into the system, do you see only the articles assigned to you?
21. How do you identify if [an article] is in the first review or second review?
22. What does this mean?
23. How does someone get to be a reviewer?
24. So you have to find the reviewers?
25. Can the reviewers see all the articles?
26. So they're sorta invited to review the article?
27. Are all of your communications with the reviewers over this system?
28. What terms are you using to search for the reviewers?
29. So you're searching the reviewer's interests?
30. How did you get so many people to sign up [to be reviewers]?
31. Typically, how long are these articles?
32. How often is [the journal] published?

33. [Person] is the editor?
34. How long between acceptance and publishing?
35. If this has to be published in December, what's the last day to accept articles?
36. You said guest editor, is that a different person than [Person]?
37. Does the system have any way to facilitate communicating with people who are temporary?
38. So he just uploaded all the documents directly?
39. Can a reviewer decline to review an article?
40. If this sheet of paper existed in the system, would it make it easier?
41. These are the ones you've initiated copy-editing on?
42. All the articles that come to you are in APA format?
43. How did they even get that to happen!?
44. What else do you do with the system that you haven't shown us yet?
45. You guys mostly do your communications via email?
46. Who started this journal, by the way?
47. Who pays for all this?
48. Since these authors aren't using the system...?
49. Is it the same file you uploaded that you're emailing?
50. So, it's kind of a redundant job you're doing? [referring to the previous question]
51. How did that happen?
52. Could you repeat the process you'd like to see?
53. How does the journal end up as a PDF?
54. So you use Acrobat Pro, ..., can you show us the process using Acrobat Pro?
55. So you use like 4 different software, the browser, outlook, excel, word, acrobat pro, the OJS system, and paper,..., wait that's more than 4 softwares...

Pictures taken during the inquiry

The screenshot shows a web-based application for managing journal submissions. The top navigation bar includes links for HOME, ABOUT, USER HOME, SEARCH, CURRENT, ARCHIVES, ANNOUNCEMENTS, and IU SCHOOL OF SOCIAL WORK. The main content area is titled "Submissions in Editing". Below this, there are tabs for UNASSIGNED, IN REVIEW, IN EDITING (which is selected), and ARCHIVES. A search bar allows filtering by title and section. A table lists 10 items from ID 1973 to 2080, showing details like date, author, title, and status (e.g., "Val REA"). The right side of the screen displays user information, notifications (with 190 new messages), journal content, and other system settings.

ID	MM-DD-SUBMIT	SEC	AUTHORS	TITLE	COPYEDIT	LAYOUT	PROOF	EE
1973	11-01	ART	Palmer	TESTING WORKFLOW CORRECTION	-	-	-	KLP
18606	05-07	ART	Gilliam, Chandler; Al-Hajja; Mooney,...	TAKING SOCIAL WORK LEADERSHIP TO THE TOP	-	-	-	Val REA
20870	11-16	ART	Brown, Park	LONGITUDINAL STUDENT RESEARCH...	-	-	-	AQ Val
20871	11-16	ART	Rapp-McCall, Anyikwa	ACTIVE LEARNING STRATEGIES AND...	-	-	-	AQ Val
20873	11-17	ART	Morris, Jones	THE CALIFORNIA PATHWAY PROGRAM: A...	-	-	-	AQ Val
20874	11-17	ART	Fitch, Canada, Cary, Freese	USE OF ONLINE VIDEO CONFERENCING TO...	-	-	-	AQ Val
20875	11-22	ART	Schwartz	COMMUNITY BUILDING IN A VIRTUAL...	-	-	-	AQ Val
20876	11-23	ART	Cotton	COMPARISON OF STUDENT CHARACTERISTICS...	-	-	-	AQ Val
20877	11-23	ART	Forgey, Ortega-Williams	CAN SOCIAL WORK PRACTICE BE TAUGHT?...	-	-	-	AQ Val
20880	11-30	ART	Sage, Sage	SOCIAL MEDIA USE IN CHILD WELFARE...	-	-	-	AQ Val

1 - 10 of 10 Items

Notes

1. Highlighted items indicate action is required by an editor, labelled as follows:
 - o An action is required in the copyediting stage
 - o An action is required in the layout editing stage
 - o An action is required in the proofreading stage
 - o An action is required in the final stage

TO CONTACT OUR MAIN CAMPUS:

Indiana University School of Social Work
902 West New York Street
Indianapolis, Indiana, USA, 46202

Figure 14. Editor's Screen showing her work in progress for editing

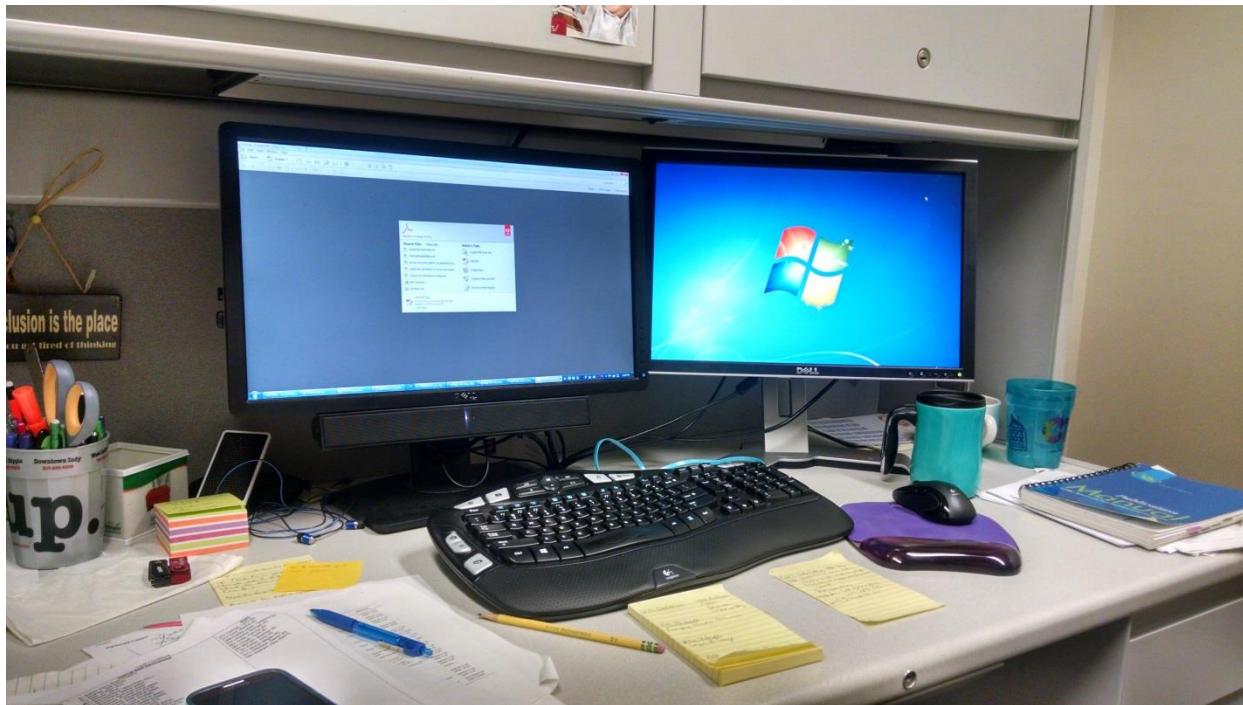


Figure 15. Editor's desk showing all the tools and systems she uses to complete her tasks

[Link to Field Notes](#)

PHILIP ADEOYE

CONTEXTUAL INQUIRY WITH AN OJS AUTHOR ON THE 15TH OF MARCH, 2016

This inquiry was conducted in the respondent's office and lasted it for about 33 minutes.

From this contextual inquiry, the biggest takeaway is that for authors, the utility of the Open Access Journal System (OJS) is quite limited. They can certainly use it to submit articles for publication – which are referred to as manuscripts – and they are encouraged to, but in some situations, they can completely bypass the system and submit those manuscripts directly to the editor. An example of a situation like this is when there is a special issue of the journal and a guest editor, who is unfamiliar with the system is in charge. In cases like this, the author simply emails their manuscript to the guest editor who takes it over from that point.

Also, when using the OJS to submit a manuscript, an author has the opportunity to specify co-authors and enter all their biographical information into the system. It is important to note however, the entering the co-author details is not mandatory, even when there are multiple authors because the author doing the submission can simply enter their names as part of the title page, which is a supplementary document. In addition, there are guidelines for “sanitizing” a manuscript – a process for ensuring a blind peer-review – but it can be cumbersome for non tech-savvy authors. Automation of this manual process with its long task list would be a very nice feature.

Finally, after submitting a manuscript, authors get an immediate email notification which is reassuring, but they are not sure what other actions trigger a notification because sometimes when updates are made by reviewers and editors they do not get any notification of them. This is not helped by the fact that all some communication between authors and editors can be done outside the system.

Questions asked during the inquiry

1. How do you get to the site?
2. Did you have to log in?
3. Are those guidelines that have to be fulfilled before you can submit a paper?
4. Do you have to check all those boxes?
5. What happens if you don't check them all?
6. So it renames the paper with the manuscript number?
7. What if you don't fill out all the metadata?
8. Can you scroll back up?
9. Is that for uploading your CV?
10. Do you have to email the editors directly, or does the system take care of it?

11. Oh! So it immediately confirms your submission?
12. When was the last time you submitted a paper, ..., sorry, manuscript?
13. So sometimes you can submit a manuscript to the journal without using the system?
14. Is that the email button? Its tiny
15. This is pretty straightforward, isn't it?

Pictures taken during the inquiry

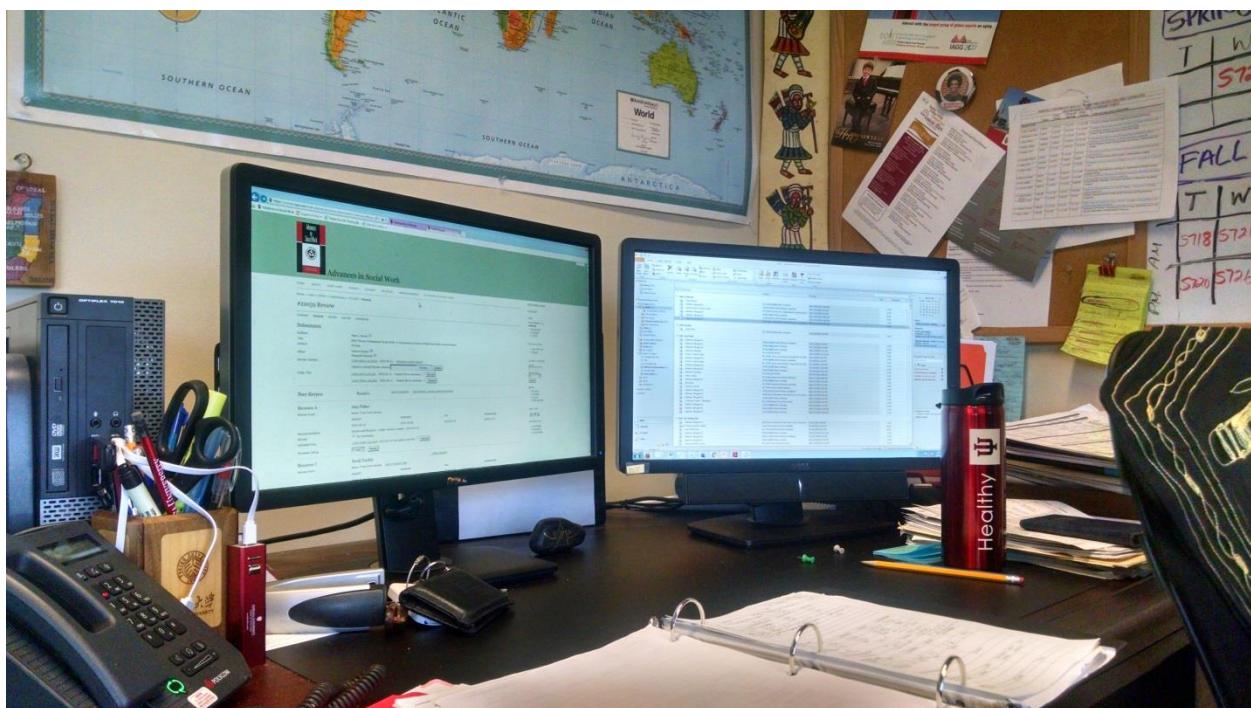


Figure 16. Picture of the author's workspace

[Link to Field Notes](#)

CONTEXTUAL INQUIRY WITH AN OJS READER ON THE 10TH OF MARCH 2016

This inquiry was conducted with a person who reads articles in a journal hosted on the OJS system. It lasted for 46 minutes and it took place in his office.

From this contextual inquiry, several key findings were observed. First, for any user, discovery of other journals – hosted on the Open Access Journal System (OJS) – that the user is not immediately familiar with or interested in is almost impossible because of a thoroughly hidden away and under-emphasized “Other Journals” buttons. Next, the user usually gets to the homepage of the journal he is interested in by searching Google for it as

opposed to using a bookmark, and when searching for a particular article in the journal, he also searches on Google as opposed to using the search functionality provided by the OJS.

After finding an issue or article that he would like to read, he prefers to download it to his computer to read using Adobe Acrobat as opposed to using the PDF viewer provided by the OJS. Also, he is frustrated by the tiny button that opens the PDF viewer on the OJS, and wishes that the button was bigger and more prominent because all he ever wants to do is read the full-text PDF and such a small button is hard to find. He also wishes that the OJS PDF viewer opened a bigger viewport than the tiny horizontal slice which it presently does. Finally, he wishes that the OJS had a better citation management system because he reads a lot and has to use novel approaches to get the citations he needs.

Questions asked during the inquiry

1. Why do you go directly from Google, why don't you go to it from the homepage?
2. Do you print the articles or read them on the screen?
3. Can you find this article directly from Google?
4. Do you download citations off Google Scholar's cite function?
5. This thing is like really easy to use, isn't it?
6. If [the article] doesn't have a detail screen, it doesn't have a link?
7. If you click on [the reject/archive button] would it ask you to confirm your selection?
8. What is copy-editing?
9. Can you walk through that series of steps you just did?
10. So, editing the article, is that copy-editing thing you talked about – checking for grammar and spelling mistakes, that sort of thing?
11. How does the author know when you're done with the editing?
12. Does anyone read all this stuff!?
13. You can create an issue?
14. So, as an author, you can completely ignore the system, but still get your article into the journal?
15. Are these articles printed on paper?
16. What would it take for the journal to actually be printed on paper?

It is important to note that this reader has been both an editor and an author in the past, but no longer plays either of those two roles.

Pictures taken during the inquiry

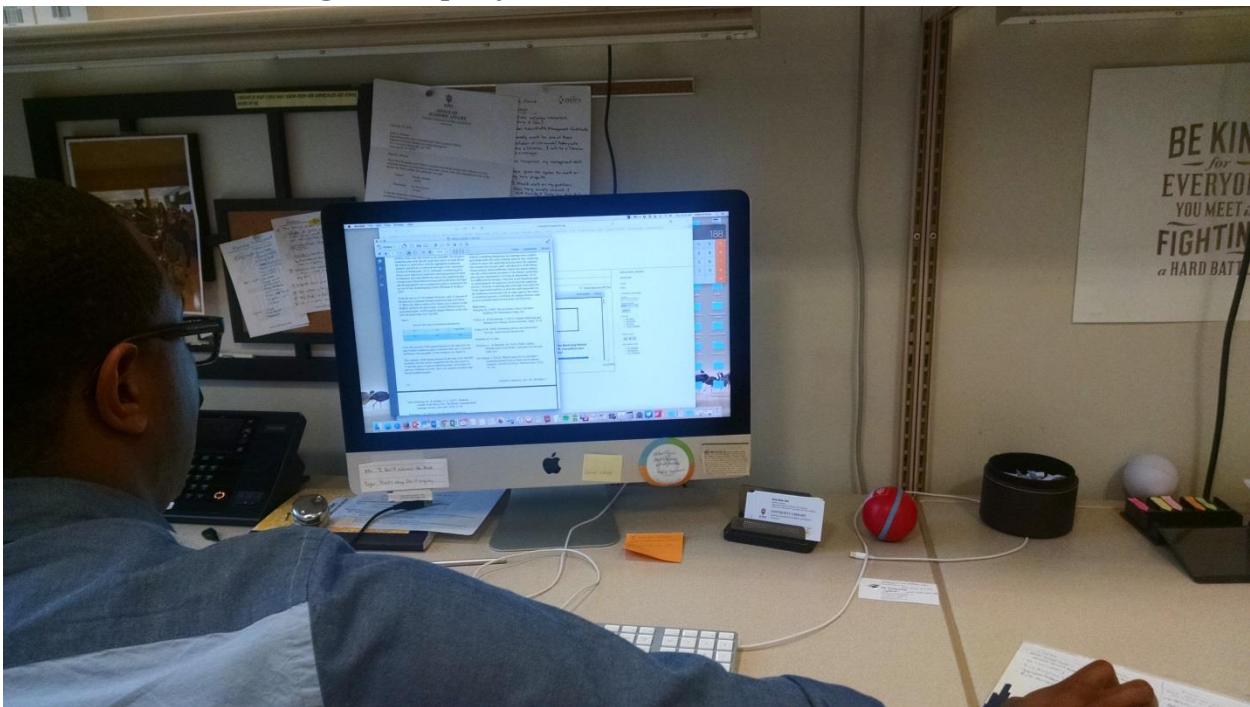


Figure 17. Picture of an OJS reader taken in his office



Figure 18. Sometimes the reader prints out and annotates articles

[Link to Field Notes](#)

REFLECTIONS ON CONDUCTING CONTEXTUAL INQUIRIES

The three of us conducted the inquiry sessions over a period of two weeks. The surprising part about these sessions was that all the participants were quite eager to help us understand the current system and build something better to make their lives easier. We learned about the complete process of journal management, and how an article is published right from an author submitting a manuscript through the different stages the manuscript has to go through to be published in a journal.

We conducted our first sessions individually, and only got a partial understanding of the system. The second session we conducted in a team of 2, where one of us conducted the session and one person was only taking notes. This helped us better than the first sessions and we continued this for each of the next contextual inquiry session. Talking to the respondents and asking questions when they performed a curious action was fairly easy as well as convincing them to perform actions that occurred infrequently, but the very difficult part was taking notes while listening to, watching, and asking them questions all at the same time. It also got a bit frustrating for the respondents when we asked them to pause for a bit while we wrote things down. Perhaps it gets easier to super-multi-task like that after conducting many inquiries, but at the moment, it is exceedingly difficult. In the future when conducting an inquiry, we feel we will need to be relax a bit more and not be so worried about how much data is being collected or the other design processes that come later and just focus on the respondent and what they are doing. With each subsequent inquiry session we conducted, we felt better attune with the flow of the process and with prodding the respondent to clarify initially unclear actions.

Connecting with the participants was the easiest part of the sessions, which made us feel comfortable and ask several questions about the process to understand it better. We feel that the OJS with its poor design and faults helped us bond with its frustrated users, and obtain insights about what kind of system they would prefer.

The most challenging part of conducting these sessions was coming up with inquisitive questions and following up on every action the participant did. As the participants were not exactly performing any specific task, but were walking us through how they usually perform those tasks. So to deepen our understanding about each step they took it was important that we asked them the right questions to dig deeper.

The biggest differences between the sessions we conducted were with respondents in different roles: Journal Manager, Editors, Authors, and Readers. The respondents in more involved roles had a lot more to say and did a lot more with the system while the others whose interactions with the system were limited did not have as much to offer.

If we had more time and could get access to more people for our sessions, we'd certainly consider doing a contextual inquiry with a Reviewer and more Editors of the system. The Editor role is the most important role in OJS, as they manage the manuscripts progress at every stage, and have to connect with all the other roles inside the system. Having more inquiry sessions with Editors will only help us gather more important data about how they work and what their needs are.

PART 3: DATA ANALYSIS METHODS

AFFINITY DIAGRAMMING



Figure 19. Complete Affinity Diagram

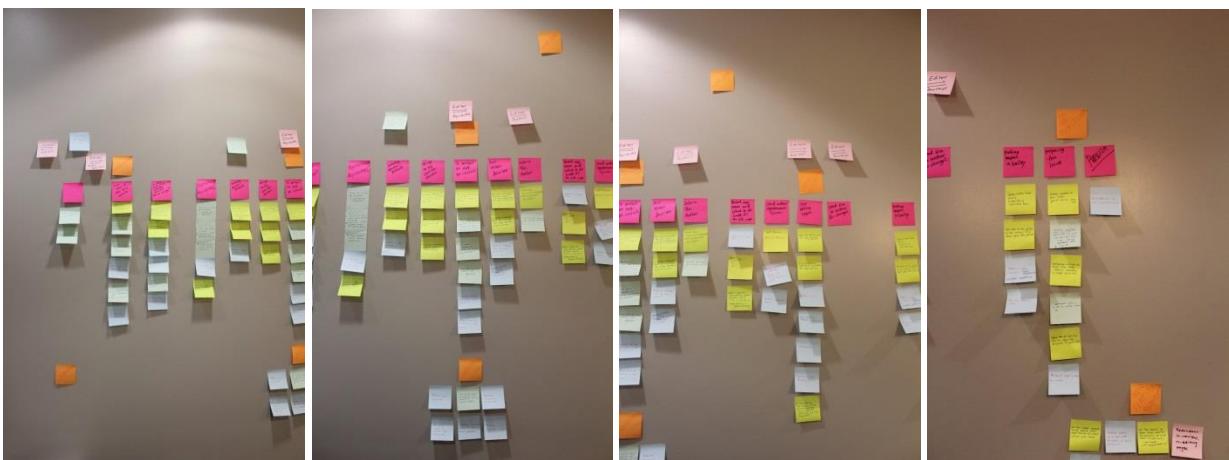
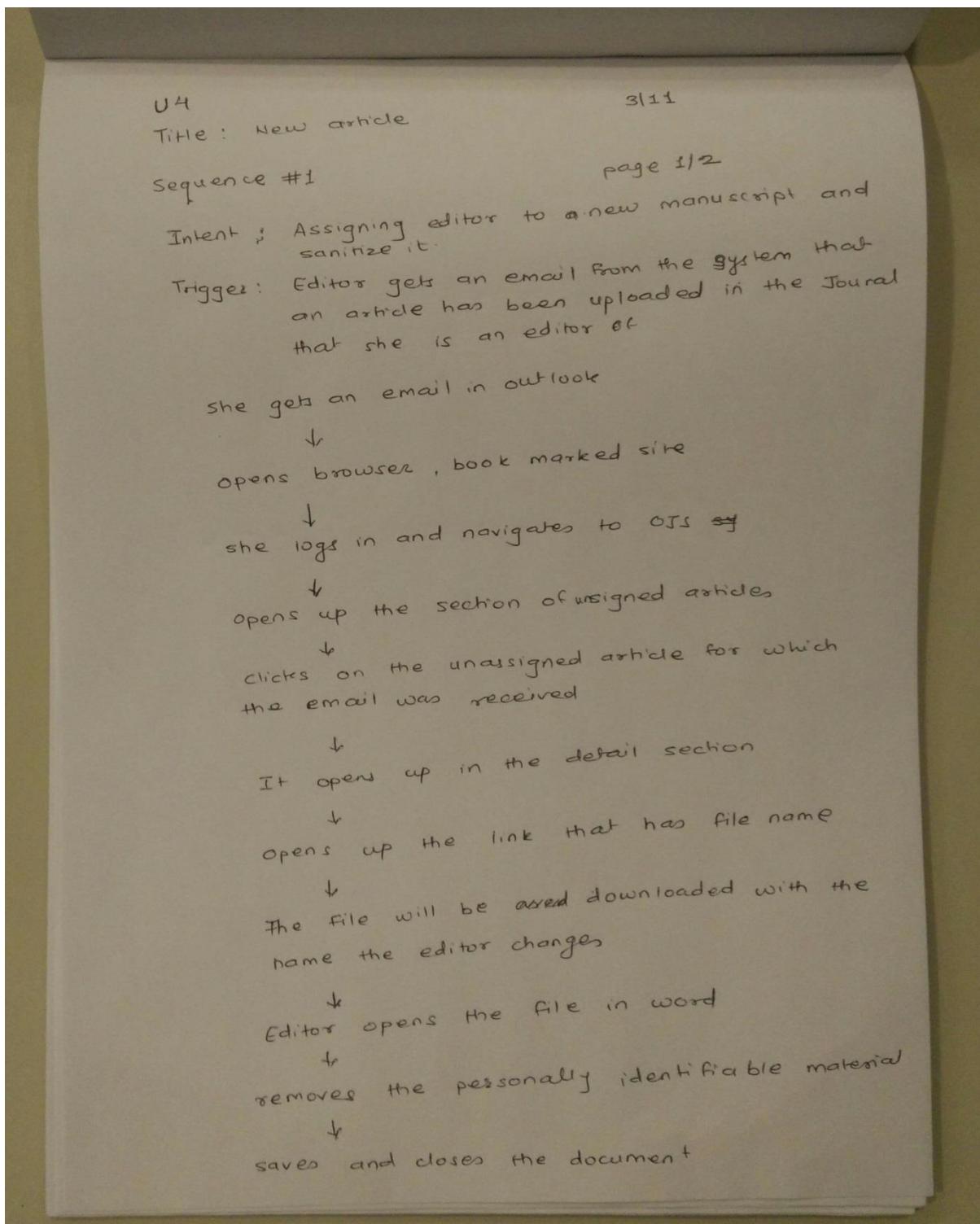


Figure 20. Affinity Diagram broken up into phases of the editor's process

SEQUENCE MODELING

We decided to use Sequence Modeling as one of our analysis methods because we noticed that there were several tasks that the editors did frequently and these tasks are ones that we felt we could simplify, and in some cases, streamline.



page 212

↓
Editor will assigns the article to herself

UH

3/12

Title : New article

page 1/2

Sequence : #2

Intent : Editing Article Find reviewer for the article

Trigger : Editor receives a notification about editing
an article

User logs in to OJS

↓
Finds article that is assigned to her

↓
clicks the reviewer link

↓
open the article

↓
Reads the abstract or some part of text

↓
determines decides what the topic is

↓
searches for a reviewer who has same
interest

↓
selects one reviewer

↓
clicks on the email button next to the name

↓
The email is a template of instructions

↓
she may or may not add the text to it

Sequence : #2

Page 2/2

she attaches the downloaded article to the
email

↓
sends the email to the reviewer

↓
makes a note in the excelsheet

FLOW MODELING



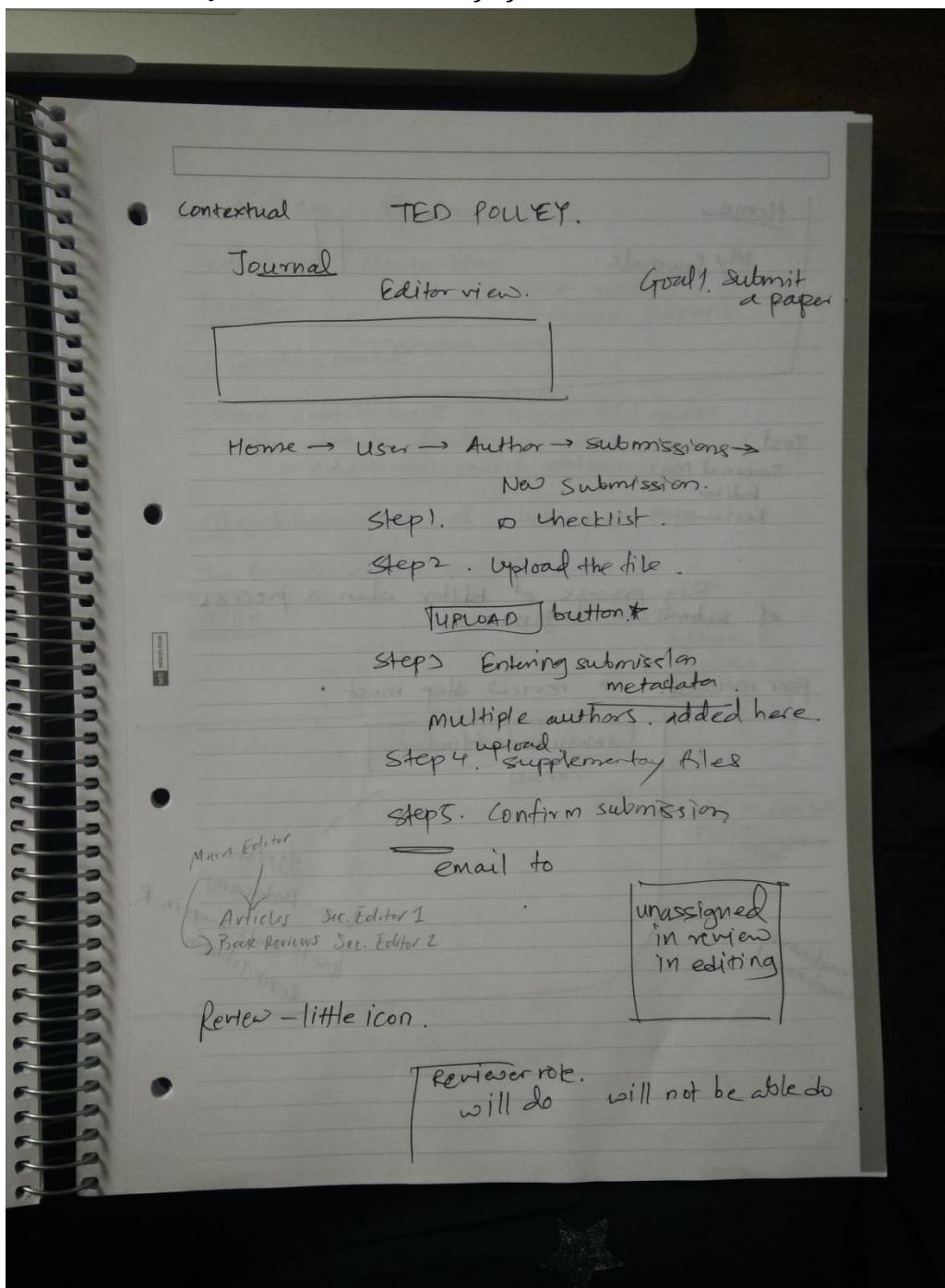
Figure 21. Flow chart detailing a manuscript's journey from its author to publication

We decided to use flow modeling because we realized that we were having a hard time understanding what tasks happened at what phase of the review/edit process, and we needed to figure out who was involved at what stage and how they affected the process. We feel that the flow diagram we came up with will help us when going further in the design process and visioning.

FIELD NOTES

Below are the notes taken during the contextual inquiries that we performed. They are listed in the same order as the contextual inquiry summaries.

CONTEXTUAL INQUIRY SESSION WITH OJS JOURNAL MANAGER ON 11TH MARCH, 2016



Home

My Journals.

Test:

Journal Mgr
Editor
Reviewer

Big process of Editor when a process
of submission begins

peer reviewed. → review step most.

American factfinder

Census

→ Mabnavie
mabnavie!

ggplot2
base - Datacamp
how to make maps in R
texin Johnson

Editor gets a notification when author submits an article.

Goes into view through author.
sees all prev. submissions.

- new submission.
- ✓ checklist of things. agree to all things.
- upload file.

the upload button is confusing. you select first and then click upload.
save and continue.

- add other details about the paper.
- * required fields and other fields.

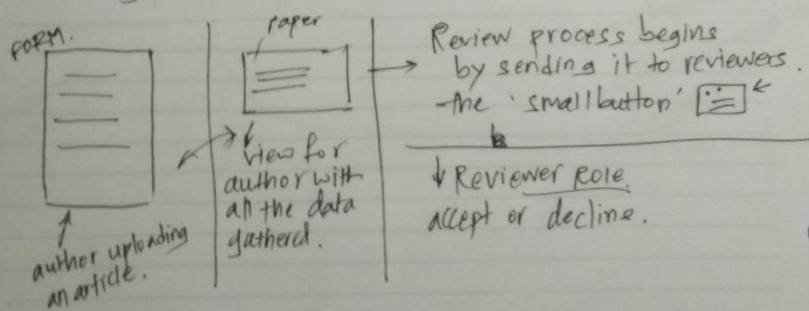
There several different Journals.

As a user of OJS you have one acc.
you can play different roles in journals.

Editor decides whether to accept or not.
sent it to diff people for peer review.

So this a whole system where people submit a paper and then it goes ahead thru the process.

Assign an editor or section editor to that article.



An editor can set up review forms.

- is the methodology sound?
- different things to be reviewed.

editor sends req to Journal Mgr. to set up a new form. you can set up a new one or ~~or~~ use previous forms.

Reviewer will make the recommendation.

fill up the form.
with other comments

every user's profile
is a simple profile
with their data in it.
By default you are
reader. then you sign
up as you want.

CHECK OTHER PAPER
Conferences to see how they
do it

With recommendations from all reviewers, the editor decides what to do.

- Then email the author. or skip.
but have to get thru that button.

then doc goes into copy-editing. (Valerie)

check copy-editing and layout.

DATES of everything when what was done

Is it to one author or other co-authors?

(e) When you send something to another

associated with a particular article.

(S) A common chapter for people

outlook or email system in the system

(H) How do you prefer emails?

that you expect from the author.

(Z) Squatization? Is there something

about the file?

(S) Special issues / editions /

etc. in the regular issue?

(C) Conference?

Do you prefer naming conventions?

Standardizing?

Ask Margaret.

CONTEXTUAL INQUIRY SESSION WITH OJS EDITOR ON 15TH MARCH, 2016

7.) DOIs? What? where? how?
why imp? who does it ->
8.) Flagged authors. is it so imp?

she has an outlook folder for AISW.

doesn't use notifications so much.

Too much juggling around between outlook and OJS

Manuscript Central is a proprietary software package
that handles the publishing process better

Problem with MC is the cost while OJS is free

MC has integrated document management

MC has a very good naming system

After a manuscript is accepted, a DOI is assigned

The DOI is useful to the ~~reviewer~~ readers because a
DOI is a pointer to the article

The DOI link backs to the ~~original~~ original source of the article

It seems like there used to be notifications of
unassigned manuscripts, but now it doesn't seem to
work anymore

She has to look at the bottom of the list to
find the unassigned articles now

She manually sends notices to the reviewers

She wants the number of reviewers, manually finds a reviewer that hasn't reviewed one in about the last 6 months

The system shows a count at the bottom

She considers how many manuscripts that have been reviewed by a reviewer

They sometimes rate the ~~best~~ reviewers on the quality of their reviews.

If a reviewer does a poor job, they get a low rating and are not so likely to get more reviews

There are opportunities to create a review form, but they don't use it. They haven't needed to so far, but they feel it'll be something useful

Sanitize word docs before uploading it to reviewers

If reviewers conflict with their suggestions, for example, one says "Revise and Resubmit" and the other says "Reject" then she prints out both the reviewers comments and the manuscripts and makes a decision

She uses a big binder to maintain the flow and process.

Learned from the process of organizing the peer reviewers to read the paper herself if when the reviewers suggestions clash

Having the manuscript number as part of the email subject helps to match the manuscript in the system to the notifications one gets.

Never uses the "manage notifications" settings

Copy-editing the ~~reviewed~~ manuscripts can be frustrating because

Authors can get confused about the system and upload the wrong docs

Before the manuscript is sent out, the manuscript number is added to the header of the document (word doc)

The manuscript ~~is~~ number is auto-assigned by the system.

If it's a first review, they get one week to respond,

If they accept to review, they get four weeks to do the review.

CONTEXTUAL INQUIRY WITH AN OJS READER ON THE 9TH OF MARCH 2016

User Number	Role	Journal
#1		
Tasks	Context	
Search		
Navigation		
→ introduction		
- so		
→ she looked through		
→ she not indexed on lib website		
→ she uses article search		
- she goes to google scholar		
- not necessarily she will go to		
- → she is finding article on homeless people		
- she uses search box on right		
→		
- she is doing a title search		
- she looked through results		
- she could not find relevant		
- she used advance		
- typed title keyword ^		
- no relevant result article		
- browse by title		

- is the right side search box easy to locate
 - ans - its a default setting
- goes by volumes.
- she has heard or read this article from
 - to
- she uses full text pdf.
- Its an open journal.
- go to google scholar - better view
- do she prefers the bigger view
than the one provided on Journal
website
- result display shows link to PDF
but still its a small display
- "I don't mind about abstract"
I want to read full text.
- she clicked on archives
- she was interested in special edition for
students so goes through archives
- + to search by topic

she is lost - she is looking for submit my article she cannot find submission or top author information

- do they provide register?
- is the information readable
she is fine with small font
- she wants her article to be submitted
- she would be interested in about
in editorial team
- policies
- submission
- may be the peer review process
- she wants someone else to review her
article before
- team of peer review is approved
- guidelines for peer review
- "Good that they have contact information
so that I can ask them!"
- "I found something weird, but
it's okay"

Author details.

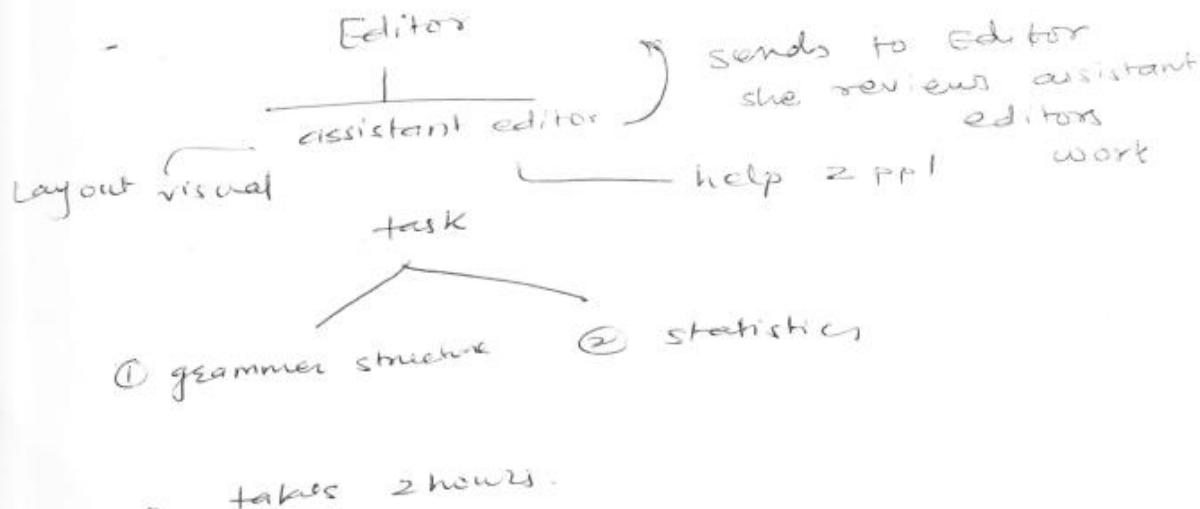
vocal link might go to article
she thought it is article title
it would be better if the article is
clickable.

useful.

- full text availability
- They use different font in the article
- color of the title consistent
- full text PDF - prominently visible some .
icm
- she uses bookmarks - browser
- Google scholar search on library
- open journal system (OJS) for
faculty and graduate.

CONTEXTUAL INQUIRY WITH AN OJS ASSISTANT EDITOR ON THE 11TH OF MARCH 2016

- How do you reach the site
 - bookmarked
 - search advances in social work
- This is in the middle
 - article get up
 - she pulls up article.
 - open - save and get
 - download
 - she talks to Amy
 - Do you like the editing tool integrated.
 - saves it with manuscript -- different ways of saving the files



- sends it to author
author not feeling savvy
 - copy editing doesn't know what that means
 - she keeps excel doc to keep track of record of her work.
 - they have a binder (Hard copy) to keep
 - Review peer review
does not make sense
color coded
- It's hard to understand the information meaning
- It's hard to keep track of the steps
 - They ask ppl see but they cancel it
 - now she needs to find a reviewer
 - 3 roles
- Author, reader, reviewer

- not lot of ppl
- ppl are interested to review - confidential
- searching reviewers interest
- one thing reviewer required interest
faculty on the floor
conferences
- system in place from 7 years
- she is finding reviewers
- they don't want to burn people out
so they want 4-6 months gap
- pages so double spaced pages
quality varies
- she is complaining about articles
with 5 ref
she wants 2 pages ref
- articles are published twice a month year

- Publishing the article
- May } Publishing month
- deadline sep - Dec }
- acceptance - deadlines.
- Spring issue is a special issue on "distance education" - guest editor
- someone who has expertise on the topic will be the guest editor
- reviews can decline.
- she used a post-it note to take a note of who agreed whom
- submissions in Editing is not very helpful.
- she has a full time research work
- this is her extra job
- she is APA expert - another expertise table of contents, visual formatting
- All the articles come to her are in APA format social work related
- they do content auditing, visual auditing and correcting auditing

- she communicates with other editors, reviewers via email
- school pays her
- she goes to editing
 - opens in a new tab
 - picks a file to upload
 - clicks on initial copy uploaded
- she uploaded the copy and sent it attached it to the email in case if they don't find in the system
- breakdown!
 - accidentally sent co-author and review
 - co-author did not assign co-author
- can we make it mandate on co-author to assign co-author so as to avoid accidents
- overlapping articles - who comment what difficult for authors to read
- she wants to authors cleanse the manuscripts at the review stage

Reviewer recommendation
accept/reject

decision is made
Margret will

s.

- Editor decides the flow to put in the journal. - (use excel.)
- She uses Acrobat pro to ^{order} fine them up.
- Artifacts
- Journal
- browser
- word
- email - outlook
- acrobat
- and excel
- paper work.

author

↓
writes

- gave us a document that explained the steps

- it is sent to board members (review)
-
- she would like different sections color coded.

CONTEXTUAL INQUIRY WITH AN OJS AUTHOR ON THE 15TH OF MARCH, 2016

Log in → Author → Submissions
→ New Submissions

Submission Checklist

To find out what they need

Step¹ Until the author checks all the buttons / checkboxes
they cannot proceed

But they lie because they mostly don't fulfil
all the requirement

Step 2

Uploading the actual paper

Lots of instructions on how to get their
paper in shape

Ensuring a blind review button

List of steps to follow to sanitize their
doc

Upload a word-doc

Save Add Continue

Step 3. Ensuring the Submission's Metadata

List of Authors

[ADD AUTHOR]

Names, Addressess

Biographic / Demographic



Contributors and Supporting Agencies

Comma - List of supporting agencies



Title And Abstract



Step 4 Uploading Supplementary files

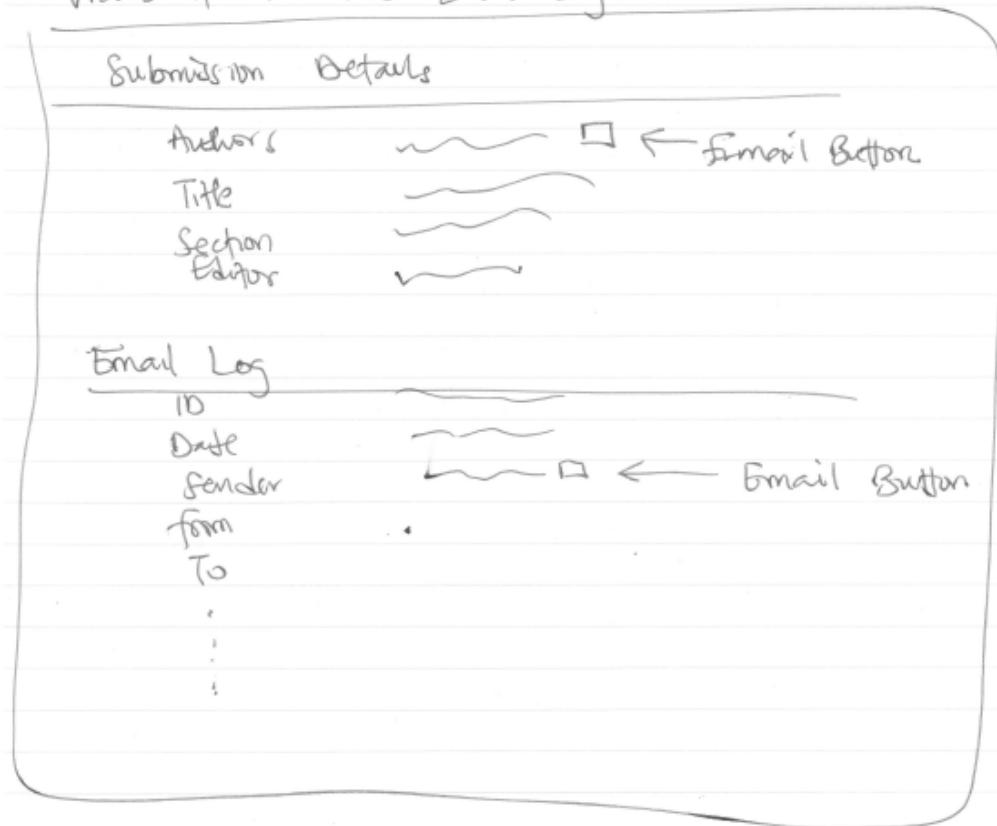
Upload a title page

Step 5 Confirming the Submission

[FINISH SUBMISSION]

Receives an automated submission
acknowledgment.

Views it in the Email Log



CONTEXTUAL INQUIRY WITH AN OJS READER ON THE 10TH OF MARCH 2016

Indiana libraries - google the term

gets directly there, doesn't go through home

Why do you go through google

Wouldn't download a full issue, but individual

Click on individual article

Complains about small PDF link

suggests big PDF button

Would you print? Read small articles on screen

open it in end note

suggests citation management

Google scholar → gets citation for favorite

Wouldn't search for content on there

Search box last name, first name

Search scope "author"

get a list of articles the person wrote
chooses an article for another author
that he knows

Login

can't verify identity pop-up
click continue

gets another

Editor Home

follow sequence taken on comment

My profile

Home

Information

for authors

Can't submit article

(can email an editor directly and not ^{the} the system)

Journal only exist on the internet

Breakdown when trying to go HOME

APPENDIX B – DETAILED DESIGN REPORT

Please flip to the next page for the start of the report.

Detailed Design Report

H-561: Meaning and Form in HCI

Prepared By: Mihir Abnave, Philip Adeoye, and Manali Desai

4/10/2016

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EXECUTIVE SUMMARY

In continuing our design exploration into improving IUPUI library's Open Access Journal System (OJS, also referred to as "the system"), we employed some practices that are intrinsic to the contextual design method: Vision workshops and Storyboarding. As a refresher, the OJS is an online academic journal management system that enables faculty and professors to freely publish and distribute academic journals, as well as engage with peer reviewers and article authors. From the contextual inquiries that we conducted with several users of the system, we found that the most active users who are most in need of our support are the journal editors. The rest of this report details the results of applying the contextual design method in the generation of ideas to ameliorate the difficult situation the editors deal with every day.

However, before we get into the details, during this design process, we gained a few insights about storyboarding, visioning, and the need to tame wild systems that threaten to get out of hand. We learned that while the process of visioning can be performed before storyboarding, doing them in the opposite order can yield some unanticipated and valuable insights on one's problem space as well as some solutions to problems that have not yet even shown up. Also, we learned that focusing on the central part of a system as opposed to trying to cover the entire thing can sometimes be the wise route because a lot of the problems at the center are cross-cutting concerns that underlie the entire thing; and once the central part is taken care of, the ancillary parts fall in line pretty quickly. Of course we know that this is not always the case, and realize that with more design experience, we will be better able to tell when it is and when it is not.

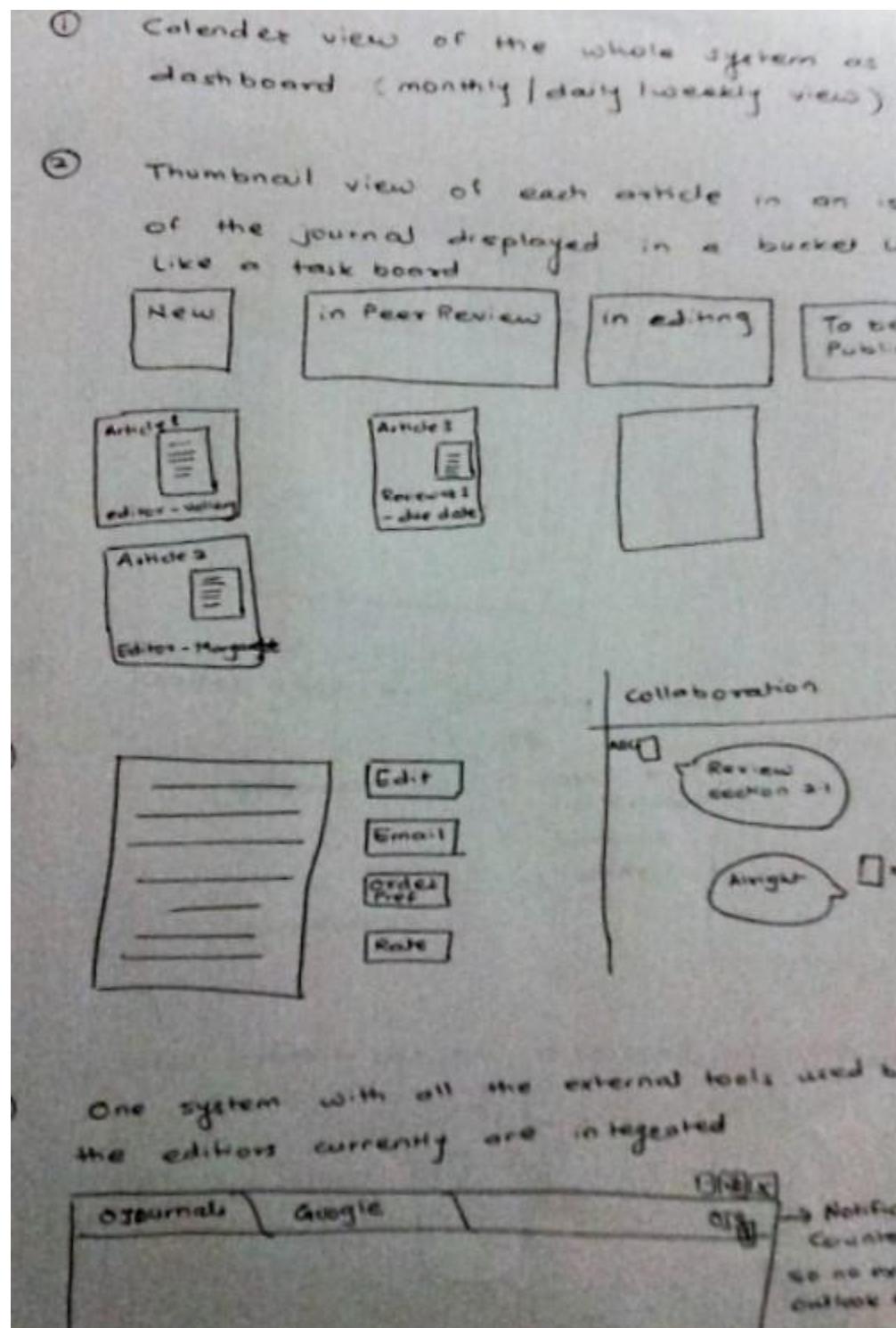
Looking forward, we intend to actualize as a prototype a desktop focused web application that uses a Kanban-style dashboard as its main user interface feature. Each board will represent an issue of the journal, each list on the board will represent a phase in the journal publishing process, and each card on a list will represent a manuscript intended for that issue. The process for managing each manuscript will be represented within each card by checklists, status bars, and milestone markers. This vision is an amalgamation of several ideas that have individually shown promise for solving certain problems and we are happy and confident that together we have found a winning solution. In order to avoid repeating ourselves, please refer to the [Design Solution Choice](#) section for more reasons why we chose this idea.

IDEATION

INTERNAL IDEATION

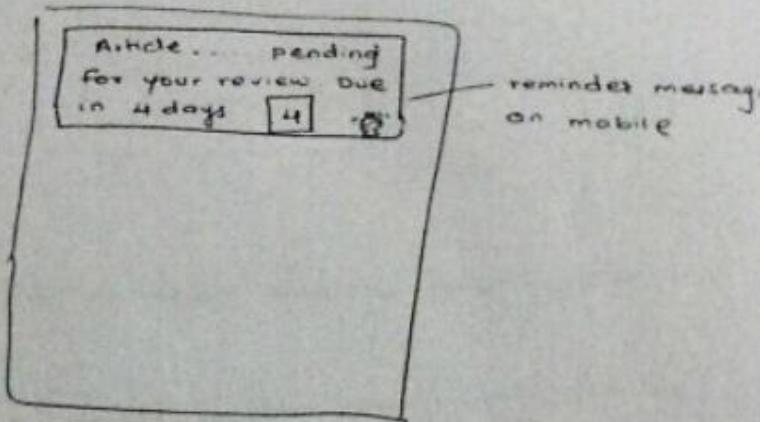
Conducting the contextual inquiries had provided us with a lot of data and our interpretations sessions and work modeling had helped us make sense of the flood of data we had acquired. During those interpretation sessions and work modeling, we had ruminated on the problem and been marinated in the key issues that were being revealed. When we finally felt that we had got a handle on our problem space, we set out to devise ideas to turn our problems into opportunities. We performed our wall walk, which felt almost like a contemplative religious experience and generated what we feel are a lot of good ideas covering many parts of our users' experience. The following are some of the ideas that emanated from our ideation sessions.

Ideation Results



⑥ Reviewed tied up to the system so the
all the OJS Manager, Editors keep track of
them

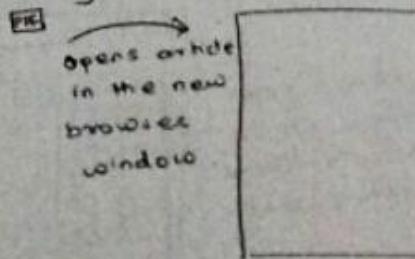
⑦ Reviewer's mobile



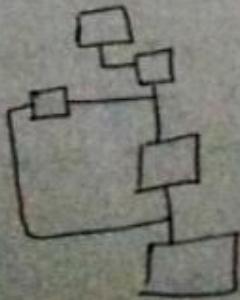
⑧ Reader's view or for any article

Abstract

Introduction



⑨ Articles status can be displayed on the
flow chart



① Online collaboration

Reviewers
provide review

comment
change the due date

② Survey link to recruit reviewers to understand their interests

③ A floating window on the screen which can be minimized but won't close if any article is due for submission

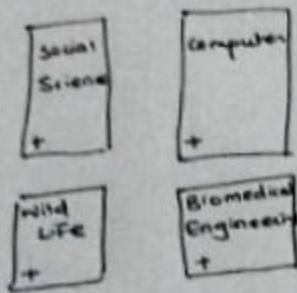
- IDI k

categorized issues
or the articles
based on the
task status

Touch screen monitor as big as a story board
the Team gets together everyday in a scrum to
update on the tasks assigned

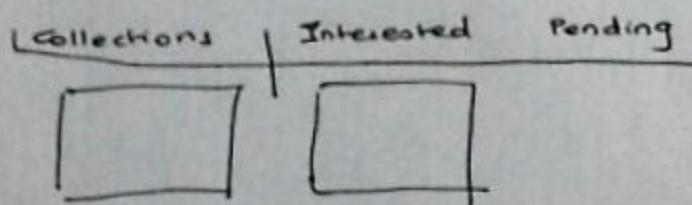
(13)

a reviewer login account that will help see the articles assigned to them. Also do sign up show them topics to express their interests



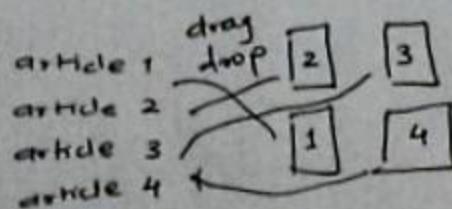
(14)

Reviewer



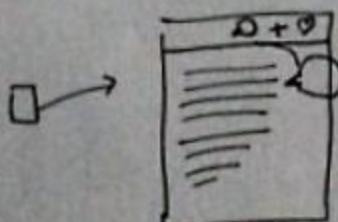
(15)

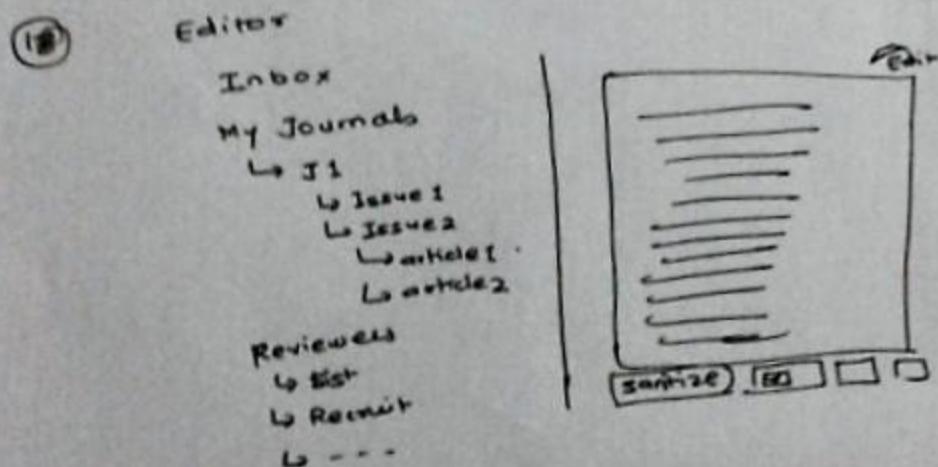
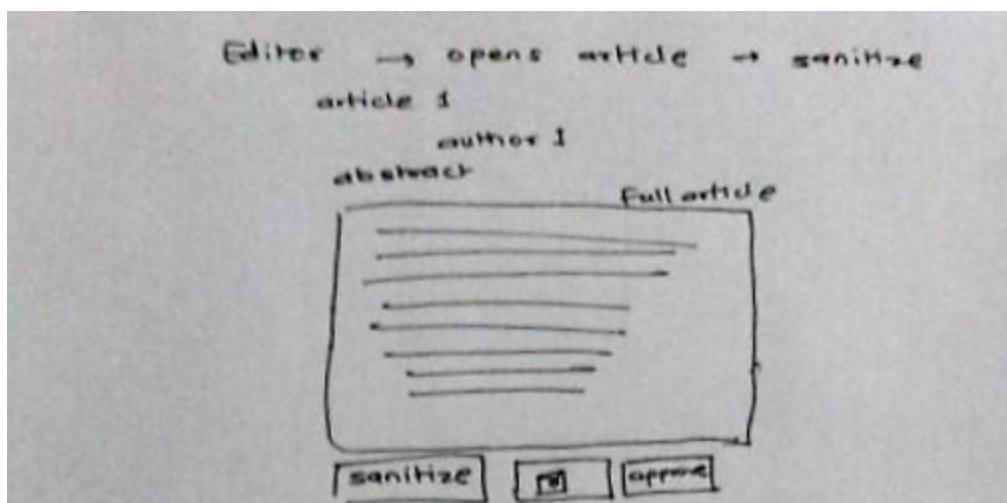
Editor Issue view before publishing



(16)

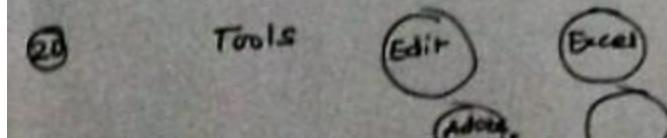
Reviewer article





⑰

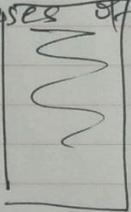
Article	Author	Reviewer	Editor	Status	Audit
1	A	X	C	in Review	04/15
2	D	E	X	in Editing	04/10
3	G	H	I	unassigned	--



- 1 Auto-generated and editable checklist of tasks
- 2 A gantt chart-like interface for viewing tasks and status of each article/manuscript
- 3 Timeline-style report for looking at previous articles/manuscript
- 4 Viewing manuscripts by themes/topics ^(tags) - to encourage exploration
- 5 Email alerts with article of the week/month - engage readers
- 6 Threaded message interface to reduce miscommunication
- 7 Timeline style interface with a checklist of tasks at each node
- 8 Progress bar, for each unpublished article that shows the status?
- 9 Automated and configurable reminders for following up with reviewers
- 10 Ratings (stars) for reviewers. And comments only accessible to editors
And stats tracking. How often they reject / accept manuscripts
- 11 Recommendation system for reviewers. Based on their last review, and how well their interests align with a manuscript
- 12 Issue builder with drag and drop functionality to reorder articles with one-click publication (auto PDF-merge)
- 13 Citation builder / manager [automated / pulled from the meta data]
- 14 Toasts/snackbar confirmations when an action is complete (feedback)
- 15 Lots of help text where necessary
- 16 Turnitin or other plagiarism-detecting software integration.
- 17 Integrated document manager - maybe like a dropbox with version history

18. Add to cart for readers - make up reading list
19. Share your reading list with other users or on the public internet
20. Calendar view of upcoming events - due dates for issue publishing, review submissions, etc. Integrations with iCal (possibly).

IDEATION SESSION.

1. The search box should be simple and have separate button to apply filters.
2. Just redesign the ^{existing} system with bigger fonts and better icons.
3. User profile pictures for reviewers, authors and editors.
4. Calendar - managing of events and deadlines.
(Calendar representation).
5. Dashboard with quick review of status of all manuscripts.
+ ten ideas.
6. The system should show all statuses of what is going on with a paper. →  paper as
7. Just design a system with a blueprint.
8. Make use of how mechanical turk works.
9. Use how Wikipedia manages their data.
10. Reminders and reminder settings. These can be added to the calendar.
11. Use the papersheet as a different tab altogether.
(This will be easy and convenient for existing users).
12. Have an ability to rate reviewers right away.
13. Display Important information about reviewer to make editor's decision easier.
14. Create a mobile solution where actions can be taken when and where there is a new submission.

15. Create a big display where one or more editors can collaborate their thoughts and make journal decisions.
16. Add comment section into the system where the concerned people can keep adding their thoughts and communicate easily.
17. Create an 'automode' where system does most of the work for the editor and waits only for Editor to take a look and approve.
18. Management softwares, and how they divide work, The OJS system or single issue of Journal can be carried out as an Agile or Lean process by using these software like methodologies.
19. Communication by a single messaging feature inside the system, so there is less confusion between system msgs and emails sent.
20. Online storage of all MS's and versions of MS. Easily editable and ready for collaboration. Something like Googledocs, drive.

EXTERNAL IDEATION

In attempting to come up with suitable and reasonable ideas to solve our problem we conceded that our overexposure to the facts and data might limit the range of our ideation. To forestall this potential issue, we reached out to a fellow design student who was not intimately familiar with our data and acquainted them with an overview of it. By doing this, we hoped to generate several ideas that we might have been previously blinded to by our experience. The following is a list of some of the ideas that the design student graciously provided for our consideration.

1. A mobile app. They don't have one right now, so that will be nice for them
2. A wearable app, like for an Apple Watch that did notifications and vibrations when stuff was getting due
3. Sort of like a Kanban board interface with sticky notes for the articles and they get passed around the different lists
4. Roadmap with roadblocks, shortcuts, side streets, etc.
5. Trello! You guys should just make a Trello clone, it's pretty easy
6. A social network for all the authors, reviewers, editors, and all the other guys involved
7. A picture wall sorta like Google Images for the articles, and the details pop down and open when you click on them
8. Word cloud for each issue. When you click on each word, the articles that have them will show up
9. Gamification and achievement unlocks like an achievement for creating a special issue or for publishing 100 articles. And you could have badges for the authors for things like authoring 10 or more papers or writing with a co-author
10. A web! Like a spider's web and everyone connected to an article will be on that web

Having an external actor attempt to provide solutions for us was a mixed bag. For some ideas, we thought, "Oh! That's clever!" while for some others, we kindly encouraged our interlocutor to break free from the shackles of mediocrity and do some proper blue-sky thinking.

VISIONING

After doing some ideation and coming up with ideas that we felt were solid and varied enough, we critiqued our ideas to bring to the fore ones that would be technically feasible significantly improve the present user experience. We also decided to focus on ideas that improved the experience for the editors since they are the most dedicated and frequent users of the OJS system, and stand to gain the most from our design explorations. In conducting this visioning process, we decided to create our storyboards before doing the vision workshops. We found that doing the storyboards first actually allowed us to expand our thinking and cover areas that we had not thought about.

What follows is an exploration of three ideas that we feel most strongly meet the previously outlined criteria. The first two are more tailored to larger screens and the desktop although they could be easily adapted to mobile devices, while the third is a strictly mobile approach. Also, each idea is accompanied by two storyboards and a vision diagram.

MILESTONES, TASKS, AND CHECKLISTS

This idea is a very top-down process-driven one. It is almost like a taskmaster walking around with a clipboard and breathing down the necks of everyone else involved. Basically, at every phase of the journal publishing process, there is a list of tasks that anyone involved at that phase needs to complete. And with the completion of each phase, a new phase is opened with its own task list until all tasks are completed for every phase and then an issue of that journal can be published. At the top level, this idea provides more of a summary/overview of the journal publishing process with the option to drill deeper into lower levels to see exactly where each individual manuscript is in the process.

STORYBOARD A

This storyboard shows the process of adding unpublished manuscripts to a pre-initialized issue. In it, we introduce “status and milestones” as a mechanic for visualizing where an issue or manuscript is in the journal publication process.

The editor has created a new issue and wants to add manuscripts to it

Issue ID : 4115 Jun 2016

▼ Status and Milestones

Initiated In Editing Finalized Published

Great! You just created an Issue: ID 4115

You can give it a nickname, and other details below. [Read More](#) [Start](#)

Add a manuscript
 Edit Issue details

The editor selects "Add a manuscript"

The editor is presented with a list of unpublished manuscripts to select from

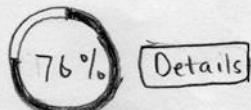
Unpublished Manuscripts (7)

► Unassigned (4) 2 selected

► In Review (1)

▼ In Editing (2) 2 selected

26115: How to Sow Wild Oats



27422: Cherries and Whipped Cream



► Archives (0)

The Editor selects a manuscript and adds it to the issue

The editor can add multiple manuscripts from the previous scene

Issue ID: 4115

▼ Status and Milestones



► Details

▼ Manuscript Central (4)



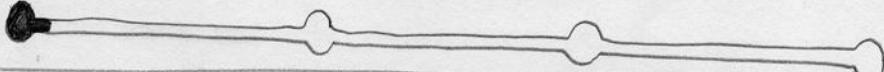
26115: How to Sow Wild Oats

01/27/2016



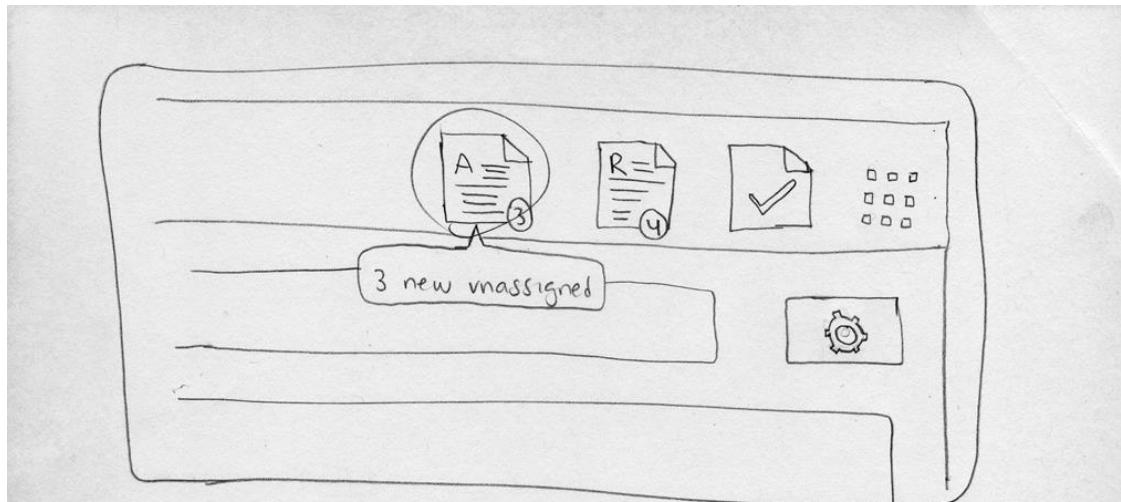
27422: Cherries and Whipped Cream

01/22/2016

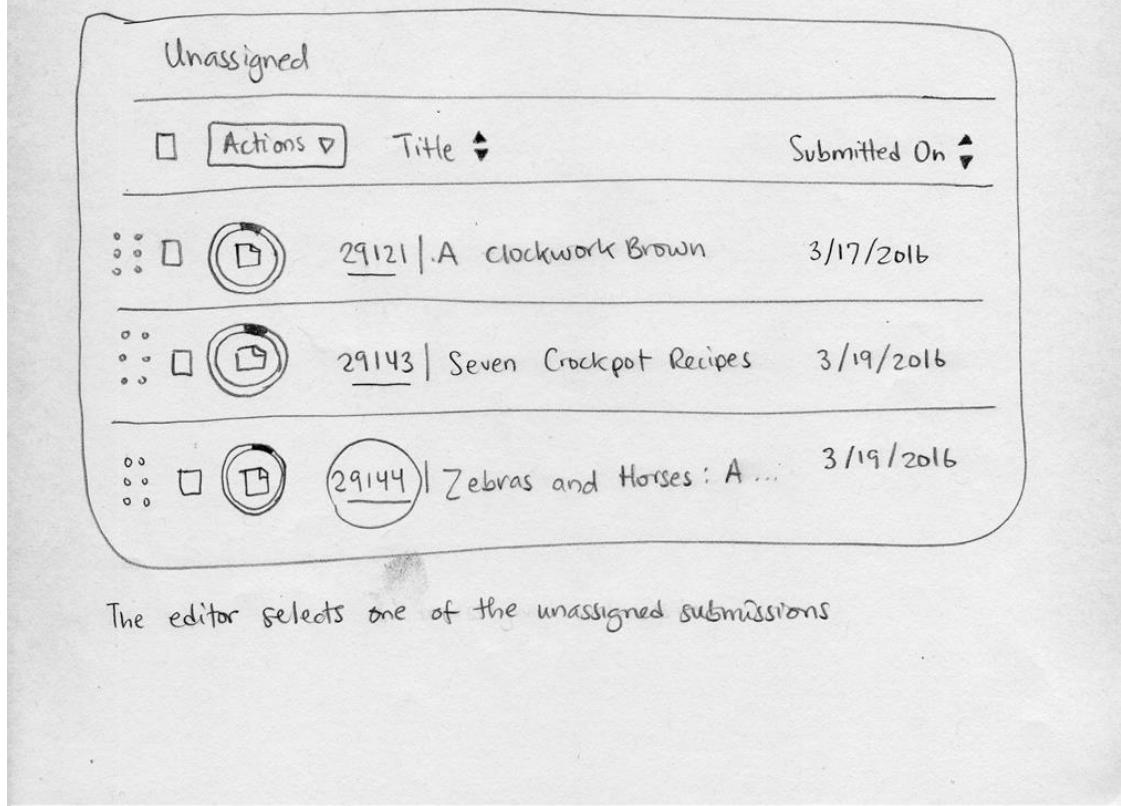


STORYBOARD B

This storyboard shows how the editor would handle receiving fresh manuscripts (unassigned) from an author and kick off the review/edit process. This storyboard also shows the internal checklists and tasks involved in the review/edit process for each manuscript



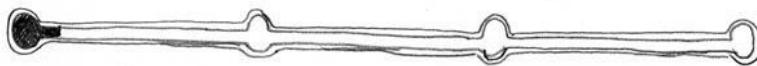
The Editor gets a notification of unassigned manuscripts and selects the icon to view them



The editor selects one of the unassigned submissions

Manuscript Status

Unassigned In Review In Editing Ready to Publish



Phase Details

- Unassigned
- + Assign an Editor Assign self Select Editor
 - + Perform Quick Review for fit
 - + Contact the author about the fit ✉ Email Author
 - + Find a reviewer Start typing a name or 🔍 Find Reviewers
 - + Find more reviewers Start typing a name or 🔍 Find Rev
 - + Reviewers have accepted review requests
 - + Add another step
 - ||
 - ; Next Steps become available as you complete each task

Manuscript Details ID : 29144

Title	Zebras and horses: A trot through equine history
Abstract	

The editor assigns himself/herself to the article, does the quick fit review, and completes the other tasks in the Unassigned phase.

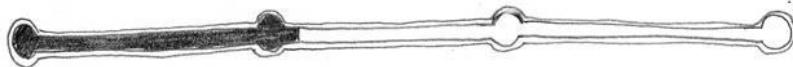
Manuscript Status

Unassigned

In Review

In Editing

Ready to Publish



► Message Center

✉ 1

✉ 14

👤 1

👤 22

▼ Phase Details

📅 4 wks ago
||
Unassigned

● In Review

+ Confirm peer review is complete

+ Acknowledge peer reviewers

+ Add another step

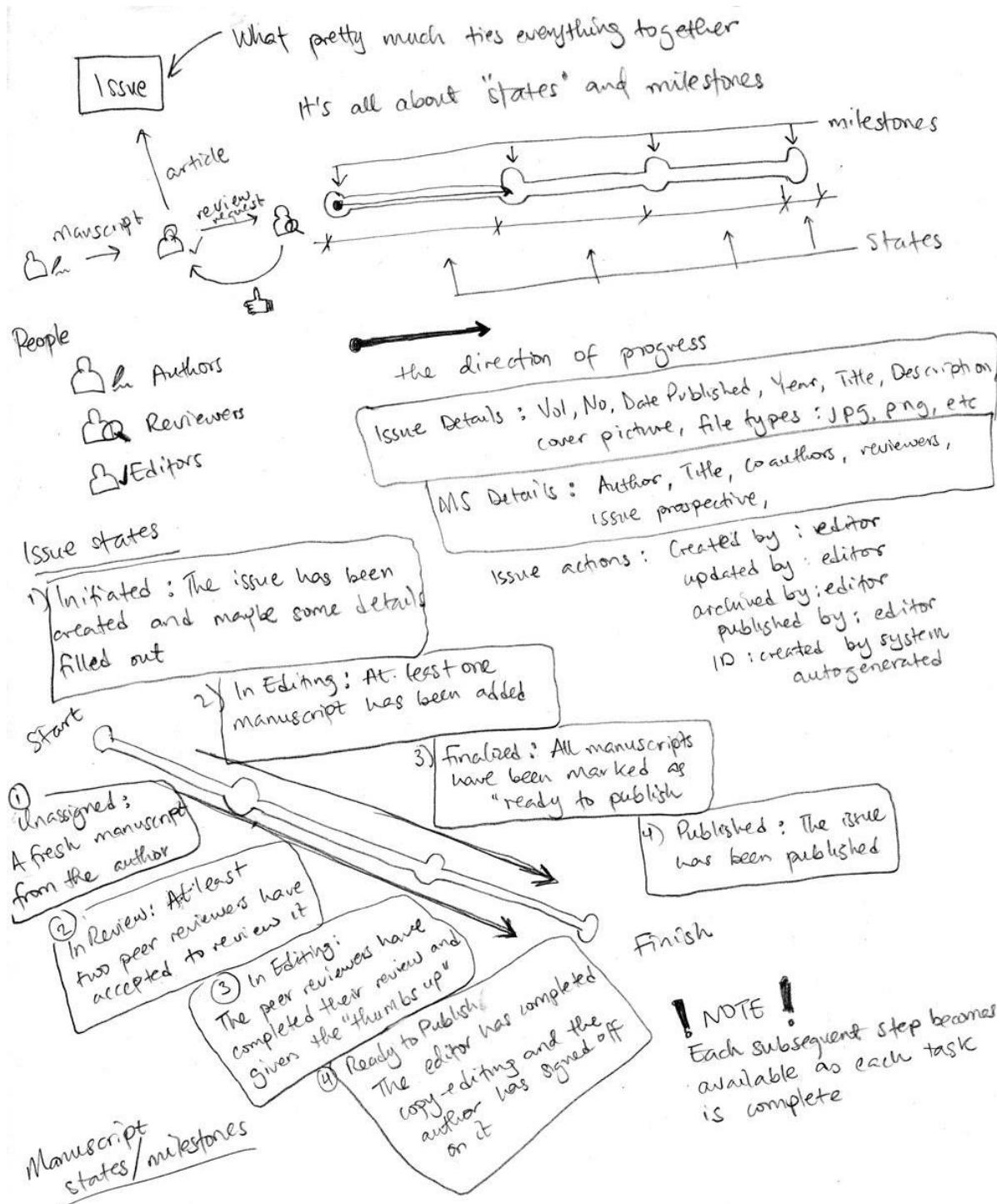
||
: Next steps become available as you complete each task

► Revision History

▼ Manuscript Details ID: 29144

The manuscript is now "In Review"

WORKSHOP



KANBAN-STYLE DASHBOARD

A Kanban is one of the frameworks used to implement agile method of product development. It mainly focuses on displaying the categorized tasks so that the team can keep track of the status of each task and visually identify the progress of each task.

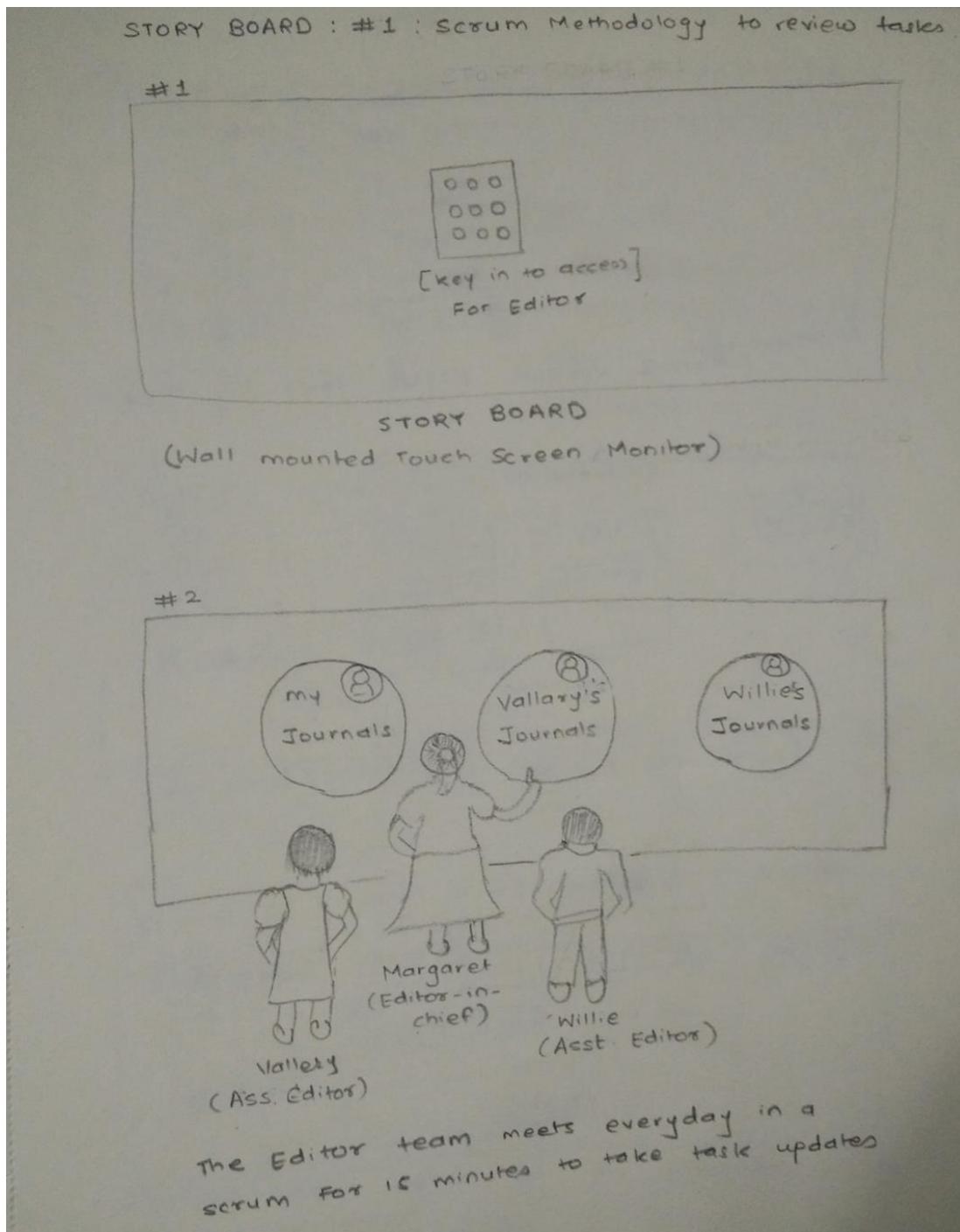


Figure 22. A very simple example of a Kanban board. Retrieved from https://en.wikipedia.org/wiki/Kanban_board

Part of the inspiration for using a Kanban comes from a contextual inquiry session with an OJS assistant editor when she complained that the system provided very little “visual segregation of the status of each article.” This instigated the thought of using agile scrum tool “Storyboard” (which is a bit different than Storyboards in a UX design context). Also, this idea was championed by a member of the team who has successfully used this methodology over many years of work experience.

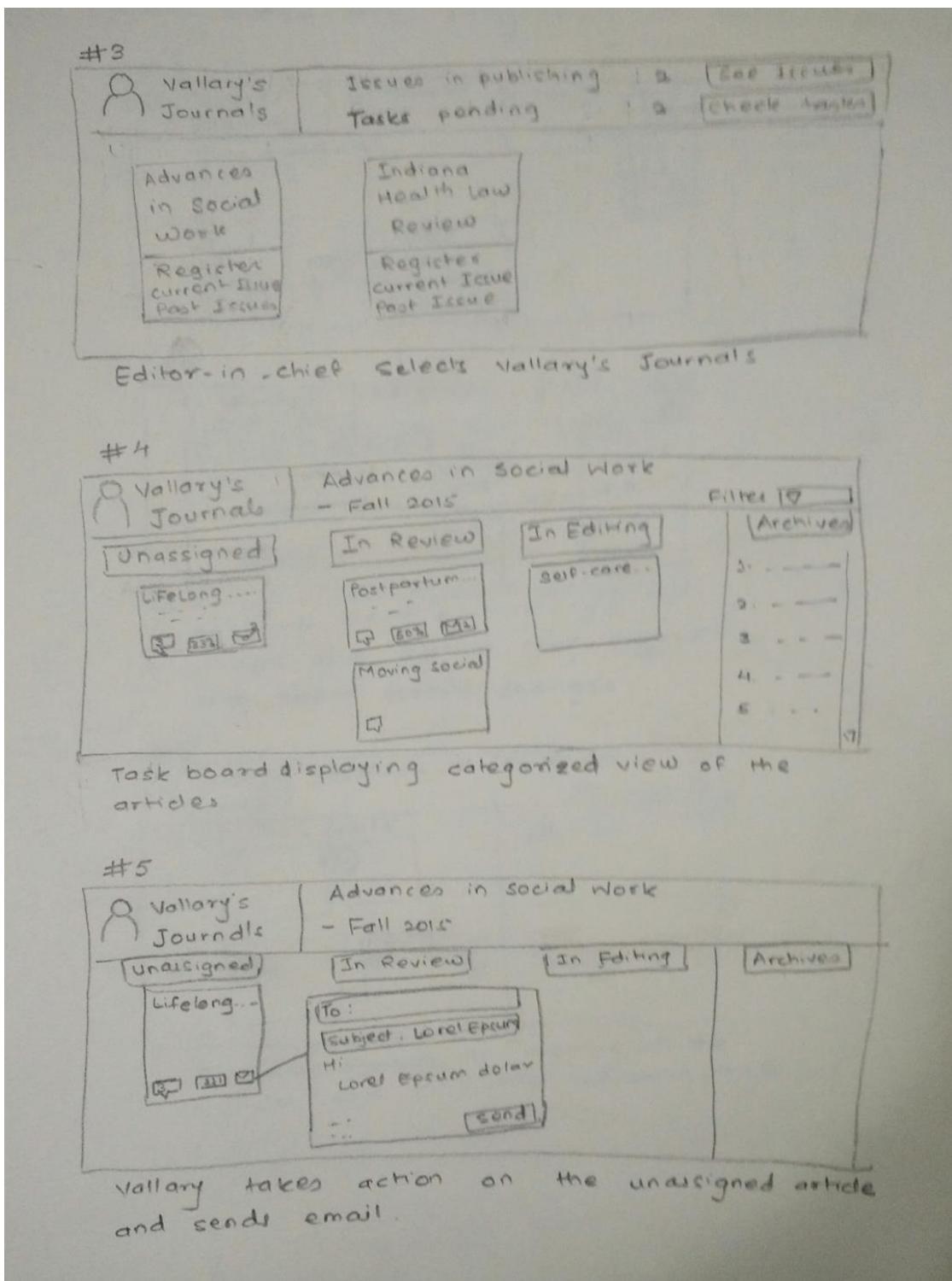
STORYBOARD A

This storyboard depicts a team of editors getting together to go over the tasks that need to be done.



Frame #1: Secured entry to the system for editors

Frame #2: Editor team meets every day in a scrum for 15 minutes to take the task update



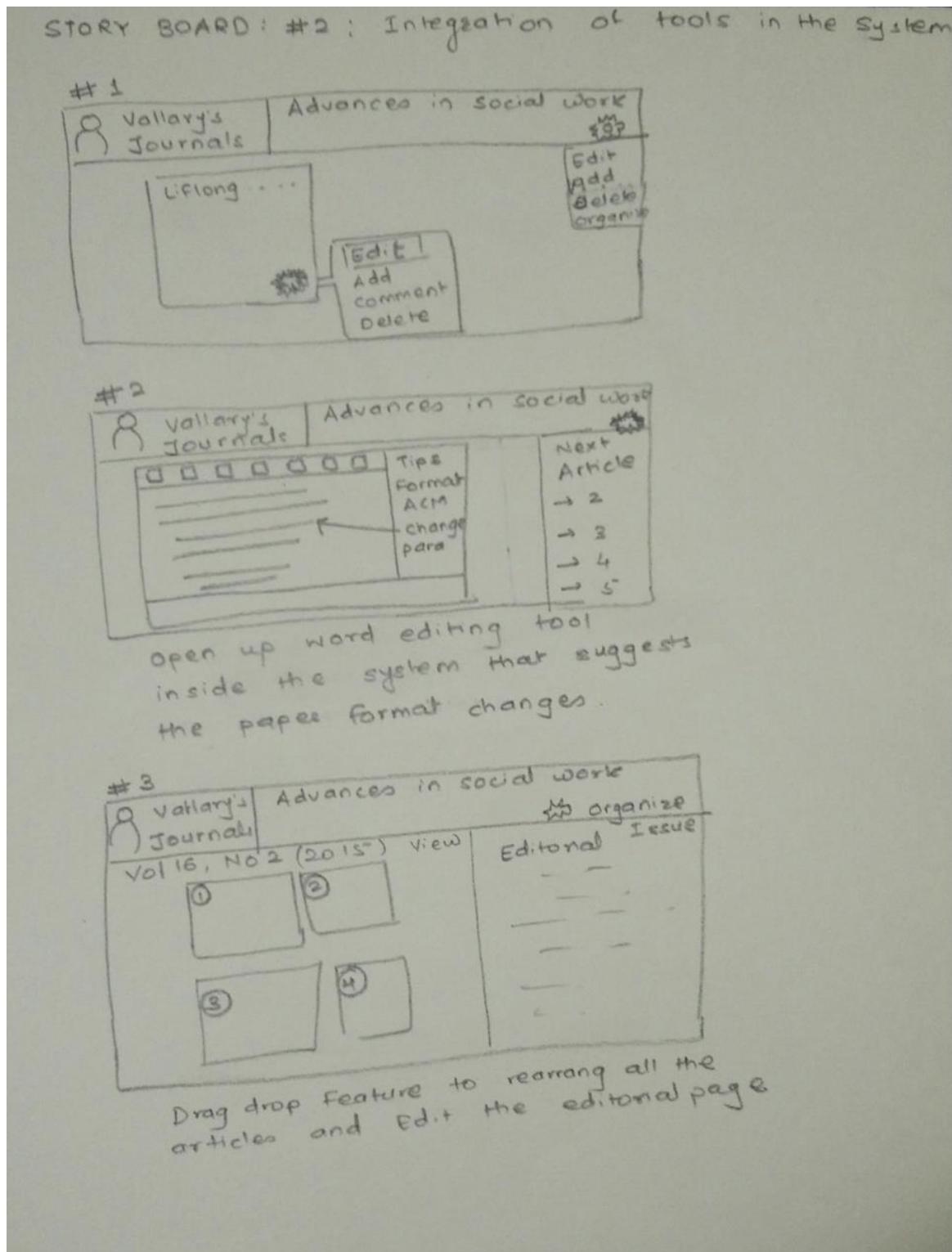
Frame #3 : Screen displays assistant editor's journals and her overall status of the Journal

Frame #4 : Editor opens up the Advanced Social Work journal and sees the status of the current issue

Frame #5 : Assistant Editor, takes action on the unassigned journal

STORYBOARD B

This storyboard displays a single story (article) card and integrated view of all the tools required to publish the issue.

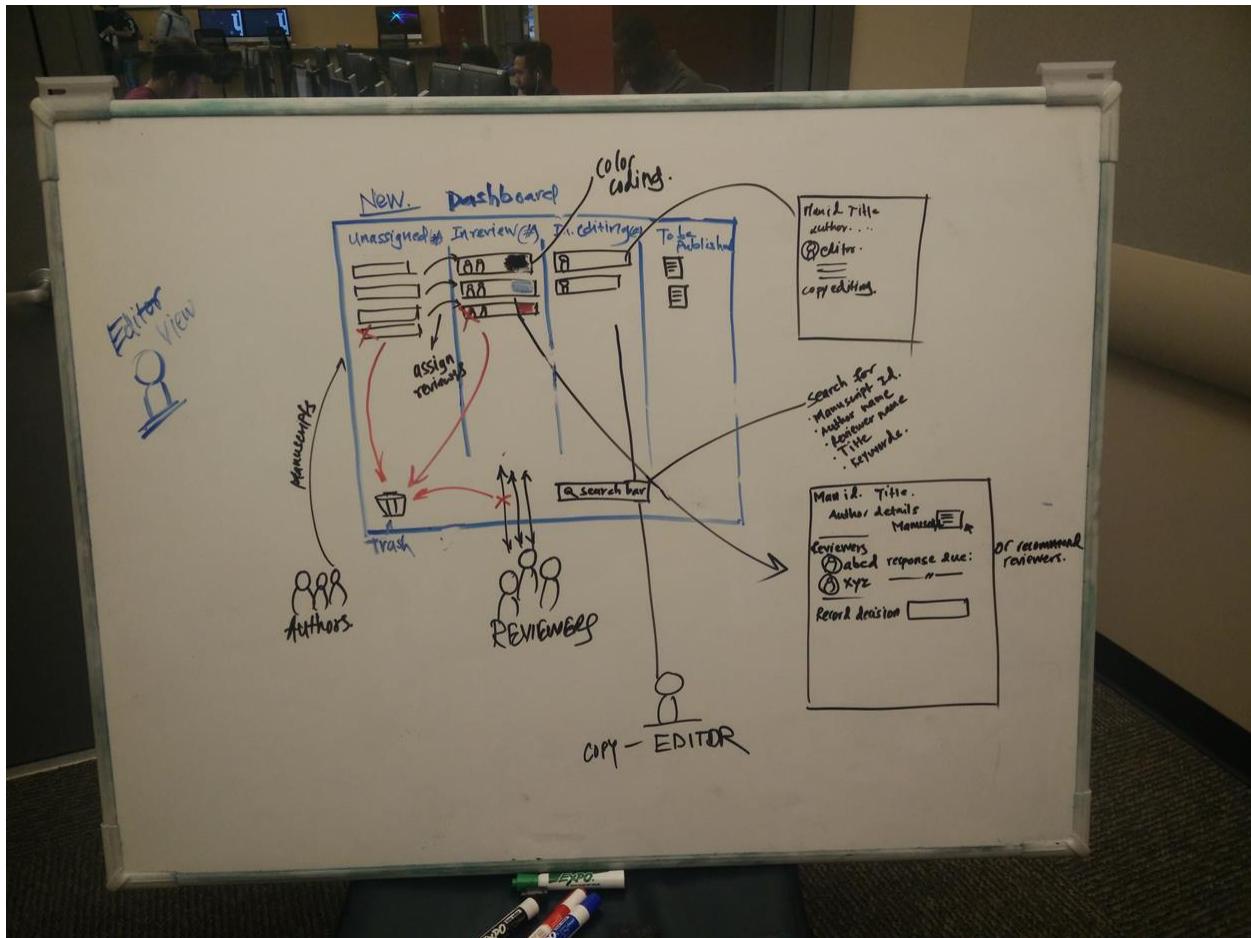


Frame #1: Ways where the settings/tools will be present in the system, one on the Issue level and other at the article level

Frame #2: Article level Edit settings allows the Editor to inline edit the article inside of the system. This is a way to eliminate the use of word editing tool for which the editor has to first download the article, edit, and send back to the author

Frame #3: Getting ready to publish the issue, arrange the article, write editorial etc

WORKSHOP

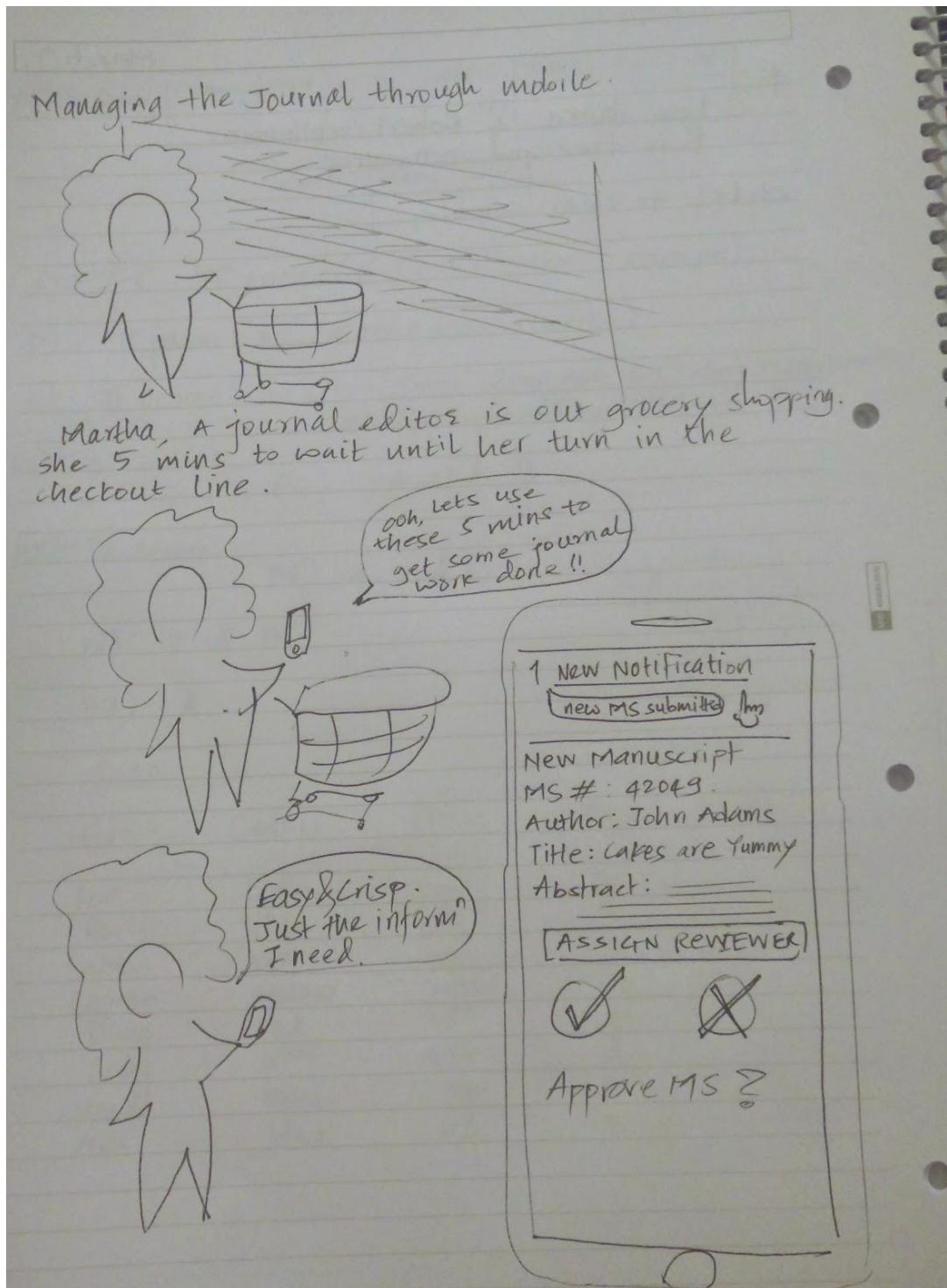


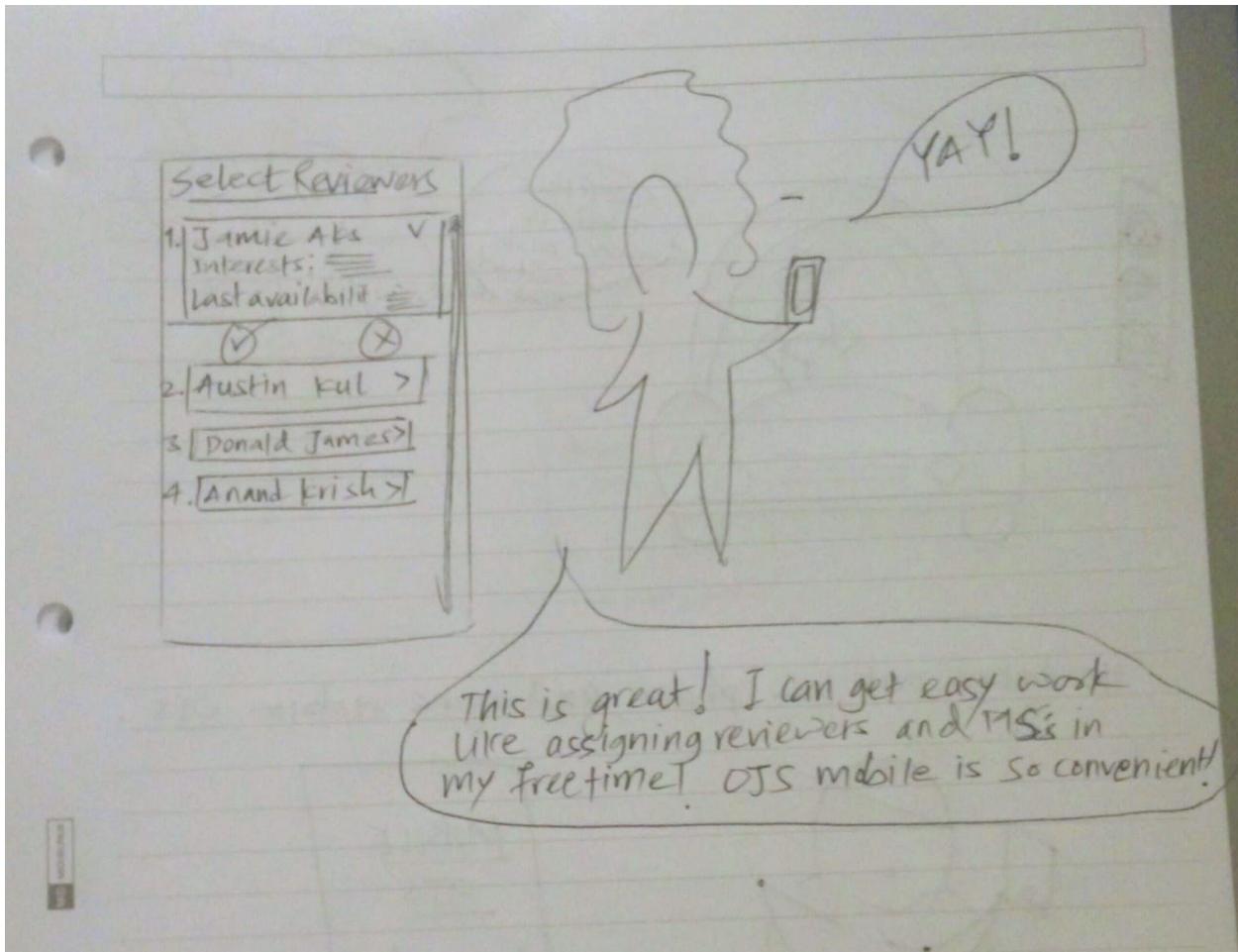
NOTIFICATION-DRIVEN MOBILE APP

The idea here was to make the initial process of the editor's job very easy and convenient, by providing them with a mobile application geared towards their needs of keeping track of a manuscript's status or performing actions dependent on the system data and the data collected from authors about their manuscript. The mobile app will have notifications when the editor has to complete an action, and this way all his work can be done through the smart phone at any place and any time they prefer. This way all their work can be done whenever it comes to it and there is no overdue work. Also, we thought about introducing a feature called Auto-mode. In auto-mode, the app will give the editor suggestions of recommended reviewers and seek the editor's approval for the action.

STORYBOARD A

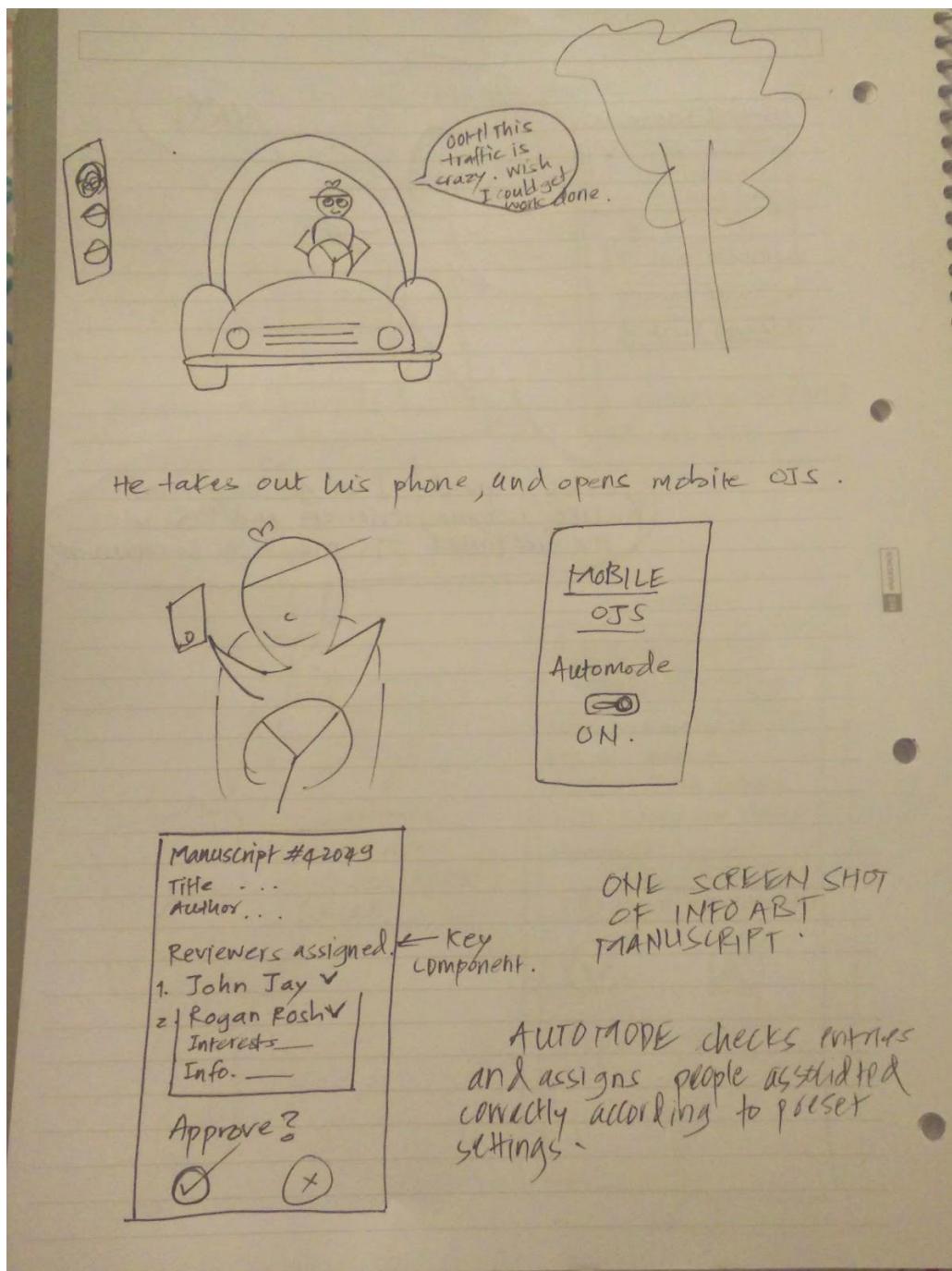
The storyboard depicts the scene where 'Martha', an OJS editor is out grocery shopping, and she is waiting in the checkout line and has 5 minutes to kill. She uses her phone to log into OJS and finishes up some work quickly in the meantime.

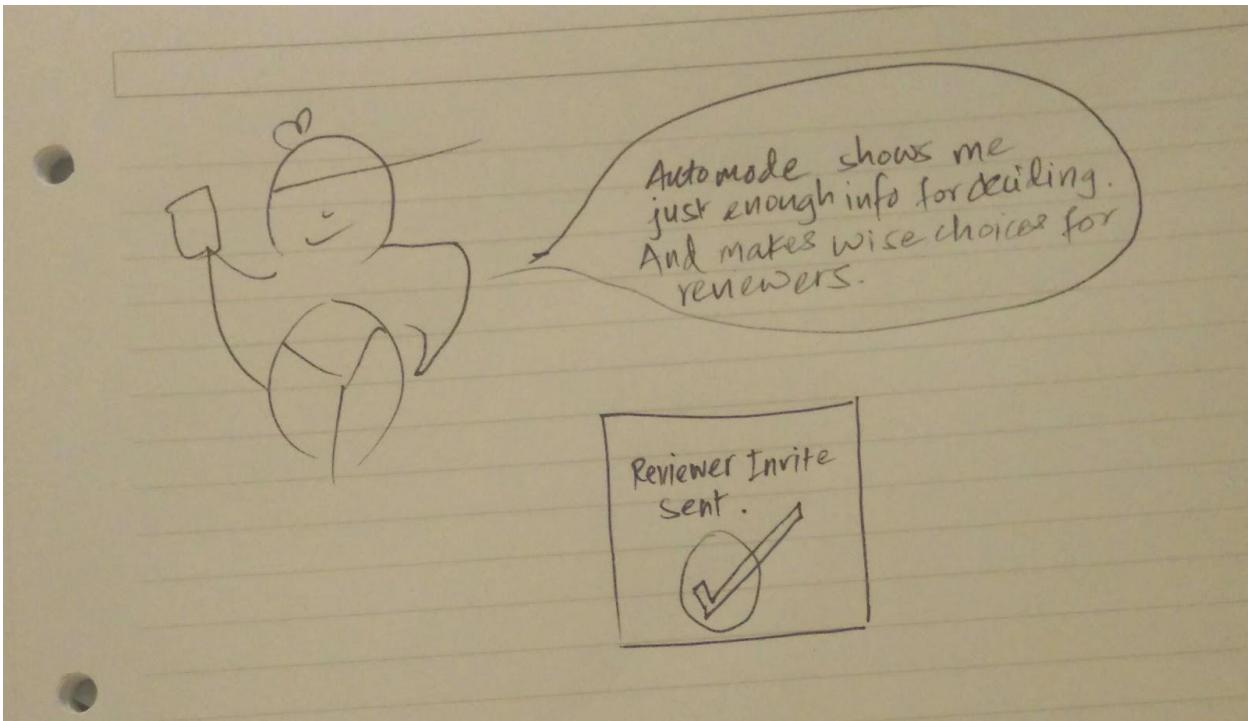




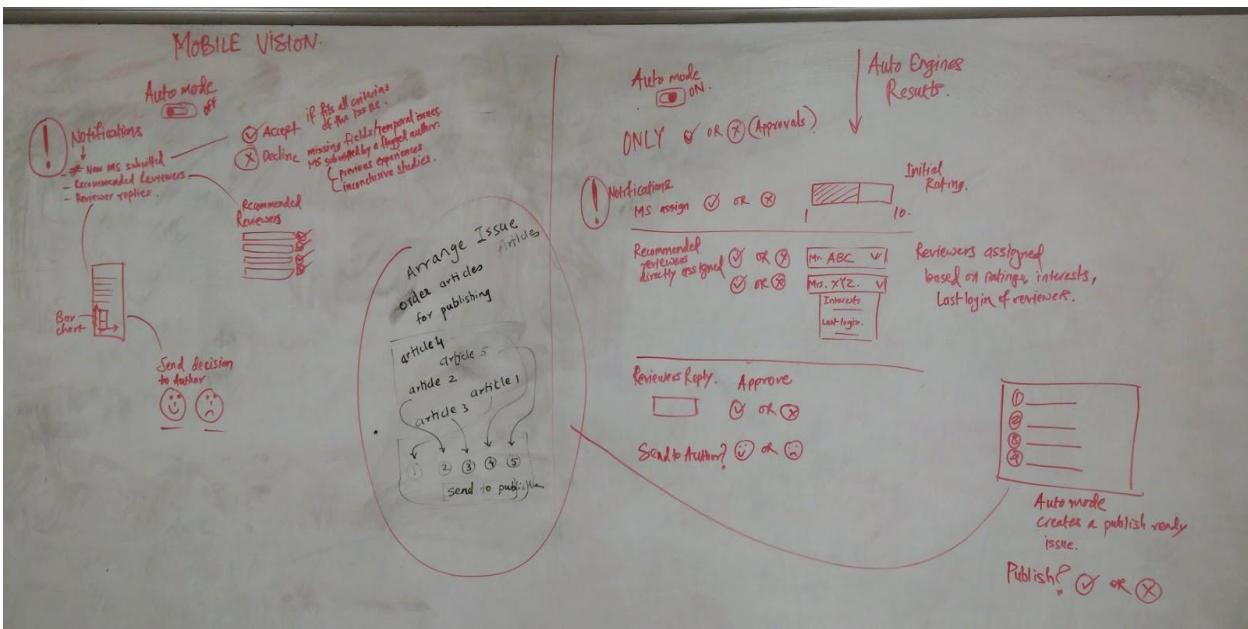
STORYBOARD B

This storyboard depicts the idea of having an Auto feature which runs many suggestions and helps an editor to make quick decisions. To show how easy and quickly we imagined the usage of the app, the character in our story board is shown waiting at the traffic light for two mins and he easily assigns work in such short time. The key features we wanted to highlight in this story board were the 'Auto-mode' and one single screen info of submitted manuscript.





WORKSHOP



DESIGN SOLUTION CHOICE

In deciding which idea to pursue going forward, we went back to our data to find out if we had stayed true to our findings and the direction they had set us on. Consulting our findings, we noticed that we had made a note to “devise a way for editors to easily know what stage of the [process] any manuscript is in, who is responsible for that stage, [and] what actions need to be taken...” Comparing what we set out to do with the design ideas that we visioned and storyboarded, we feel that we are closer to meeting our goals.

Going forward, we will not be pursuing the mobile notifications idea because although it promotes incredible ease of use, it may not be technically feasible and it takes away a lot of the fine-grained decision making and control that makes the process transparent to the editors. Instead, we have chosen the Kanban-style dashboard as the design idea to be the hub for the users of our system.

We strongly feel that the Kanban-style dashboard provides an easy way to immediately visually assess many factors regarding the status of a manuscript. We are also convinced that the drag-and-drop interaction inherent to the Kanban board will closely resemble the action of moving a physical piece of paper around like the users presently do.

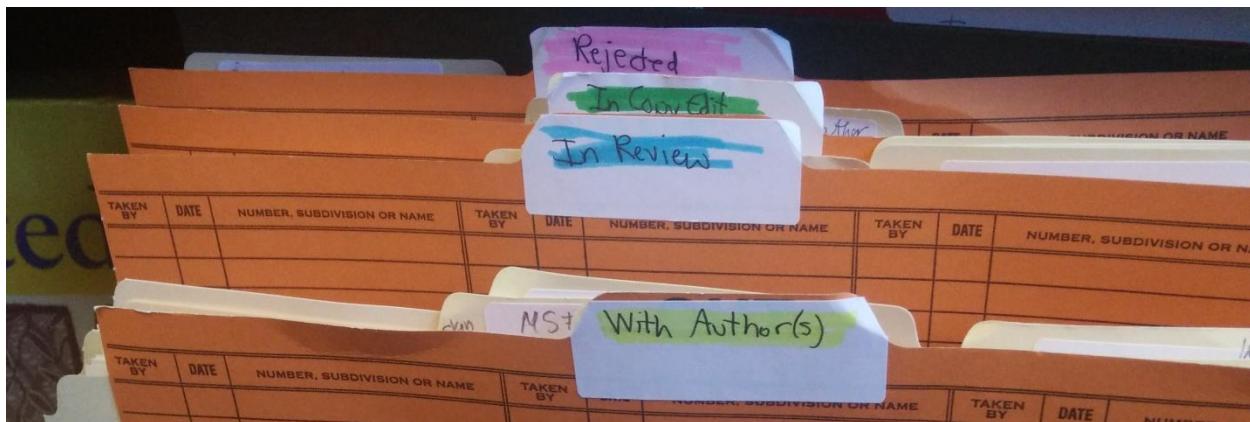


Figure 23. Picture showing how the users presently keep track of what phase a manuscript is in

We also plan to incorporate aspects of the “Milestone, Tasks, and Checklists” idea to provide our users with finer-grained details and tasks within a manuscript (card). We feel this will be helpful because it brings a very strong process-flow mindset to augment the visually superior layout of the Kanban board.

A few more reasons why we have chosen to continue with the Kanban board idea are that it makes it easy to conceptualize what is going on, each card immediately shows details about the people involved, and some members of the design team have been on successful multi-

person projects where similarly designed systems (and the methodology behind it) were employed.