

## The Freedom to Write

## **Usability Testing Report**

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**Pratt Institute** 

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### **Executive Summary**

This report details a usability study conducted by four Pratt Institute evaluators of the PEN America Archive prototype. Launching in Spring 2017, the site features a dynamic search function allowing users to browse several hundred pieces of archived PEN America audio and video content.

The Archive's prototype was assessed using the Think Aloud method (Nielsen, 2012), enabling the group of evaluators to independently examine the interface and determine any possible usability pain points. These observations were used to distill a list of findings regarding the prototype interface. This report highlights the major findings that currently impede the Archive's usability. The recommendations included here address these issues, and improve upon the user's overall experience navigating the PEN America Archive.

The **five** primary recommendations are to:

- 1. Make the homepage search functionality more obvious and accessible by incorporating a prominent search bar.
- 2. Provide users with a more approachable platform by condensing and nesting search filters under parent terms.
- **3.** Provide stronger search result feedback by adding a status indicator to the search bar and multiple signifiers to results confirming relevant search.
- **4.** Improve the legibility of and increase the user's confidence in search results by providing stronger filtration feedback and signifiers to clear filters.
- **5.** Redesign the layout of the featured collection pages to more closely relate the timeline to the content.

These recommendations are designed to improve the usability of the site, encourage exploration of the Archive's content, and to provide a satisfying experience for visitors to enjoy.

### Introduction

This report is intended to serve as a guide to facilitate the development of the PEN America Archive website. The PEN America Archive was designed to provide for users of all backgrounds and interests access to PEN America's multitude of archived audio and video materials. For the purpose of analyzing the site's usability, our team of evaluators consulted with the PEN America project team and decided to evaluate the following features of the prototype:

- Search functionality
- Labeling
- Required learning curve
- Overall aesthetic impressions

To discover valuable insights directly from users themselves, our team performed a usability test of the prototype. We utilized the user testing software Lookback.io to record audio, video and screen activity during our user testing. We then evaluated the quantitative and qualitative data the tests provided, and drew out high and low points concerning the interface's usability. Our evidence clearly highlights usability issues with the website, and we offer recommendations with mockups to resolve the problems we found.

### Methodology

According to Rubin and Chisnell's Handbook of Usability Testing, user testing is intended to inform design "by gathering data from which to identify and rectify usability deficiencies existing in products and their accompanying support materials." User testing derives itself from traditional experimental methodology, and there are many different approaches one can take depending on the study's objective.

For our user testing session, we chose identify a pool of participants within a target demographic specified by the PEN America project team. We then observed the participants in a controlled setting as they performed a series of tasks involving the PEN America Archive prototype. In our case, moderators guided testers through three tasks, instructing them to "think aloud" (i.e., narrate their thoughts and actions) as they worked through the tasks. The predefined tasks were designed to allow for exploration within certain areas of the site that may need improvement.

**Task 1.** You are a college professor developing a class on human rights. Find audio materials pertaining to human rights violations recorded during the 1970s, and determine where the audio recording took place.

**Task 2.** You are a literature enthusiast looking for audio clips of panel discussions involving Norman Mailer. Search for materials relevant to Norman Mailer, select one, and without listening, describe what your selection is about.

**Task 3.** You are a college student looking for information on prominent American authors. You are a first time visitor to the PEN America Archive looking to get a feel for the website. Find a "Featured Collection," explore the page and find an audio recording that looks interesting to you.

As moderators guided testers through the tasks, the user's commentary, onscreen movements, and facial expressions were captured using screenrecording software (Lookback.io).

The task-driven portion of our user test was supplemented by several additional activities intended to round out the study by helping us learn more about the users, their experiences while completing tasks, and their takeaways from the session. In addition to tasks, we also administered:

- Pre-test questionnaires: gathers information relating to participants' demographics and audio/video discovery/dissemination habits
- Post-task interviews: gathers reflections and experiences following tasks
- System Usability Scale tests: quantitatively rates and weight users' reactions and impressions of the prototype (see Appendix 5)
- Post-test interviews: gathers information on the user's experience as a whole following the test

Tasks and pre-/post-task activities allowed us to gather the data we used to develop our evaluations of the interface (see Appendix 6) from those evaluations, we formulated the following findings about current pain points in the interface, and made recommendations to improve usability.

### **User Test Participants**

During the team's initial meeting with PEN America, the PEN America project team provided us with a brief snapshot of the online Archive's target audience. They described the typical user as "a humanities-minded individual seeking to explore a wide range of issues at the intersection of Literature and Free Expression," and expanded on this description by referencing academics, writers, multimedia producers, and activists as ideal visitors to the site. Both our screening and pre-test questionnaires provided valuable information regarding tester demographics and how our participants fulfilled PEN America's expectations of ideal users.

We first used the screening questionnaire to narrow down our participant pool to reflect only those who:

- **a.** Are comfortable using the internet
- **b.** Are interested in literature and literary culture
- c. Use the internet to find and discover audio/video content somewhat often

While the screening questionnaire was primarily intended to source participants that align with the PEN America Archive's target audience, it also shed light on participant professions and media consumption habits. The pre-test questionnaire went into greater depth by asking users more about themselves, their preferred research tools, their favorite websites to find audio/video content, and their reasons for visiting online archives.

### **Participant Data Summary**

From the data gathered, we discerned that our pool of testers was comprised of young adults (all in the range of 25 to 35 years old), and all possessing at least one higher degree. The majority of our testers (62.5%) were female, and 50% of testers were familiar with PEN America. Professionally, our testers represented a wide array of careers that fell into PEN America's target demographic. Specifically, our testers identified as follows:

- 1 city employee (12.5% of testers)
- 2 creative professionals (25% of testers)
- 1 student (12.5% of testers)
- 4 librarians and information professionals (50% of testers)
  Note: 2 of 4 participants who primarily identified as library and information science (LIS) professionals also identified themselves at students. The data reflects their profession as indicated in the pre-test questionnaire.

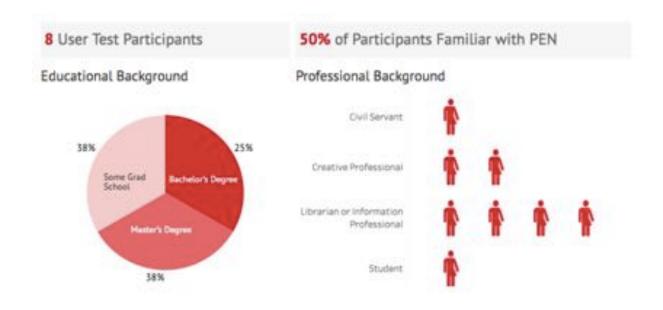
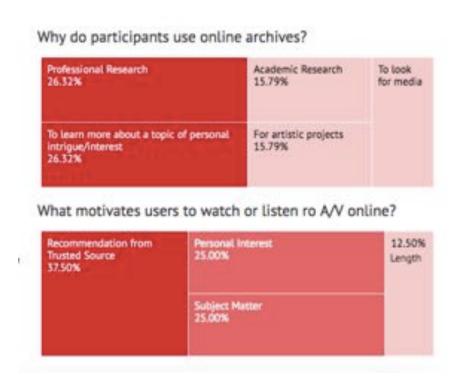


Figure 1.

Our user data also shed some light on participants' preferences and motivations. We learned that the participants most commonly use online archives for professional research or to learn more about a topic of personal intrigue or interest (See Figure 2a).



Figures 2a and 2b.

We also learned that **37.5**% of participants are motivated to consume audio/video content online when the content is **recommended by a trusted source** (*See Figure 2b*). Participants indicated that they are also motivated by the content's subject matter, whether the content reflect their personal interests, and the length of video or audio clips.

Additionally, we found that **50**% of users listed Google Scholar as a preferred research tool, and **37.5**% of users listed NYPL's online resources as a preferred research tool. When asked about favorite tools for discovering audio/video content, the data suggested that users prefer Youtube, Soundcloud, and Spotify.

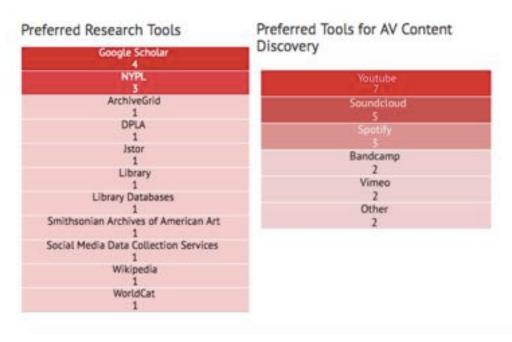


Figure 3.

When participants were asked whether they would prefer the option to share audio video content on social media, 62.5% said 'yes'.

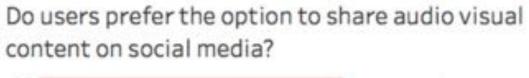




Figure 4.

### Findings & Recommendations

In the following section, we have detailed our major findings and recommendations for improving the PEN America Archive's usability. We have included quotes from our participants, who are listed as by their user ID number (for example, participant 1 will be listed as 'P1').

# Finding 1. Users had difficulty locating the search bar, and didn't have confidence using it.

Upon being prompted to find a specific item, users were immediately unsure of how best to begin a search. Users commonly first chose to use a more standard filtering method like the "Search by Timeline" tool, and tried typing in the search bar as a last resort. They commented that "the search feels so big," (P2) and that it "felt like I really worked up and down the page, instead of using the top space," (P7). Overall, the average time spent on the first task, which was designed to have users interact with the advanced search fields and filters, was 8 minutes and 30 seconds.

On average, users thought the advanced search was "somewhat" clear and understandable. 38% of users agreed that the website is "very cumbersome to use" and 50% agreed that various features in the website were not well integrated. Our analysis reveals that users are uncertain of how to efficiently begin and conduct an advanced search.

# Recommendation 1. Incorporate a search bar prominently on the homepage.

Incorporating a prominent search bar on the Archive homepage will clearly communicate to users of all levels how to begin a search for content. In addition, providing suggested terms in the search bar encourages users to interact with the tool. It will also signify to visitors a core purpose of the website—as a searchable archive of PEN America's media assets.



Figure 5.

# Finding 2. Users were overwhelmed by the magnitude of the subject headings.

Participants were overwhelmed by the quantity of terms and filters to choose from. Many users briefly read the subject headings and moved on, or opted to forgo the field altogether because of the time involved in reading through the extensive list.

One user scrolled through the list of subject headings and selected numerous choices they thought applied to the search prompt. They remarked that "having the controlled vocabulary here was very nice," (P8).

# Recommendation 2. Condense subject headings to provide users with a more approachable platform.

Once users have begun their search, they should feel encouraged to filter and drill into content by utilizing the broad, yet controlled, structure of subjects. Nesting subjects into a collapsible and expandable format saves the user time while also offering an understandable map of the archive's subject organization.

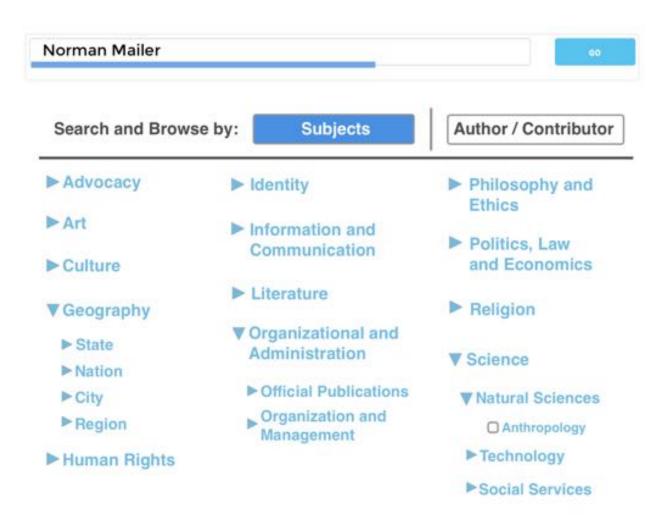


Figure 6.

#### Finding 3. No status feedback for keyword searches.

Users found that the current system does not provide any feedback that keyword searches are being processed. In many instances, users clicked 'Go' multiple times after typing in a keyword search.

In addition, participants have to read through blocks of text to verify search criteria were reflected in results. For example, P7 stated, "I'm not seeing what I would normally be seeing which would be a label to call something out to distinguish the kind of content it would be," and "One of my first reactions was, there was a lot of text I had to take in but nothing that was distinguishing the content easily using graphics or some kind of icon."

## Recommendation 3a. Add a status indicator to the search box.

After users click "GO," activate a waiting symbol to communicate that something is happening to process the user's text search.

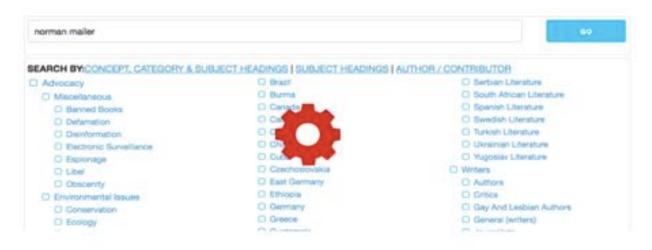


Figure 7.

## Recommendation 3b. Provide multiple signifiers that search returns are relevant.

To more firmly reinforce that a search has been successful and returned relevant results, keywords should be reiterated above the search results to convey that the resulting content matches the searched term. In addition, highlighting searched keywords in the generated content helps users understand how each result is relevant to their search.

Both additions are designed to build confidence in the search function's operability.

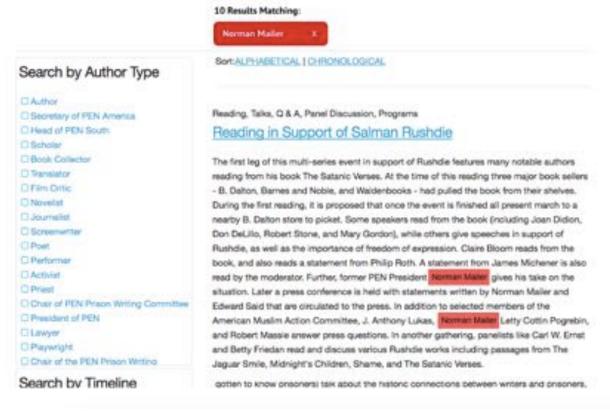


Figure 8.

### Finding 4. Applying and clearing filters confused users.

Users were surprised that filters were processed in real time (as opposed to having to click 'GO' to apply filters) because the system does not provide feedback to indicate a filter has been applied. Because there were no indications that filters had been utilized anywhere, users became confused, and often had to clear filters and reset their searches by trial and error. Users also reported feeling uncertain about whether search returns were audio or video content.

Recommendation 4. Provide stronger filtration feedback by making selections more prominent on the page. Consolidate signifiers that clear filter selections.

Displaying filters prominently on the page will allow users to feel more confident that the search returns reflect their filtration selections. The addition of signifiers to 'clear' searches makes it simpler for users to reset the page and embark on a new advanced search. Additionally, icons added to the results would better signify the content's media type.

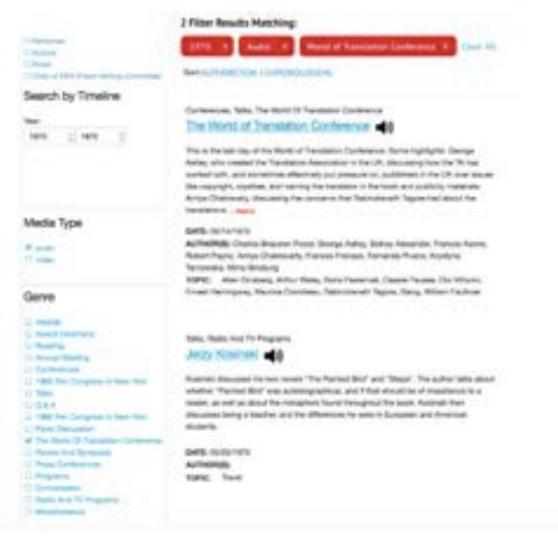


Figure 9.

# Finding 5. Specific edits to the curated "Featured Collection" template would build upon positive feedback.

Users had an overall positive impression of the Featured Collection page and its potential as a research tool, but found the layout of the page awkward due to the size of the image and column-style of text. Users noted that the viewing experience was somewhat vertical, and linear, and that space on the page can be used more effectively.

# Recommendation 5. Make Featured Collection page more prominent and highlight its features.

The following edits to the "Featured Collection" page template would improve the accessibility of the curated content: header photos should be sized down; the layout should be made less vertically linear with the addition of editorialized article text in a scrolling container laid over the photograph; as users scroll, corresponding dates that appear in the interactive timeline should be highlighted in red; if an audio asset has a subject heading or tag that appears in the timeline or in the article, it should also be highlighted in red. Overall, the page was reconfigured to optimize visibility of content of the page – allowing users to grasp both the page's purpose and scope.



#### Related Content

Awards, Award Ceremony, Reading Prison Writing Award 40

The winning poems, stories, nonfiction pieces, and short plays from the annual PEN Prison Writing Contest are read by autor Eugene Osborne. Smith and children's book author Mary Pope Cisborne. This is the first year that a price for Drama is given out. After the readings, radical lawyer William Kunstler speaks about prisoners he has represented and the prison-industrial complex.

DATE: 11/17/1967

PEN AMERICA ARCHIVE

AUTHORISE: Eugene Osborne Smith, Mary Pope Osborne, William Kunstler, Charles Culterie, Raymond Fernandez, Carlos Horneby, Timethy J. Haley

TAGGED: Artics Prison riot, Herman Melville, Moby-Dick, Nicaraguan Revolution

Conferences, Q & A. Time Fen Congress in New York. Panel Discussion

American Fiction and Poetry 48

Raymond Carver, Alien Ginsberg, Cynthia Macdonald, Joyce Carol Ostee, Kirkpatrick Sale, and Mark Shand talk about the status of proce and poetry and their influences on each other.

DATE: Invalid date

AUTHORSS: Reymond Carver, After Greatery, Cynthia Macdonald, Joyce Carol Cates, Kirkpetrick Sale, Mark Strand, Richard Howard TAGGED:

Conferences, 1986 Fen Congress in New York

Opening Ceremony = 0

This is the first event of the 1986 Congress, and introductory remarks are given by Per Wiletberg (President of PEN International), Norman

Figure 10.

### Conclusion

The PEN America Archive is presently in a great position for growth. The content is exceptionally interesting and engaging, and the recommendations contained within this report are designed to improve the existing search functionality and level of user confidence. We arrived at these recommendations by performing eight in-person usability tests and evaluating the quantitative and qualitative data we extrapolated from those tests. By following these recommendations, the PEN America Archive could see a significant improvement in their users' experience with the site and content, and in user-retention upon launch.

### **Appendices**

### Appendix 1 - Recruitment Questionnaire

\*Your name and email address will be used only for the purpose of this study and will remain confidential.

- 1. What is your name?
- 2. What is your email address?
- 3. Please indicate your age:
  - a. Under 18
  - b. 18 24
  - c. 25 34
  - d. 35 44
  - e. 45 54
  - f. 55+
- 4. Please select the term that best describes your current profession
  - a. Educator
  - b. Student
  - c. Creative professional
  - d. Staff at museum/library/archive
  - e. Activist/advocate
- 5. Please choose your highest level of education:
  - a. High school
  - b. Some college
  - c. Bachelor's degree
  - d. Some graduate school
  - e. Master's degree
  - f. PhD

- 6. How comfortable are you using the internet?
  - a. Very I use the internet every day, at home and/or at work
  - b. Familiar I use the internet often and can perform most basic tasks
  - c. Not comfortable I rarely use the internet [REJECT]
  - d. I've never used the internet before [REJECT]
- 7. On a scale of 1 to 5 (1 being the lowest, 5 being the highest), please rate your level of interest in literature or literary culture:
  - a. 1 (not interested) [REJECT]
  - b. 2[REJECT]
  - c. 3
  - d. 4
  - e. 5 (very interested)
- 8. How often do you use websites to discover audio/visual content?
  - a. Very often multiple times per week
  - b. Somewhat often several times per month
  - c. Rarely one or two times per year
  - d. Never you've never used a website to discover A/V content [REJECT]
- 9. Are you familiar with the PEN America organization?
  - a. Yes
  - b. No
- 10. Would you be available to travel to Pratt Manhattan Campus at 144 West 14<sup>th</sup> Street (in Chelsea) for a 30-minute usability test between November 5<sup>th</sup> and November 20<sup>th</sup>?
  - a. Yes
  - b. No [REJECT]

### Appendix 2 - Pre-Test Questionnaire

\*Please fill out this questionnaire so we can get some basic information about you and how you like to search for A/V content on the web.

- 1. What is your name?
- 2. Please indicate your age:
  - a. Under 18
  - b. 18 24
  - c. 25 34
  - d. 35 44
  - e. 45 54
  - f. 55+
- 3. Please select the term that best describes your current profession:
  - a. Librarian or information professional
  - b. Gallery or museum professional
  - c. Student
  - d. Educator
  - e. Creative professional
  - f. Activist/advocate
  - g. Artist
  - h. Other [Text entry field]
- 4. Have you ever used an online archive to search for or discover information?
  - a. Yes
  - b. No
- 5. If you answered yes to the previous question, who do you typically visit online archives?
  - a. Academic research
  - b. Professional research
  - c. For artistic projects
  - d. To learn more about a topic of personal intrigue/interest

- e. To look for media (photos, audio clips, video clips)
- f. Other [Text entry field]
- 6. What are some of your favorite online research tools? (For example, WorldCat, NYPL website, Digital Public Library of America (DPLA), Google Scholar, etc.). [Text entry field]
- 7. How often do you search for audio/visual content on the internet?
  - a. 1 (never)
  - b. 2
  - c. 3
  - d. 4
  - e. 5 (very often)
- 8. Where do you most prefer to consume audio/visual content?
  - a. YouTube
  - b. Soundcloud
  - c. Bandcamp
  - d. Vimeo
  - e. Spotify
  - f. Other [Text entry field]
- 9. What influences your decision to listen to an audio clip or watch a video on the internet? [Text entry field]
- 10. When you discover an audio or video clip you enjoy, would you prefer the option of being able to share it on social media?
  - a. Yes
  - b. No
- 11. How often do you share audio/visual media on your social media accounts?
  - a. 1 (never)
  - b. 2
  - c. 3
  - d. 4
  - e. 5 (more than once per week)

### Appendix 3 - Moderator's Script

## **Moderator Script**

**PEN America Archive** 

#### Introduction

Hi, my name is \_\_\_ and this is my colleague, \_\_\_. I'm one of four members of a team of Usability students from Pratt Institute School of Information. We appreciate you joining us to participate in this user study. Your feedback will provide us with valuable information which will be used to assess the design of the PEN America Archive website.

Today you will be completing a pre-test questionnaire, a series of tasks using the website, a post-test interview, and a final questionnaire. These activities are not a test of your technical abilities, and there is no such thing as a wrong answer. Your participation helps us understand what works or doesn't work about the website. Be aware that during each task-based activity, your on-screen movements and commentary will be recorded using a screencast software.

The site being tested is a very early prototype and therefore some functions are not yet operational. Because this is an early version of the website, you may encounter some placeholder text or graphics.

After today's user test is complete, our team will review and analyze the test results in order to develop usability recommendations for our group report. Upon completion of the study you will receive a \$10 Starbucks gift card.

Before we begin, we ask that you please silence your phone during the user test. Note that you may stop the study and leave at any time for any reason.

#### **Consent Form**

Please read our consent form stating the intent of this user test and the participation requirements. [Hand them the form and give them a moment to read it over]. Do you have any questions or concerns about this form or the details required of you as a participant? [Respond to any questions from the participant; have participant sign the form; collect the form].

#### Instructions

We will spend the next (approximately) 25 minutes using the computer in front of you to conduct our study. The study will include:

- A digital pre-evaluation questionnaire so we can learn more about you.
- A set of three (3) tasks which will be completed using PEN America's website.
- And a post-evaluation assessment, which will include a short in-person interview and a digital questionnaire.

While you are completing the task-based part of our session, we will be using software to capture recordings of your process. Throughout the study, we ask that you 'think aloud,' meaning you should provide verbal feedback about each task. I will be sitting next you observing the tasks, and I may also ask questions from time to time. My colleague \_\_\_ will be taking notes throughout the test.

Before we start, do you have any questions?

### **During the Test**

### **Pre-Test Questionnaire**

First we will complete a pre-test questionnaire so we can learn a bit more about you and your background.

[Have tester complete the pre-test questionnaire Google form]

#### Tasks

Now we will begin the test of the PEN America Archive website. You will be given three tasks to complete. Here is your first task.

[Bring up prototype page, activate Lookback. Refer to User Note Template to document tasks and post-test interview]

\*[Hand them slip of paper with task written out]

We've completed the test of the PEN America Archive prototype. We have a few more questions for you, and a quick survey for you to take.

[Ask post-test interview questions on user test notes doc; bring up SUS Google Form, have tester take the questionnaire]

### After the Test

Thank you for participating in today's user testing session! We appreciate your input and will be using your questionnaire responses, interviews, and recorded screencasts in our final usability report for PEN America. Here is a \$10 Starbucks gift cards for volunteering your time today.

[Hand them incentive, get signature on receipt form]

### Appendix 4 - Task Result Summary



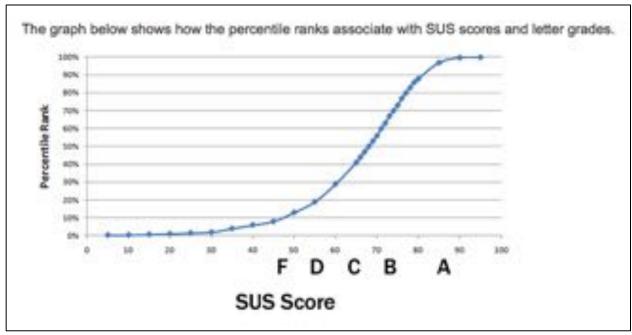
### Appendix 5 - System Usability Scale (SUS)

As Sauro states, "the data shows that SUS is a reliable and valid measure of perceived usability," (2011).

You can see an example of a SUS here:

Strongly Disagree 1	2	3	4	Strongly Agree 5
0	0	0	0	0

http://www.measuringu.com/sus.php



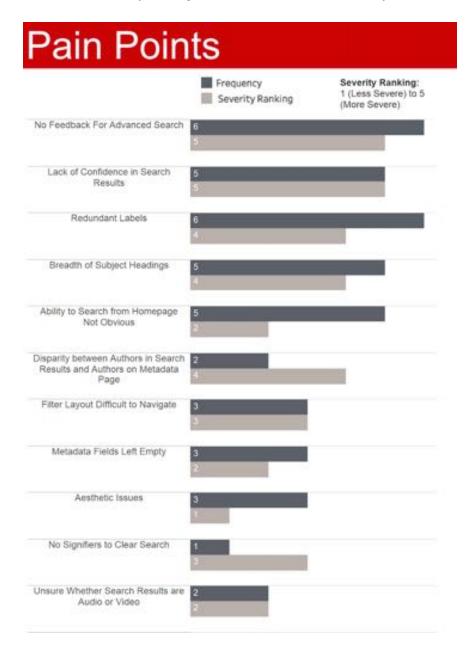
http://www.measuringu.com/sus.php

And here are the results of the PEN America Archive testing SUS:

Participant	SUS Score
1	25
2	75
3	55
4	45
5	37.5
6	85
7	75
8	30
Average	53.44

## **Appendix 6 - Priority Visualization**

Below are the priority visualizations we extrapolated from the gathered data:



## Pain Points

# Priority \*SUM(Frequency + Severity Ranking) No Feedback For Advanced Search Lack of Confidence in Search Results Redundant Labels Breadth of Subject Headings Ability to Search from Homepage Not Obvious Disparity between Authors in Search Results and Authors on Metadata Page Filter Layout Difficult to Navigate Metadata Fields Left Empty Aesthetic Issues No Signifiers to Clear Search Unsure Whether Search Results are Audio or Video

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