

Web App UX Evaluation Report



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Web Frameworks and Dynamic Data (11841)

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Introduction

This report will provide a comprehensive user experience evaluation of a web application on the National Film and Sound Archive's API. It will first briefly introduce the web app developed, sharing the scope and purpose of the project. Then, two user personas will be developed to understand two types of audiences, which will be followed by user testing conducted by the web app developer, targeting the chosen audiences to identify key issues and potential solutions for the web app. The results from the user testing will be deeply assessed and will also discuss areas for improvement. Finally, a reflection on the project will summarise the overall development from the perspective of the web app developer.

Project Overview

The National Film and Sound Archive's API contains a large collection of film and sound-related artifacts. The project brief encouraged the use of the NFSA's API to not only understand the implementation of web frameworks but also introduce creative ways to generate a positive experience for users. Inspired by the cinema atmosphere decades ago, lobby cards were a key interest that were desired to expand on in a web application. The web app developed became a search-prompted collection, where users can sort the results by a search query, date of publish, and colour, in hopes of targeting a creative audience as well as a historical audience. In the end, the web app was published, including a unique feature for a random lobby card generation.

The web app developed can be accessed at the following link and will be utilised for user testing and evaluation throughout the report.

<https://jonathan-stahl.github.io/vue-project/>

Method

1. UNDERSTAND: Establish user groups by researching through interviewing users within the target audience and building a persona representing the group.
2. INITIATE: Build a task sheet contral to the user goals for user testing.
3. USABILITY TESTING: Conduct user trials with the task sheet to test the succession of achieving user goals while identifying key positive and negative factors during the trials, noting the severity of any issues.
4. EVALUATE & IMPROVE: A comprehensive evaluation of the results from the usability testing while providing recommendations for improvements.

Understand

Two audiences were targeted in the initial development of the web application: creative and historical. Hence, two user personas representing these audiences were developed to understand their needs.

User 1 Creative - Emma



Emma

Demographic:

20yr old female who explores creative visual arts through personal interest by doodling, painting, and drawing.



User 2 Historical - Jeffrey



Jeffrey

Demographic:

42yr old male who enjoys learning anything history related



After establishing the audience's goals, motivations, and frustrations, user trials tailored to those needs can be conducted appropriately.

Initiate

The following table shows the built task sheet central to the user goals for user testing. Two task prompts have been made from each persona (2 tasks from each of the 2 users result in 4 tasks) to identify if needs are met or if they need to be improved to reach that particular goal. The full task sheet will be directed to a mix between the two audiences for user testing.

Task No.	Relate to user	Task
1	Understand history in design	Find a lobby card
2	Pique own interest/inspiration for projects	Utilise the colour sorter
3	To spend his time productively	Use the search bar to find something you want
4	To enhance his knowledge	Utilise the random card generator

To further understand the users in relation to the web app and vice versa, a 4-question unrecorded interview will be conducted with the user. This was chosen to be done unwritten as the data received from these questions would be difficult to measure; hence, it's only for understanding and interest.

Post-trial questions:

1. What did you like about the web app?
2. What didn't you like about the web app?
3. How can the web app be improved?
4. Describe the web app in a few words

Usability Testing

Method

User Trials	
1.	A 10-minute block will be allocated for a user, providing access to only the web application through a designated laptop. The environment will be kept to be the same/similar to prevent other factors from influencing the trial results.
2.	5 users will be chosen to take part in user testing, 2 from a creative audience and 2 from a historical audience, and 1 random user for a basic mobile test. The users will be partially briefed on the overview to establish the standard.
3.	The proposed task sheet will be directed to the users in numerical order of the tasks.
4.	Concurrent observation of any particular behaviour (physical or speech-related) will be recorded during the trials.
5.	On completion of tasks or when the designated time limit is breached, the user will complete a System Usability Scale (SUS) (see Appendix 1).
6.	Finally, each participant will answer 4 feedback-related questions for further understanding about the user and the web app.

Demographic

Participant		Occupation	Relevance
1.	20yr old female	unemployed (studying psychology)	enjoys exploring creative projects on pinterest and including them in her room, loves drawing
2.	28yr old female	cafe barista	sells paintings as her side hobby and passion
3.	43yr old male	pastor	enjoys museum trips with people, especially in new places
4.	19yr old female	unemployed (studying medical science)	loves reading biographies of key figures
5.	20yr old female	works as an administrator at a tuition centre	N/A

Results

Participant	SUS Score	Grade (A, B, C, D or F)
1.	65	C
2.	72.5	C
3.	82.5	B
4.	80	B
5.	87.5	A

Evaluating solely based on the SUS scores, trends can already be seen and listed:

1. The 2 participants from the creative background both presented low scores
2. The 2 participants from the historical background both presented a similar score
3. The random user selected for mobile testing presented a high score

This alone already shows the need for significant improvement in a particular area, as both creative background participants presented a low score, which would mean their goals haven't been satisfied. This could be related to the colour sorter being unsatisfactory or unnecessary. It is worth noting that the mobile version succeeds in usability significantly. This could be related to the simpler viewing and page layout.

Observations on particular user behaviour or oral responses were noted and are revealed in the following table.

Participant 1	"Why is the website moving around?"
	Issue: Website jitters when loading a new page.
	"Why isn't it doing anything?" (as the user clicks enter on a search query).
	Issue: Can't click enter on a search query
Participant 2	Smiled when utilising the random card generator, then proceeded to use it a few more times.
	The user didn't know much about lobby cards.
	Disapproval of the colour sorter, the user described it as 'pointless'.
	"Oh my God, that's cool. Can I click it again?"
Participant 3	The user refers to the random lobby card generator after their first time using it.
	Date filters not understood or realised.
	Confusion about the dates 'not working'
	Can't click enter on a search query
Participant 4	Desire for genre filters.
	The user hovered over the cross icon in the lobby card popup window multiple times.
	Can't click enter on a search query
	Played around with the back page while in the card preview popup.
Participant 5	The user was unaware that the cards were clickable for further information.
	Approval of the random lobby card sorter.
	No issue utilising date or colour filters.

Evaluate and Improve

Each observation is evaluated and includes a recommendation for improvement or fixation. Colours have been used to identify similar or common observations that occur across the same or other users, usually relating to the same issue or solution. The ones left blank in colour are other observations that are worth noting but aren't as significant across other users. This table is further discussed in the next section of the report.

Participant 1		
Observation	Evaluation	Recommendation
<p>"Why is the website moving around?"</p> <p>Issue: Website jitters when loading a new page.</p>	For some reason the website jitters when loaded, which may cause discomfort in the user.	Debugging issue.
<p>"Why isn't it doing anything?" (as the user clicks enter on a search query).</p> <p>Issue: Can't click enter on a search query</p>	Most search bars offer users to click the search button OR click the 'enter' or 'return' key on the keyboard to ensure a smoother transition process. This website lacks the function of the enter key, so it forces the user to do something else that isn't intuitive.	Revisit the code and change it to allow the user to click 'enter' or 'return' to activate the search.
<p>Smiled when utilising the random card generator, then proceeded to use it a few more times.</p>	This random card generator was probably the most intriguing item in this web app. It's not uncommon that humans love random results; though not necessary, it piques interest.	<p>I think that the random card generator can be improved to maximise it's feature.</p> <p>Including filters for the random search may be more efficient if the user's goal was to pique interest as opposed to exploring. Having both a random card generator with the same filters as the collection will attract both creative and historical audiences.</p>
<p>The user didn't know much about lobby cards.</p>	As there is no description about lobby cards on the site, those who aren't familiar with it or the	Include an about page, or a section where the users can understand about lobby cards

	NFSA collection will not understand the purpose of the website and will lose interest rapidly.	and can read further about the NFSA collection.
Participant 2		
Observation	Evaluation	Recommendation
Disapproval of the colour sorter, the user described it as 'pointless'.	Coming from someone with a creative background, this was a bit odd. Perhaps the colour sorter is interesting but hasn't been implemented well in this layout. Or perhaps the user doesn't have a reason to sort the lobby cards into colours.	Revisiting user needs and feedback will generate new solutions or adjust the current. However, after careful evaluation, adjusting the colour sorters as a normal search filter would be beneficial, directly next to dates rather than on the side of the screen as the layout proved redundant.
"Oh my God, that's cool. Can I click it again?" The user refers to the random lobby card generator after their first time using it.	Similar user satisfaction to the lobby card generator being intriguing.	To further encourage the random lobby card generator to be used numerous times, it could be turned into a sort of slot machine. This can encourage safe gambling in a fun and unique way, incorporating history and art.
Date filters not understood or realised.	It isn't necessarily clear to users that the search filters ARE search filters, especially when the colour filters are on the side away from the search bar, and there is nothing telling the user that the date filters or it's function.	Putting the colour selectors directly next to the date filters establishes that the filters are filters. A textual prompt will further establish. E.g. Search by date: Search by colour:
Participant 3		
Observation	Evaluation	Recommendation
Confusion about the dates 'not	The date filters did work, but it	When a search filter is clicked, it

working'	didn't necessarily show that it worked, as the gallery looks quite similar upon load. This is a critical issue, as the user will not know what the current page of the gallery is showing. Regardless of what search button filters they clicked, the user does not have it represented to them on the date and colour filter buttons.	must indicate that. One way is through highlighted colours (darken) or text display (e.g. Searched for: DOG, 1951-1990, BLUE)
Can't click enter on a search query	The exact same issue reflected again. This is a severe issue as it is not intuitive.	Revisit the code and change it to allow the user to click 'enter' or 'return' to activate the search.
Desire for genre filters.	The only filters available to the user are 2 types: an assortment of colours and 2 options of date periods. This can make it really difficult to narrow down niche areas. Genre is a very relevant topic for lobby cards, and it's only right it should be included, especially as remarked by this user.	Include genre filters as an option. As there are a lot of genres, perhaps a click to reveal and select a genre in alphabetical order will be the solution. (similarly to selecting a country in a profile for example)
Participant 4		
Observation	Evaluation	Recommendation
The user hovered over the cross icon in the lobby card popup window multiple times.	The user enjoyed the simple animation and how it looped.	There can be other ways simple animations can be included in the website, maybe when hovering over lobby cards to indicate that they are clickable.
Can't click enter on a search query	The exact same issue reflected again. This is a severe issue as it is not intuitive.	Revisit the code and change it to allow the user to click 'enter' or 'return' to activate the search.
Played around with the back page while in the card preview popup.	Not a severe issue, but it distracts the user from the purpose of their website visit.	Adjust the code so the back page cannot be interacted with when in the card popup until exited.

Participant 5		
Observation	Evaluation	Recommendation
The user was unaware that the cards were clickable for further information.	There is a lack of textual or symbol evidence that the cards in the gallery are clickable apart from hovering, which is almost impossible to be doing on a mobile interface.	Add a 'read more' CTA button to indicate that there is more; the hover animation can still be good for desktop, but the CTA button on both interfaces will be sufficient.
Approval of the random lobby card sorter.	Similar user satisfaction to the lobby card generator being intriguing.	Ensure the updated random lobby card generator is responsive and satisfactory on mobile.
No issue utilising date or colour filters.	In the responsive view, the colour filters were put directly underneath the date filters. This would have caused the user to understand the search functions better.	Integrate this solution of the filter location into the desktop layout to make it more intuitive for users.

Discussion

After a deep evaluation of the results and ideas for improvements have been made, it's important to bring everything together to find overall solutions for the web applications.

It is apparent that some of the observations have recurring themes across the participants.

1. The search filters needed to be significantly improved on their functionality and layout. The decision to separate colour and date filters is detrimental to the users' intuition and creates unnecessary confusion. All the filters should be kept in the same spot, relative to the search bar. In the mobile version, this adjustment was done and succeeded as an intuitive layout. Genre categories should also be included as a search filter as well, so that users will have more opportunity to explore on the web app. Lastly, there needs to be a visual indication that a search filter is selected, as it is currently lacking. Once these fixes are done, it will compel users to achieve their goals, including understanding history, spending time productively, and enhancing knowledge.
2. The search query bar works only when the user clicks the search button on the screen. This is impractical for the user, as their fingers have readily habitual access to the enter/return key, as opposed to typing and then using the mouse/touchpad, which does not flow in the user's actions. Fixing this will result in a smoother search process, improving usability, where the user will not have to bother about problem solving on the spot.
3. The random lobby card generator widget was a success and opens a big area for development. All users enjoyed utilising the random card generator, while most revealed it was their favourite part about the web application. The anticipation of waiting for a card to load and coming up with something they haven't seen before is a reward in itself. An idea to revamp this widget into an app in itself for overall longer use time would be introducing a slots machine-style game. This could flourish into a fun and unique application that users can spend time on for fun while also still having the opportunity to learn and discover the lobby card collection.

Other usability issues or interesting observations include:

1. The lack of an about page or information page in the web app means new users will be unfamiliar and lose interest quickly. Introducing a tab that can provide information about the website, lobby card collection, or the NFSA will be profitable to all users, particularly those with little background knowledge.
2. Small things like the animation of the 'X' that closes the card popup window are satisfactory to users. It promotes usability as it not only allows users to feel at ease with the navigation system but also promotes life to the digital screen. Users tend to feel more comfortable and relatable when introducing lifelike concepts, no matter how subtle they can be. Further implementation of this attribute will include stronger animations in the card gallery and in the search filters, and perhaps introducing a load animation.
3. A critical error in the mobile view is that the card gallery does not appear to be tappable to the user. The card popup windows after a card is tapped include key information structured for the user. The mobile view hinders the user from obtaining the full experience of the website, preventing them from achieving some of their goals. The card gallery succeeded in the desktop view as each card would move on hover and encourage the user to interact with the card. With the lack of hover functionality on a mobile screen, a visual indicator must be introduced. A CTA like a text button prompt will fix this issue and encourage users to achieve their goals.

Conclusion

Overall, this UX evaluation of the developed web app has brought forth an insightful and critical outcome. It particularly established the target audience and evaluated the web app based on the target audiences' desires and needs. Over the course of the investigation, user-centric usability trials were conducted, which revealed a lot of strengths and weaknesses of the web app. These include, but are not limited to, the success and potential of the random lobby card generator, the unintuitive search filter layout that requires significant improvement, and some minor formatting and functionality issues in the code that require attention. The data obtained from observing users in their trials had been critical to the project. Also, the methods taken to acquire and evaluate that data have been successful. At the end of evaluation, new ideas were brought to the table that have the potential to skyrocket the web app when implemented, as it's been tailored for users by users in a way.

Reflection

This project has been incredibly relevant to my studies of interaction design, especially targeting my passion for UX and UI design. I feel that this unit as a whole gave me opportunities to take a lot of the theory I've learnt in my 1st year of studying and implement it in a practical way. This gives me more confidence in my abilities as a designer and grows my skills in interaction design.

Towards the start of developing the web app, I found it quite difficult designing a creative and interactive web app prototype that utilised the NFSA API. In honesty, I thought that any creative pathway taken would be a bit uninteresting in the end. On completion of the web app, I thought it was quite dull, and I didn't think that using it could be satisfactory on any level. The product didn't have much going for it, and it lacked uniqueness and quality. There was one feature I wanted to include in the web app to make it more interesting, which was a colour sorter. Unfortunately, this didn't go as intended, and it resulted in a function that was clunky but also wasn't as desired towards the end. This was especially revealed in the UX evaluation, where I tested my web app with real users and identified critical issues within the original design.

However, this doesn't mean that the project was a fail at all. The evaluation process results quite literally gave me the keys to making my web app successful. I got to explore what the users actually needed, which is a critical aspect in UX and UI design. They needed a platform that is intuitive, with solidified search filters to make the search process comfortable and smooth. I also got to identify any other issues within my website, severe or minor, including the reasoning behind those issues being brought up and finding a solution to each one. Even something I didn't think was as interesting, the random card generator, proved to be a success with the users. The evaluation process showed me this and gave me an innovative idea to pursue, which I believe would enhance the web app significantly.

Another thing that the UX evaluation gave me was encouragement. It has been addressed that I found my product to be uninteresting. However, the users I tested on proved me wrong. Most of the users I tested on were intrigued when using the web app, following through with the tasks correctly and utilising the web app as intended with a

generally satisfactory experience. This has given me a lot of confidence and understanding in that my web app isn't necessarily bad because I couldn't make it better, but it is bad because I hadn't previously taken those measures to investigate what users needed and how I could tailor the web app to meet those needs. If users needs are met and the product is satisfactory, then the project is a success. Even in the journey to investigate user needs, new ideas and improvements will come to fruition.

In conclusion, this UX evaluation has proved to be a success on my behalf as a student, developer, and designer. It has taught me a lot about myself and about other people, but for the most part, it has taught me a lot about interaction design in a practical way.

References

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<https://chat.openai.com>

[Some prompts including UX report structure and UX techniques were conducted.]

Appendix

1.

System Usability Scale

© Digital Equipment Corporation, 1986.

	Strongly disagree						Strongly agree
1. I think that I would like to use this system frequently	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
	1	2	3	4	5		
2. I found the system unnecessarily complex	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
	1	2	3	4	5		
3. I thought the system was easy to use	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
	1	2	3	4	5		
4. I think that I would need the support of a technical person to be able to use this system	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
	1	2	3	4	5		
5. I found the various functions in this system were well integrated	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
	1	2	3	4	5		
6. I thought there was too much inconsistency in this system	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
	1	2	3	4	5		
7. I would imagine that most people would learn to use this system very quickly	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
	1	2	3	4	5		
8. I found the system very cumbersome to use	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
	1	2	3	4	5		
9. I felt very confident using the system	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
	1	2	3	4	5		
10. I needed to learn a lot of things before I could get going with this system	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
	1	2	3	4	5		

Focusing on Older Web Users: An Experience in Patagonia Argentina - Scientific Figure on ResearchGate. Available from:

https://www.researchgate.net/figure/System-Usability-Scale-SUS-questionnaire_fig4_2718498

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