UX Report
COMM229
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I. Introduction

In Potsdam, NY and the surrounding area, there is a chain of movie theaters run by a company known as JSCinemas. The extent of JSCinema's online presence is through a website that provides information regarding hours open, available movies, and showtimes.

While the information supplied is helpful for its users, there are many deficiencies in their overall presentation. One specific area of weakness is the design. The website contains many table-like entries with each topic of information, and each cell in this table has a different color. There is not a cohesive color palette, consistent fonts, or consistent formatting between cells. Additionally, there are deficiencies in terms of the content supplied. While the core information needed to research a movie is there, there could be additional amenities such as mobile tickets purchasing, online concession ordering and a more customizable experience.

After examining the website and identifying these weaknesses, it was decided that a prototype of what a potential JSCinemas app could look like should be created. This prototype focused on edits made to already purchased tickets, including sharing tickets, changing your seats, and adding the scheduled movie to your calendar. After creating an interactive prototype, a usability test was conducted with the goal of examining how people currently feel about the current website, and how well they would be able to interact with a new version. Testing sessions were conducted in person, and included screen and audio recording to aid in a post-analysis. During the session, the subjects were given 3 scenarios to work through, and for each one the time it took them to complete each step of the scenarios and any difficulty points were noted. Additionally, each subject was asked to fill out a questionnaire before and after the scenarios so that more information could be provided for analysis.

While the intended audience of this app resign is mainly college-aged students and local middle-aged families, it is important that this app is as user-friendly as possible so that it can be used by any group of people. The purpose of this report is to further detail the creation of this prototype, describe the usability test process, and provide an analysis and suggestions about what the next steps JSCinemas should take.

II. Methodology

For the process of usability testing, six students were asked to participate and interact with the new JSCinemas prototype through the program AdobeXD. Testing was conducted over two class periods, with each individual session taking less than 10 minutes. Shown in more detail in *Appendix A*, each session began with a pre-session questionnaire. This questionnaire consisted of five questions with each of the questions having a corresponding Likert scale of answers for the subject to choose from, or a short answer text box. They were asked as follows:

- *In general, how would you rate your ability to use technology?*
- *Between a mobile app and a website, which are you mostly likely to visit for a particular company?*
- *Approximately how frequently do you go to movie theaters?*
- *Have you heard of JSCinemas and/or the Roxy Theater?*
- *When you look at the current JSCinemas website, what first comes to mind? What, if any, are some issues you find with the site?*

After the subject filled out this questionnaire, the prototype was pulled up on the screen and the audio and screen recordings were started. Each of the three scenarios were read and subsequently performed by the subject:

- *You have already purchased 4 tickets to watch the movie Sing 2. You now want to share those tickets with someone via iMessage. Please walk through the steps on how you would go about doing so. You will need to pretend to enter a phone number when sending the message.*

- *You have already purchased 4 tickets to watch the movie Sing 2. You would like to change your 4 seats to be closer to the screen and on the left side of the theater. Please walk through the steps on how you would go about doing so.*

- *You have already purchased 4 tickets to watch the movie Sing 2. You would like to add the details of this showtime to your calendar. Please walk through the steps on how you would go about doing so.*

Following the scenarios, the subjects were asked to fill out a post-test questionnaire. Also shown in *Appendix A*, there were 10 questions asked in total:

- *I found the scenarios hard to complete*
- *I found this app easy to navigate*
- *I found the various functions in this system were well integrated*

- *I would imagine that most people would learn to use this system very quickly*
- *I could see myself returning to this app on my own*
- *I think that this app was designed well*
- *I prefer this app to the current JSCinemas website*
- *I think that the color scheme was aesthetically pleasing*
- *What was the best part of the app?*
- *What would you change about the app?*

Once the post-session questionnaire had been filled out in its entirety, the session would be concluded, and the next subject could begin this process from the beginning until all six subjects had been tested. At that point, the next stage could begin.

III. Results & Analysis

i. Pre-Session Questionnaire: Analysis

After the subjects have all been tested and filled out any necessary questions, a post-analysis of the results could be conducted. To begin with the pre-session questionnaire, we can see what type of past experiences and thoughts each subject had that could possibly influence how they would react throughout the scenario testing.

The first pre-session question was: “In general, how would you rate your ability to use technology?” that was rated on a Likert Scale of 1 (Poor) to 4 (Exceptional). From Figure 1.1, we can see that most of the subjects rated themselves on the higher end of this scale. While it is important to note the limitation that people can often be overconfident in their abilities, this serves as a good baseline as to how intuitive the app may seem to them. Those that are more unfamiliar with technology as a whole may have a harder time interacting with this prototype just from the fact that they have issues interacting with *all* technology. Now that we can know that our sample of users feel more confident in their ability to use technology, we can take this into consideration with their scenario interactions. If there are any mistakes or tough areas that they are unsure to figure out, it is due to something specific to the prototype and not due to their general ability to navigate technology.

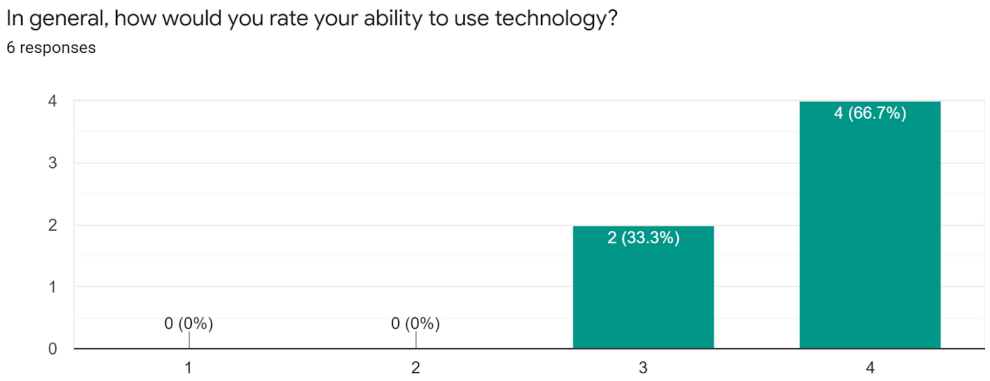


Figure: 1.1

The second question asked to each subject was “Between a mobile app and a website, which are you most likely to visit for a particular company?” Once again, there were four choices to choose from based on a Likert scale, with them being labeled from 1 (I always choose mobile apps) to 4 (I always choose websites). From Figure 1.2, we can see that there was not a single subject that will always choose a mobile app or a website. Instead, they seem to use a hybrid method, with four people choosing the third “bubble”, suggesting that they use a combination of mobile apps and websites, but lean more towards websites. Additionally, there were two users who chose the second bubble, suggesting that they too use a combination overall, but are more likely to use mobile apps over websites. This question is important because this study is specifically to get feedback on a mobile app design. When completing their scenarios, it is therefore good to note that, while they may have preferred to go through this process on a mobile app, a majority of them would have felt more comfortable if they had been given a desktop/website version.

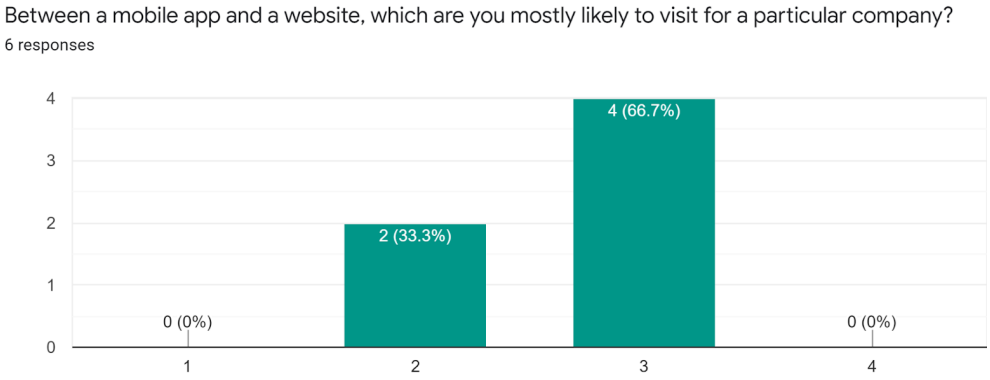


Figure 1.2

The third question asked was “Approximately how frequently do you go to movie theaters?” With options ranging from “Multiple times a week” to “Never,” it was interesting to see a grouping around just two options. Looking at Figure 1.3, there were four subjects who visit movie theaters once a year, and two subjects that go once a month. This is also an important question to highlight because the frequency that a user visits theaters would impact their frequency in visiting apps catered towards theater services. Someone who visits once a year may expect different services to be provided than those who go at least once a week. Someone who frequently visits theaters may be more comfortable getting more amenities, such as ticket sharing, adding movies to a calendar, or simply ordering more than just their tickets online than those who go once a year. Since these users fall on the more infrequent side of the spectrum, they may be going into these scenarios with a less informed mindset on how the layout works, since they would have not thought to use these amenities.

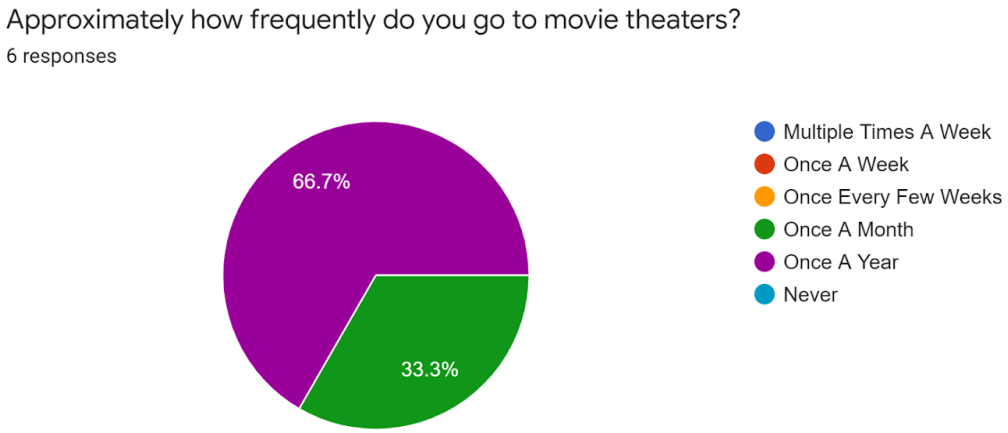


Figure 1.3

The fourth question in this questionnaire was “Have you heard of JSCinemas and/or the Roxy Theater?” Since this app was testing a redesign of a local company, it is important to know if the subjects knew about this place prior, so that they would be able to give feedback regarding whether or not the redesign was an improvement, or if they liked the original design better. Looking at Figure 1.4, we can see that a large portion, four, of the subjects have both heard of and been to the Roxy Theater before. There are also two of them that have at least heard of JSCinemas. This will be useful when completing the scenarios, since not only will the users be able to provide a holistic level of feedback, but they can also reflect on the actual JSCinemas website and provide relevant feedback to any improvements or things that got worse.

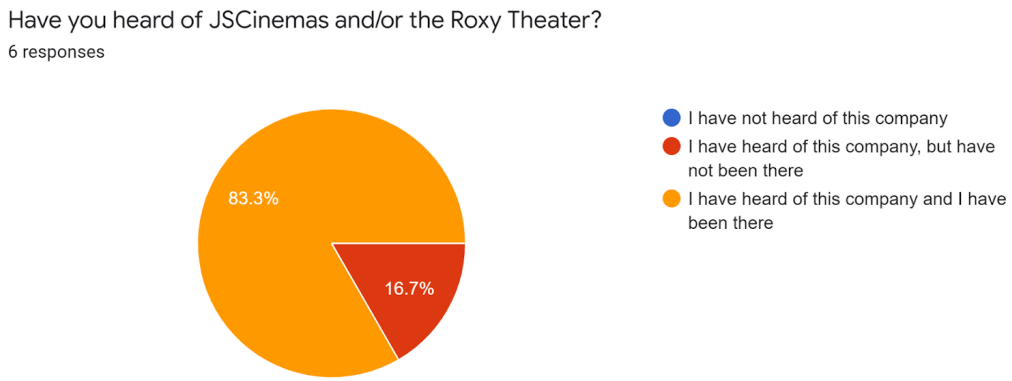


Figure 1.4

The fifth, and final question, was a short response regarding “When you look at the current JSCinemas website what first comes to mind? What, if any, are some issues you find with the site?” The idea behind this question was to get a basic understanding of some common shortfalls when it comes to how the JSCInemas website currently stands. Each response shared a common theme: that the current website is inadequate. The top commonalities were that the website was unappealing, hard to navigate, lacking a cohesive color scheme, and very outdated with a lack of enhancing features. All of these comments aligned with what the new prototype hoped to address to create a better overall user experience. After each subject completes the scenarios and the post-session questionnaire, we are now looking to see an improved opinion regarding the specific issues that they pointed out in this response.

ii. Scenario Analysis

Once the pre-test questionnaire had been filled out and examined, the next important part of each session was walking through each scenario. While watching each subject complete their scenarios, the time it took them to complete each step and the ease of completion were recorded. There was not too much data gathered during this process in terms of quantity. While times could be helpful to gauge learned improvement, and common hesitations could be indications of problem areas, most of the users varied in how they completed the scenarios. This led to the most valuable information coming from the post-session questionnaire. However, there are still some topics that should be discussed.

One thing that was important to note is that the time in which it took the subjects to complete each scenario would decrease depending on which scenario (1-3) was being completed. If it was Scenario 1, the average time would be roughly 10 seconds. However, by Scenario 3, the average time decreased to roughly 8 seconds. The length of steps did not vary between scenarios,

so any improvements of time comes from becoming more familiar with the overall layout. It should also be noted that the confidence that each subject had regarding each scenario increased. Users seemed to become more familiar with the design the more total time that they spent interacting with it. Each scenario focused on the same section of the app, and as they had to navigate to the same general area, they did so in a shorter amount of time. Any user who was apprehensive and confused while navigating the interface throughout the first scenario would have significant improvements by the third.

The scenario that by far seemed to be the most common for the users to get stumped on in some way was Scenario 1. However, this does not necessarily mean that the scenario itself is the issue. This scenario was their first introduction to the interface as a whole, so in addition to looking for the way to advance to the next screen, they also had to take in the entire layout and process it for the first time. I believe that this led to the slower times between progressing to the home screen until they arrived at the movie details screens. This order of the screens Home > Tickets > Movie Details, could be confusing for people who have had no prior interaction with the app. However, this progression was needed for each of the three scenarios, and therefore we were able to have a record of how long it took each user to become comfortable with this process. If more testing could be done, switching up the scenario order could help to determine if the issue actually laid with Scenario 1, or if it was due to it being the user's first exposure.

There are also a few issues noted that pertained to the prototype itself. Specifically, when asking the user to share their tickets via iMessage, a few of them got confused as to what button would advance them to the next screen. The prototype was currently set up to only advance when the user hit the "send" arrow that is typically displayed on the iMessage screen. However, there were a few users who instead wanted to hit the "go" button on the keyboard. This did confuse the user for a few seconds, as for them, that was the only way to send a text that they were familiar with. This alternative option was completely viable, and should have been added to avoid confusion. If another implementation of the prototype was to be created, adding additional paths for the user to use to complete a specific task may help improve the speed in which they do so. As discussed in Jakob's Law, users prefer things that work the same way as other applications that they are already familiar with. If these subjects are accustomed to hitting "go" to advance screens, then the option should be added to the prototype in the future.

The issues discussed in this section were the most common observed between users, and any other smaller issues that could have arised seemed to be more of a user specific issue than a deficiency in the interface itself.

iii. Analysis of Post-Test Questions

There were 10 questions included in a post-session questionnaire, with the first 8 being on a Likert Scale of 1 (Strongly Disagree) to 4 (Strongly Agree), and 2 being short responses. The first few questions were all meant to collect information regarding how the application was set up, and if the scenarios were a good indication on the overall usability of the app. Each question will now be discussed to some degree to point out general findings and if improvements should be made.

The first post-session question was “I found the scenarios hard to complete.” As seen in Figure 3.1, the subjects sided equally towards either “Strongly Disagree”, or “Slightly Disagree”, with none agreeing to any degree. We can conclude from this that the scenarios themselves were not too difficult for the users to follow along with. I do think that it is important to note here that not everyone chose “Strongly Disagree”. When conducting usability tests, it is imperative that the tasks that the users need to complete should not be too easy. Having just a small bit of difficulty encourages users to have to consciously think about how they are navigating through the interface, which can provide more helpful data regarding where problem issues can lay. However, we still want to ensure that users are not continually struggling with general usability of the app, so the steps to complete the scenarios should be further evaluated upon another redesign to ensure that they are not too complex for users to follow.

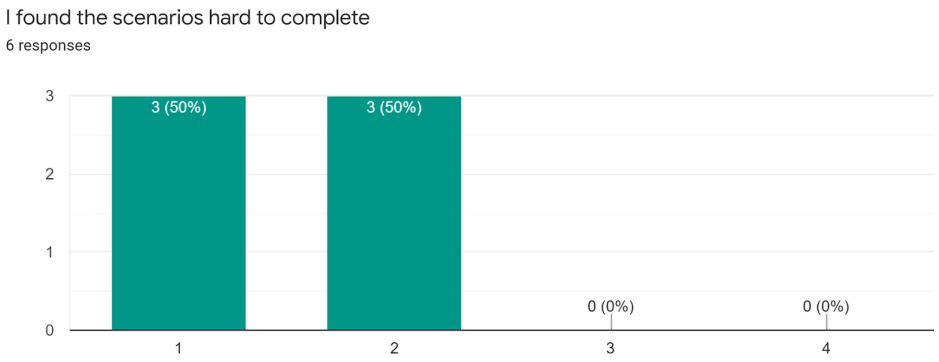


Figure 3.1

The second and third post-test questions were “I found this app easy to navigate” and “I found that the various functions in this system were well integrated.” Similar to the first question, these questions aimed to determine how user-friendly the application is for the subjects. Looking at Figure 3.2, we can conclude that the users were generally able to navigate throughout the app easily in a way that did not hinder the completion of the scenarios. While all users agreed to a certain extent, having the majority choose “Slightly Agree” means that some work can be done to aid in navigation. Figure 3.3 also checks to see how the users felt about buttons, menus, and other interactive icons. This question takes what was asked previously, and now breaks it

down to be a more precise thought to highlight a particular factor of the app that we needed feedback on. Since all the answers are on the "Agree" side of choices, it can be determined that, for the most part, users thought that the functions of this app worked well.

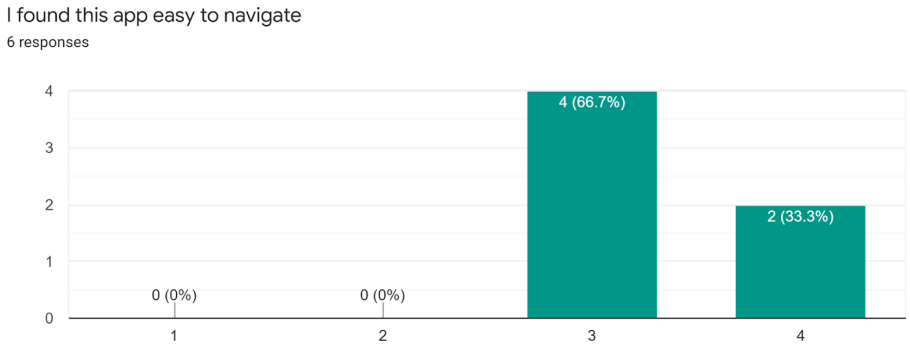


Figure 3.2

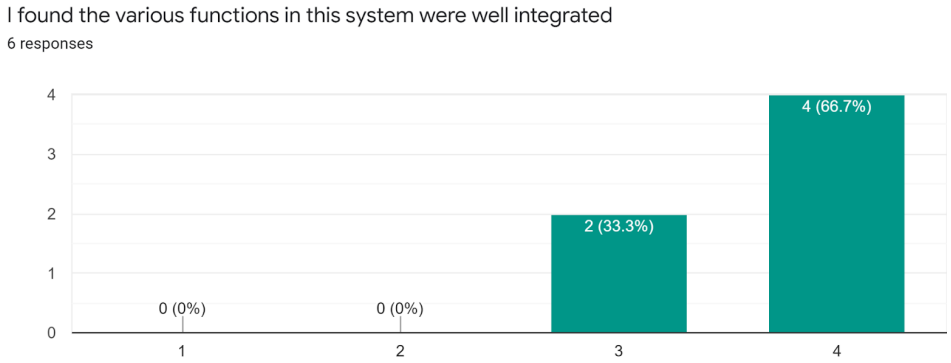


Figure 3.3

The fourth question asked was "I would imagine that most people would learn to use this system very quickly." As shown in Figure 3.4, the responses were almost entirely positive, except for one response that was Slightly Disagree. While I cannot speculate exactly as to why it was rated this way, I think it can partially be due to this subject being outside of the "normal" college age range of 18-24. Due to this, they would have most likely had a different upbringing when it comes to technology, and some things that feel intuitive to those under 24 could seem confusing to others. In the future, it would be good to include a more diverse group of subjects to ensure that this app works well regardless of who the majority of users will be.

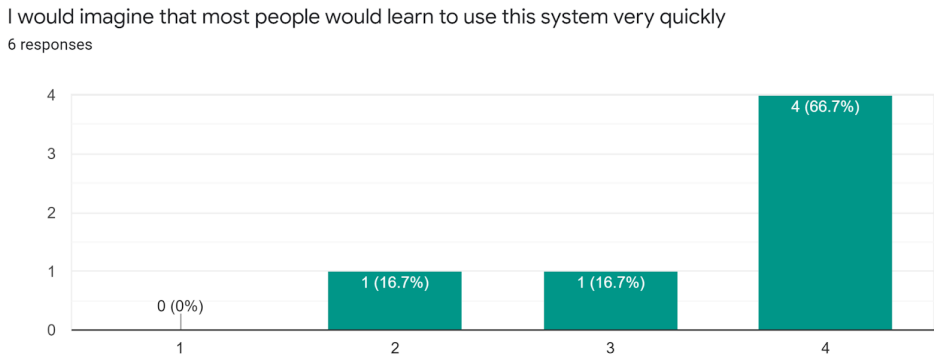


Figure 3.4

The fifth question asked was “I could see myself returning to this app on my own.” I found this imperative to ask because there can be a difference between saying an app looks nice and works well, versus deciding that the app was pleasant enough to want to use again after the testing was done. Shown in Figure 3.5, we can see that all of the subjects chose “Agree” to some extent. We can therefore interpret that outside of simply viewing this for a project, if this was a live website that could be visited, they would not mind using it. Poor ratings would not reflect well, as then work would need to be done to provide a better experience that leaves the user wanting to return. However, the marks gathered by this question are encouraging, and mean that the prototype would assimilate well with real, working applications.

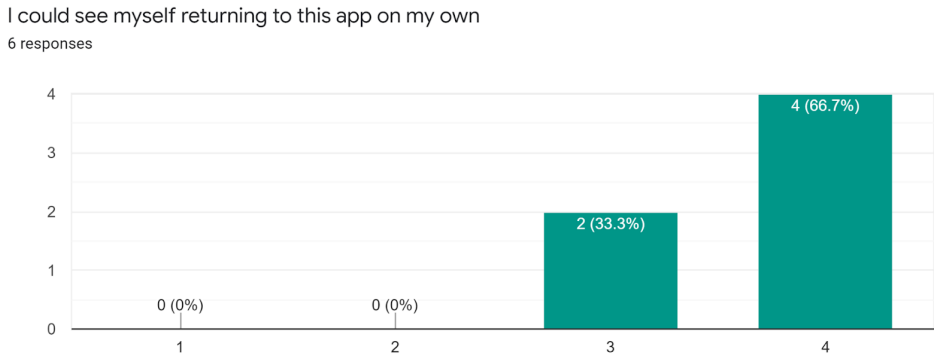


Figure 3.5

Three of the most important questions that did not deal with specific portions of the design were “I think that this app was designed well”, “I prefer this app to the current JSCinemas website” and “I think that the color scheme was aesthetically pleasing.” While observing the current design for JSCinemas, one area that needed improvement was their overall design, as there was a lack of a cohesive style. Therefore, this was an important question to ask to ensure that the design was being addressed and that it did improve upon what needed to be fixed. As

shown in Figure 3.6, all but one user strongly agreed with the statement that this app was designed well, and also in Figure 3.8 that the color scheme was appealing. The main goal of this entire project was to holistically design an app that is more appealing than the current design. Shown in Figure 3.7, all six of the subjects strongly agreed that they preferred the redesign over the existing design. This is a large success, and overall what we hoped the outcome to be. These questions highlight the most important findings of the report, which is how the design is liked overall. While it is important to smooth out problem areas to ensure that the app is designed as flawless as possible, we know from the Peak-End Rule that users are not likely to remember their experience in its entirety. Therefore, as long as they leave with an overall feeling of satisfaction, then that means it will have been a positive experience for them. All three of the charts below follow this. There is a high amount of positive thoughts with the design, color scheme, and preference to the older version of this design, meaning users as a whole will think positively of their interactions.

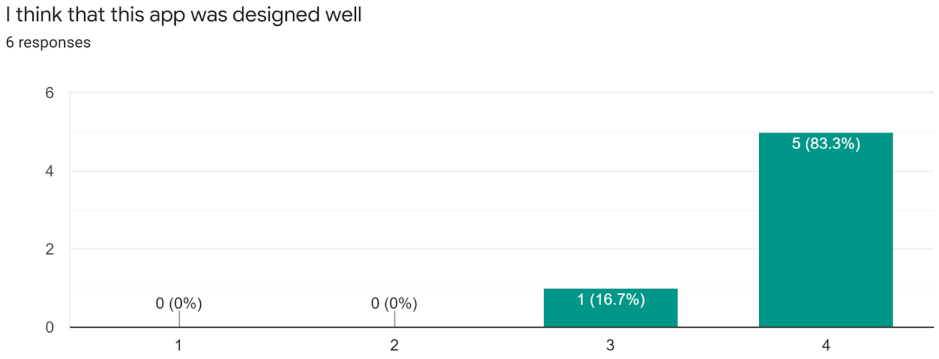


Figure 3.6

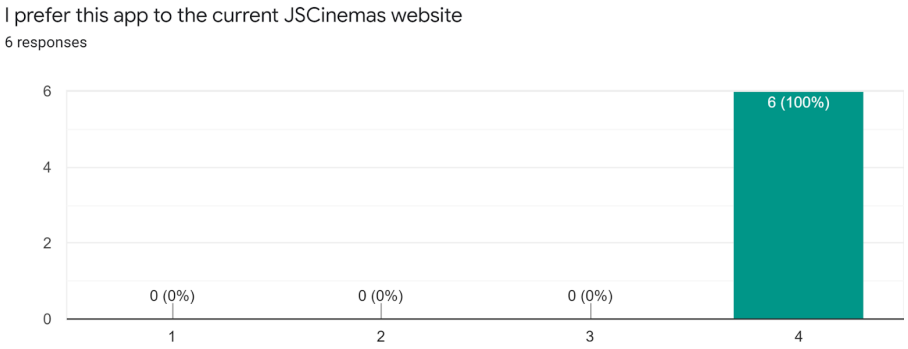


Figure 3.7

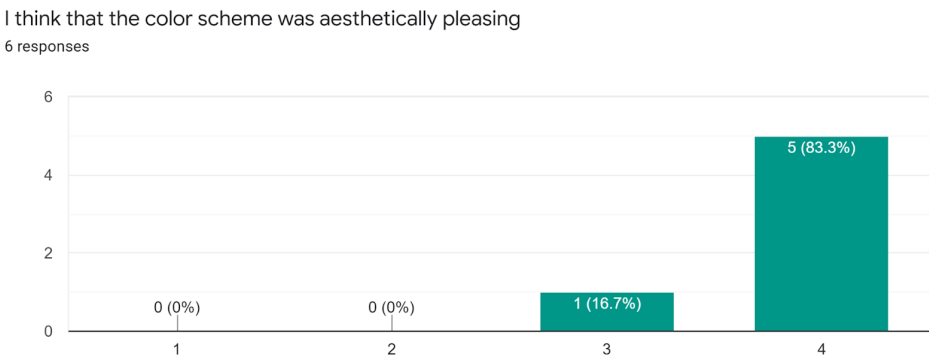


Figure 3.8

After asking eight rating questions, users were also asked two short answer questions. The first one was “What was the best part of the app?” There was quite a variation of responses for this one, where some said the color scheme and layout, the seat changing screen, the movie details screen, the share ticket option and font choices, and the button designs. These are all major parts of the overall redesign, and it is great that these users were able to point out some, if not all, of the focal points. The second short answer question was “What would you change about the app?” Many subjects did not give feedback of too much detail in this section, with a majority saying none, but there were some that said fewer steps, the design of seat selection buttons, and removing the JSCinemas logo and search bar on every page. It is a positive thing to see that there were not too many areas of critique here, but the specific design elements brought up here could be reviewed upon a redesign to ensure that any important changes can be made if needed.

All of the questionnaire answers in combination with the raw data recorded from during the sessions themselves, allow us to analyze exactly what can be improved upon, and what the successes were.

IV. Conclusion

From the analysis conducted, we are able to detect and point out any shortcomings and general conclusions. As a general summary, there are both things that this prototype fared well with, as well as having areas of needed improvement. The usability testing revealed that the prototype did well with the overall design, functionality of features, and ease of navigation. However, there is still room for improvement when it comes to ensuring that there are not too many steps, ensuring that the app is intuitive for all users, and looking into redoing the seat selection buttons.

One thing that can be improved upon were fixing small prototype errors such as allowing more buttons to be “clickable” and allowing users to advance to the next screen. While this would not be a problem when the app is actually being developed, when it comes to a new round of testing it would be helpful to eliminate any areas of confusion that could easily be fixed, as this would allow users to focus on actual issues instead of issues with the prototype development.

Another thing that has room for improvement is simply increasing the subject size of our testers. The app has been tested almost exclusively by college students aged 18 - 24. This small subject of people may not accurately reflect every single person that is likely to use a JSCinemas app, so by having a more diverse group of subjects we would be able to gather more data and find issues that only certain groups were struggling with. Also, one small issue that was noted not only with the questionnaires but also observed during testing is that the subject did not always recognize what was a button versus a piece of text. While buttons were normally exclusively colored orange and had a drop shadow behind them, in a secondary redesign it could be useful to look at reimplementing the buttons.

Lastly, if more testing could be conducted, then switching up the scenario order could help to determine if particular scenario difficulties were due to it being the user’s first exposure to the interface or if they were actually relevant to the tasks. While these improvements may be small in the grand scheme of things, there did not seem to be too many large issues that should be handled first. Each user struggled with small and different aspects of this project, so by focusing efforts to improve upon testing instead of specific design changes, it would help to round out the data and ensure that when any issues do come up, it is a common issue between many demographics of people.

This process, as a whole, was successful. The prototype that was drafted held up well during usability testing, and there were not any major problem areas. Each user had small and unique suggestions of improvement, which means that the critiques are mostly preferences than necessary changes. This prototype does still have room to grow, and with a few more iterations of usability testing I am confident that it could make an excellent product for JSCinemas to use.

V. Appendix A: Protocol

Holly Rossmann
COMM229
JSCinemas Movie Theater App Redesign
Testing Protocol

User #_____

1. Purpose & Script

My name is Holly, and I'm going to be walking you through this session today.

Before we begin, I would just like to briefly explain some information to you. So, we are asking people to use a prototype of an app that I have been working on so we can see whether it works as intended. The purpose of this test is to learn how well a representative sample of movie theater-goers can interpret and use a redesigned interface for JSCinemas. Areas of the site that will be evaluated for performance and overall user satisfaction include the: architecture, navigation, terminology, and its ability to meet expectations.

This session should take less than 10 minutes. As you use the site, I'm going to ask you as much as possible to try to think out loud. So, try to say what you're looking at, what you're trying to do, and what you're thinking, regardless of if it is a positive or negative reaction. If you have any questions as we go along, feel free to ask them. However, depending on the situation, I may ask you to attempt to figure out something on your own before giving you the answer. Also, if you need to take a break at any point, just let me know.

I would also like to record our conversations and what happens on the screen. The recording will only be used for my post analysis, and won't be seen or heard by anyone except for me. Do I have your permission to do this?

Before we begin, do you have any questions?

2. Introductory Questions & Tasks

First, I would like you to answer a few introductory questions: (Here).

Question 1:
In general, what would you rate your ability to use technology?

- 1 - Poor
- 4 - Exceptional

Question 2:
Between a mobile app and a website, which are you mostly likely to visit for a particular company?

- 1 - I always choose mobile app
- 4 - I always chose website

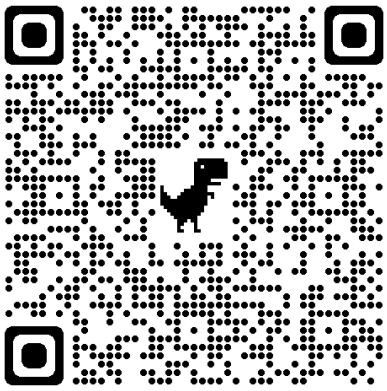
Question 3:
Approximately how frequently do you go to movie theaters?

- Multiple times a week, Once a week, Once every few weeks, Once a month, Once a year, Never

Question 4:
Have you heard of, or been to, JSCinemas and/or the Roxy Theater?

- I have not heard of this company
- I have heard of this company, but have not been there
- I have heard of this company and I have been there

Question 5:
Show user current JSCinemas website When you look at this website, can you let me know what first comes to mind? What, if any, are some issues you find with the site?



3. Scenarios

Now we will move onto our scenario portion of this session. I will be giving you 3 different scenarios to work through, and for each one I would like you to complete a specific task. With this prototype, there is only one successful path to take in order to succeed in the task, so I will be identifying the level of difficulty in doing this. I would like to measure how you interact with the prototype to see the ease in navigation.

As a reminder, please feel free to speak out loud when you are thinking, regardless of if your thoughts are positive or negative. Please ask questions when you have any, and I will either give you the answer, or ask that you continue to navigate a problem area on your own.

Also, remember that I will be recording your mouse movements on the screen. After the scenarios are complete, there will be a google form that you will fill out.

Rating Scale (For Tester Use Only):
0 - Could not complete, needed assistance
1 - Completed on own with issues
2 - Completed on own

Scenario 1:
You have already purchased 4 tickets to watch the movie Sing 2. You now want to share those tickets with someone via iMessage. Please walk through the steps on how you would go about doing so. You will need to pretend to enter a phone number when sending the message.

User ____:

Task	Rating (0-2)	Time Taken (in Seconds)	Notes
Tickets Tab			
Sing 2 Purchase Details			
Share Tickets			
iMessage Button			
Enter Phone Number			
Send Button			

Return to Movie (Optional)			

Scenario 2:
You have already purchased 4 tickets to watch the movie Sing 2. You would like to change your 4 seats to be closer to the screen and on the left side of the theater. Please walk through the steps on how you would go about doing so.

User _____:

Task	Rating (0-2)	Time Taken (in Seconds)	Notes
Tickets Tab			
Sing 2 Purchase Details			
Edit Seats			
Choose Seat Location			
Confirm Changes			
Return to Movie (Optional)			

Scenario 3:
You have already purchased 4 tickets to watch the movie Sing 2. You would like to add the details of this showtime to your calendar. Please walk through the steps on how you would go about doing so.

User _____:

Task	Rating (0-2)	Time Taken (in Seconds)	Notes
Tickets Tab			
Sing 2 Purchase Details			
Add To Calendar			
Add (Popup)			
Add (In Event)			

Return to Movie (Optional)			

4. Post Test Questionnaire

Thank you for acting out those 3 scenarios. We are now done with the user testing portion of this session. Now, I would just like you to fill out a google survey to answer some post-test questions.

Click here.

1) I found the scenarios hard to complete (1-4)
2) I found this app easy to navigate (1-4)
3) I found the various functions in this system were well integrated. (1-4)
4) I would imagine that most people would learn to use this system very quickly. (1-4)
5) I could see myself returning to this site on my own (1-4)
6) I think that this app was designed well (1-4)
7) I prefer this app to the current JSCinema website (1-4)
8) I think that the color scheme was aesthetically pleasing (1-4)
9) What was the best part of the site?
10) What would you change about the site?