Assignment M2(Fall 2018)

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Abstract. Apple Music app on iPhone is trendy and cool. Simple and clean, easy to use interface with all the music you could ever ask for. However, some of the functionalities of the app fail to give users the ability to accomplish their intended tasks quickly. As a daily user of the iTunes mobile app, I have observed a number of functionalities that could use efficient redesigning. In this assignment, I would like to redesign the way of transitioning between playlists while playing music. In this assignment, results of the needfinding plans for Assignment M1 will be summarized.

Needfinding Execution 1 :

Participant observation

In this need finding process, my goal was to change playlists in Apple's Music app while exercising and driving. Recording the process by taking notes and to have a friend observe me in some steps were also part of the plan to gain data.

Task: Changing playlists while exercising.

I asked my friend to keep track of the time I spent looking at my phone while changing the playlist and note down other observations.

Time and Location : 09-20/20187.30 PM, Good Shepherd Health and Fitness Center, Barrington, IL

Type of exercise : Cardio/Running (I was running on a indoor track with other runners)

The number of attempts : 2

Average time per task : 28 Seconds.

Summary of the observations:

As the user who executed the task of changing playlists while running, I have noticed that I need to slow down or stop running in order to complete the task. Stopping was safer to avoid colliding with other runners on the track. My palms were sweaty and the phone screen was covered with sweat after completing the task. Since I was stopping and slowing down, I had to run faster to catch up with the rest of the running group. Lost momentum was also observed.

Task: Changing playlists while driving.

I was driving with the same friend who helped me in the first need for finding exercise. He was taking notes while I was driving and our combined observations are summarized as follows.

Trying to change the playlist on the music app while driving causes a distraction from driving. I was looking at the navigation app for driving directions, I had to quit the navigation app and open the music app. Waiting at a red light felt like the safest way of completing the task. The average time spent while changing the playlist was 37 seconds for five attempts. I was controlling the wheel with one hand during the time of the task.

The main takeaway from both of the needfinding exercises detailed above is that changing the playlist or songs causes distraction from the activity that the user should be focused on. This could be dangerous when driving since the user's attention is derived from the surroundings of the road. Any redesigning efforts should consider limiting the user attention which needed in order to accomplish the task of switching songs and playlists.

I was anticipating the confirmation bias in this needfinding exercise. Using a friend to observe my actions and making him do the timing of the activities helped to curtail the bias.

Needfinding Plan 2:

Interviews

I have conducted interviews with two of my friends, two colleagues and one relative for this needfinding exercise. All of them are familiar with the Apple’s

Music app and use it regularly. I have asked them the same questions individually and recorded their answers. Unfortunately, I didn't get a chance to have the participants together in a discussion.

Questions and answers can be found here.

https://docs.google.com/document/d/1xDYZ4Tst4vXVaMNN9Mu1fol7CK0LIriOCtH2GV86Lwg/edit?usp=sharing

Participants in the interviews have diverse backgrounds, and they are using the app during different tasks. All of them had some difficulty performing the task of changing playlists during an activity that needs their full attention. Everyone who took part in the interview process, have gone through the steps that I laid out in the Assignment M1 to complete the task. One person didn't realize that task involves few steps, But he realized it during the interview and looking forward to using a better solution. With that observation, I believe there is a population that doesn't find the task is a difficult one to achieve. Hands off approach were given as a solution by a few. On Apple phones, You can use SIRI to change songs or playlists. It still involves touching the home button, but the voice commands may not be very clear while doing some of the tasks such as exercising or diving. You may not have the phone at a vicinity where SIRI can pick up your voice commands. Some suggested adding more controls to the widget, which displays on the home screen while playing music. Some of them do not change their playlist often, but they would like to switch between different songs and they find it difficult to achieve with the current design. This is an observation I had in mind but didn't focus on finding a solution in this exercise. Now that I heard from a few people about it, I can think of include solutions to both problems in my design.

Take away from the interview process is that the problem that I am trying address do exists even some users may not realize it. Users listen to music while engaging in other activities and most of them would like to pay full attention to the main activity of their choice.

Observer bias and social desirability bias was expected during interviews. Out of five people that were selected, I do not interact with three of them on daily

basis. They are backgrounds are also different from each other professionally and age wise.

Needfinding Plan 3:

Thinking out Loud

In this needfinding plan, I have asked two friends of mine (did not participate in the interview needfinding exercise) to use Apple's music app while performing another activity and report back the results and their thoughts of the process. A general set of questions were given to the participants and their answers were recorded. They were encouraged to share thoughts about the experience and suggestions.

Questions, answers and other responses can be found here.

https://docs.google.com/document/d/1QW1CDComWL482Y840o9Od3MvCC49C_rp1WljibZPYS0/edit?usp=sharing

Performing the task during painting and biking were performed by the participants. Both of them mentioned that they would like to use a version of the app which has a better design. Distraction from their main task was observed during both occasions. Distractions that cause during a bicycle ride was recorded as dangerous by the participant. Shortcuts to complete the tasks need to be added to the design according to both of the participants. One of the suggestions was to change the headphone design to execute the task by making them respond to taps and touches. Both participants agreed on making changes to the existing app widget on the home screen. Add more controls and shortcuts for the task of changing the playlist and browse songs. Making the control icons bigger was another suggestion for the widget which would make the users' goal easier to achieve.

Take away from this exercise is that both participants experienced some sort of a difficulty achieving a simple task such as changing playlists while performing another activity. I know that using just two people for the exercise will not determine the needs of the vast majority. But both participants expressed their

thoughts about an improved design showing the signs that users would like a new and efficient design.

I recommended them to reach out to me right after they have performed the task to avoid them not reporting their experience accurately. All the participants reported back to me soon after they went through the task. Recall bias was avoided with quicker turnaround time.

Data Inventory:

Who are the users?

People who listen to music using the Apple's music app while carrying out other tasks. Participants were both male and female and in the age range of 22 - 42. Whoever uses the music app and engage in another task regardless of their age and gender, could benefit from the proposed redesign. Some participants did not think the task given to them was difficult, but once they gain the knowledge about the gulf of execution, they agreed to the fact that a better design is needed.

Where are the users?

Participants were using the music app in different environments. Playing basketball at a court, sports practices, running on a track, exercising at a gym, cooking at home, driving and biking on the road, work and study environments are a few scenarios I came across during the need-finding exercise. Users tend to use the app while in different environments and one design may not address all of the needs.

What is the context of the task?

Driving, exercising, painting, cooking, studying, biking are a few activities that were exposed during the needfinding exercises. All of these activities need the user's full attention. Turning attention away from a task like driving or biking could pose risks for the user. Studying or working may be interrupted while executing the task of changing songs or playlists. There are clear signs of

distraction from the main task and almost all the participants had suggestions for changes.

What are their goals?

Goals of the users are common across all the task I explored during the needfinding exercise. Changing and searching songs they want to listen easily and transitioning through playlists were the main goals. They had different suggestions on how to achieve the goals. Some expressed concerns about safety while performing the goals and others pointed out the distractions. Their goals were simple, but the Apple's music app doesn't execute the goals very well according to the participants.

What do they need?

They need changes to the app interface to make them navigate through songs and playlists without having to look at the screen for longer and also to complete the task with a few gestures. Most participants suggested making changes to the app widget shown in figure 1. Adding options to the widget was a popular choice.

Figure 1. Apple Music app widget

What are their tasks?

Their main task is to focus on the activity such as driving or exercising. Losing focus due to the current design of the app was highlighted throughout all the needfinding exercises. All their cognitive and physical tasks are involved in the main activity they chose to perform while listening to music. As an example, driving should be the main task of the user who happens to listen to music and the same goes for other activities.

What are their subtasks?

Subtasks for this need finding exercise would be searching and changing songs. I was focusing on just changing playlists, but some participants pointed out that searching for songs and playlists also need an upgraded design. Skipping to a specific song of their choice is also a subtask that participants would like to perform.

Defining Requirements:

Requirements drawn out the data inventory would be to create an efficient design prototype for the Apple ’s music app, to make better user experiences. Participants of my needfinding exercise were expert users of the app and I would assume that they would adapt to changes quickly. All of them suggested changes to the app widget. I would do more research in finding out how users interact with other app widgets to gain insights and apply the knowledge to my design for the music app. Having lager icons and voice commands seems to increase the accessibility, the new design should incorporate the changes requested by the participants in a way that anyone who uses the app will find it easier to learn. To evaluate the success of a prototype, I would ask the same participants of the needfinding exercise for their thoughts. I would emphasize the fact that changing the widget than changing the app interface to achieve the tasks.

Continued Needfinding:

Next iteration of need finding is to create a survey with questions I used during interviews and thinking out loud exercises. This would help me to get more inputs from participants and different point of views other than the ones that I have already recorded. Asking users if the proposed solutions would help solve their problems would be a beneficial question to be asked. Including the proposed solutions in the questionnaire would make participants give their thoughts on improvements. I would also reconduct interviews with the same and different participants on new designs and also conduct thinking out loud exercises for the proposed designs.

References

1. Udacity Lectures