

Human-Computer Interaction

Evaluation

Introduction

This pilot study mainly focuses on the evaluation to help improve the usability of a frame App. we choose the focus group as our evaluation method, 3 participants were involved in the focus group and provided invaluable information to us. We have successfully completed this appraisal from the collection of data. This report details the whole evaluation method and process.

Reasoning for method selection

Focus group is the method we choose. In this coursework, we are aiming to evaluate another team's design by identifying flaws and errors in usability. To collect more opinion ideas and beliefs on a certain product, a focus group can have unsurpassed advantages over other methodologies. While surveys or questionnaires can somehow be useful, they cannot capture what a person is thinking or feeling. Focus group's response is open, broad and qualitative. Although their responses may be difficult or even impossible to record on a large scale, they provide more in-depth information and are closer to people's actual thoughts and feelings. Also, cost performance is another thing we need to take into consideration. Due to its low human resources cost and its relatively low sample quantity, focus group can thus have high controllability and high efficiency. Those are why a focus group will come into play.

Methodology

The focus group is essentially a symposium. A group of participants have a discussion on a topic directed by a researcher, the core function is to focus on an event or a topic, revealing the

experience, feelings, attitudes, and wishes of the target users in a structured way, and trying to objectively present the reasons behind them.

Before the focus group:

- **objective:**

Evaluating an app to get some necessary information from the selected user's real experience to find problems and improve it.

- **Plan:**

1. Using questionnaires to recruit and select participants
2. Discussing and arranging a moderator and an observer. Preparing the materials, questions, and gifts needed by the focus group
3. Negotiate with participants and determine time and place
4. conduct the focus group
5. Summarize, analyse and report the results

- **Key points:**

1. Participants should know about how any data collected or personal data will be used and how it won't be used
2. Name badges needed to help participants talk to each other and to the moderator
3. Writing questions should follow a logical sequence in which key topics are focused on important issues.
4. Moderator flexibility to adjust questions and ensure participants feel relaxed
5. Control in about an hour of meeting time
6. Make sure the recording device is working properly

- **Recruit participants:**

We sent questionnaires to the WeChat group of informatics to get volunteers. The group has approximately 300 people on it and 19 replied. Those who have participated in focus groups are usually not suitable participants also relatives, friends and classmates. Besides, for our tasks,

we chose them because we need to make sure that we have both male and female with a good education level. They all love new things and communication. it is more appropriate to select 4 participants to let them fully experience the application and try to express their opinions

- **Preparation:**

Preparation is one of the important parts. We team first determines the moderator and observer, then prepares a list of questions the moderator needs to ask (the questions are arranged in order). We team also provide each participant with a manuscript and an evaluate sheet. Besides, We will negotiate with the participants to make sure that everyone can attend the meeting at this time. The location is determined to be the small meeting room in the Appleton tower of the University of Edinburgh, which usually can accommodate 8-10 people, so the room can provide enough space for everyone to interact.

Conduct focus group

We prepared all the materials needed for the focus group in advance in the conference room, including water and snacks, debugged the recording devices, there are actually three people attended the meeting and we invited them to take a seat. The focus group is mainly divided into five parts:

1. The moderator gave a brief introduction to the focus group process, stated the purpose of the meeting, then gave participants a brief self-introduction and asked them to introduce their own experience of using an app
2. The moderator shows the first two pages of the app to participants and asks them to guess the category of the app. Then the moderator told them the actual role of the app and gave a brief introduction to the app. The moderator asked several participants if they had experienced similar applications. This will provide a good reference for the following discussion.
3. Let the participants experience every function we team need to evaluate, score the satisfaction of this experience after the end of each function experience, then the moderator asks everyone about the problems encountered. Meanwhile, the recorder records the questions raised by the participants. The moderator again asks each participant about the priority in dealing with the problem which means the impact on the participant's experience to what extent. Finally, the moderator asked the participants to write down the keywords for the experience.

4. In response to the questions raised in the previous part, the moderator asked the participants if there were any suggestions for the improvement of these problems.
5. The participants put forward some feedback to this focus group, the moderator summarized the focus group subsequently

After the focus group

1. We team summed up the meeting
2. Playback the recorded video, supplement and modify the information recorded by the recording devices
3. Analyse and summarize the materials filled in and recorded by the observer.
4. Writing a report for the summary

Results

The focus group was held in the fourth-floor conference room of Appleton, the Duration is about 1h and 20 minutes. 3 participants, a moderator, and an observer are involved. Through careful, rigorous analysis and summary of the information collected, the following results are drawn:

In terms of the first impression of the participant on the design without being told about its specific function. None of the participants guessed the true purpose of this design, and the UI interface was somewhat misleading. After fully experiencing the design, participants gave subjective ratings of 2, 1 and 2 out of 10 respectively Indicating a poor user experience. Participants encountered and raised many issues when experiencing this App even after the introduction.

Evaluation results of functionality:

1. This app can only achieve very limited functionality that is to share photos with others, lacking certain innovations that make all participants questioned the existence value of this app since its functions could be better performed by other existing apps like Apple's album.
2. In addition, some of the features presented are not available or need further improvement. For example, there is no response after pressing the button 'play' on the page11 or button

‘select’ on the first page. Sharing photos to a social platform such as Twitter has not been implemented.

3. How to share photos with an object other than the one provided in the app is also not clear.

4. On top of that, any UI related to the terminal digital frame, including how to display on the frame, etc, are not displayed either so that participants cannot have the straightforward intuition of what they have done.

5. Basically, participants can complete the fundamental function of sharing photos.

Evaluation results of UI

1. this app is not user-friendly since it doesn’t have a reasonable introduction to guide the participants about using methods or tips, especially for those who try it for the first time which might let them be unfamiliar with the button, function, and so on.

2. It has a great suspicion of copying Apple's design. Everyone agrees that Apple's design should not be copied.

3. The participants to presume that the app is an album only, generating unnecessary misleading of the app’s true application. Participants are also confused about what they can do with these feature buttons.

4. the first page of the app is a photo library, which makes one of the participants feel it is bad since it is too straightforward without any transitioning pages such as login page.

5. The lower part of the interface has too much white space to reduce beauty.

6. The photos added were obviously inconsistent with their labels, all of which were labelled with ‘Arthur seat’.

7. The advantage of this app is that the design of UI is concise.

Evaluation results of others:

1. There are also some technical concerns that the quality of uploaded photos is not clear. No information about the quality, pixels, etc. of the image is displayed during the uploading process.

2. This app might have certain potential security and privacy risk. It seems that anyone can access the app for all the operations without validation, after all, the photo involves much of the personal privacy.

3. In terms of priority rating for improvement, Design is 'not intuitive', 'useless' that was the most urgent need for improvement, scoring averaged 9 points followed by issue 'Defective function' obtaining averaged 8.7 points. The problem with the model of UI is seriously needed to change in avoid misleading and plagiarism and got averaged 7.7 points. Averaged 7 points were given to the problem 'potential security and privacy risk'.

Summary of the focus group:

1. Participants all thought that the progress of this session was in line with the management, logic and well planned.
2. views and ideas of every participants can be expressed and explored well under the guidance of the moderator, which may be more effective than some simple methods such as questionnaire.
3. Participants also noted that the session was long and that the moderator and observer needed to be more proficient.

Recommendation

Based on the result, we have listed the potential design problems into several parts. First is the functionality. Some basic functions like sharing via twitter should be thoroughly completed by adding some afterward steps. For example, a finished window or success notification should pop up to help the users be aware of whether they have successfully shared the photos. Besides, the function of sharing photos should be improved by realizing the multi-selection functions. In this design, however, users can only share photos after selecting a single photo, this should be replaced by choosing multiple photos at once or even allow users to share the whole album. This means a further improvement can be done over those unimplemented functions. Another example, the play button on the local album does not play any roles which suppose to allow users to play photos in their album. Also, there should be a friend list or a way to share with new devices since we noticed only two contacts 'Family' and 'friend A' appeared on the sharing page, but we cannot find a way to connect to a new device or manage the already existing device. Apart from those basic functions and unimplemented functions, some

additional functions are necessary to be added, which can make the app more differentiable and distinguishable.

For the UI design, every page is exactly the same as Apple's photo gallery, which can make the user misunderstand the usage of this app. The best and easiest way to solve this is to completely change to an original UI design. In the new design, the icon of the function button should match closely to its real function. And at the same time, the new design should also consider some aesthetic points. For example, it is necessary to add a homepage which is used as a transition page. Besides, the new design should reduce the white space and make the function button distribute more uniformly. What's more, when we come into the sharing page, it is unreasonable to display all shareable devices in one row. If we have more than ten devices, it will take quite a lot of time to swipe left and right. An alternative way is to display the shareable device in the column underneath the 'message' and 'twitter'.

Other problems like privacy, we can design a login page to make sure only certain users have access to this app. Also, we strongly urge the designer to add information about the quality, pixel, etc of the image. This would make the user aware of if the quality of the image would deteriorate during the transmission. Lastly, it should be better to add a help function or instructions for new users, this would help them get along more easily when they first use this app.

Reflection- Changchun Li

The entire meeting went smoothly overall. Everyone was present at the appointed time. The moderator had a good control of the whole meeting and the observer fully took the corresponding notes. The participants were very motivated and quickly reached a tacit agreement with each other and they provided a lot of valuable reference information. Participant satisfaction is high. The meeting is complete and orderly, so it gave our team a good understanding of this method and helped us successfully complete the evaluation task. At the same time, some didn't work. Firstly, The number of participants is small, and some people have relevant background, resulting in a lack of perspective on app evaluation. Secondly, Some

terms in the question are too professional such as UI and it not be explained, so that some participants can not fully understand. Some problem lacks logical coherence, so the moderator temporarily designed some problem, resulting in no corresponding modules for the related materials. Besides, Due to equipment limitations, each participant has limited time to experience the app, and some participants do not fully understand the function and purpose of the app, which makes the information provided subsequently insufficient and comprehensive. Finally, After the meeting, we did not immediately summarize the meeting in detail. Some meeting details were lost, although there were audio recordings of the meeting. If do the focus group again, we will pay attention to the following aspects:

1. Inform the participation rewards in advance to attract participants and then carefully screen the participants. The determined participants should be one or two more than the plan, because not everyone will be present.
2. Brainstorming to design more reasonable questions
3. Declare the meeting process and discipline in advance
4. If a new concept is introduced, the participant should first be asked if there is any doubt about these concepts, and then ask the relevant questions.
5. After the meeting, 1-2 hours were taken to sort out the notes of the meeting, then form a structured record.
6. More equipment preparation, allowing participants to fully experience the product to be evaluated
7. Add video recording if possible

Appendix



