

Usability Test Plans

Team 2 : The Berry Bunch

Graduate Student: Niusen Chen

Undergraduate Groups:

Joe Taylor

Jacob Jablonsky

JC Helm

Dawson McKenzie

Drew Stockero

Brandon Paupore

Jayleen Rossi

Piper Schlaeppi

Rebekah Craft

Introduction

This document provides details about usability test plans for an app, The Berry Bunch. It is an app which is trying to collect preliminary data about recreational berry picking and foraging across the region. The test consists of 6 sections, each section will include 4 students (one graduate student, two undergraduate students from CS4760 and one undergraduate student). The test is conducted through Zoom on April 11 and April 12.

Test setup:

Usability test is conducted through zoom. This requires participants can access to the Internet during the test. Participants also need a microphone to ask any questions or provide comments during the test. Participants need to share their screens during the test. Participants should sign the consent form and perform a pre-test questionnaire before the test. Participants should follow the task list to conduct the test. Participants should record any bugs or errors they detect during the test and fill the bug report form. About how to record bugs, please refer to Appendix A. After participants finish one test, they should perform a post-test questionnaire. Also, if you meet any challenges during the test, please fill the Testing Challenge Form (Appendix B). The test is organized as follows:

- Share the zoom link with the participants and developers
- Explain the app
- Sign the consent form
- Perform the pre-test questionnaire
- Explain the scenario to participants
- Participant starts to test app
- Record any bugs, erros, questions or comments during the test
- Perform post-test questionnaire

Computer User Interface Usability Testing Consent Form

You are being invited to participate in a research study to determine the usefulness and usability of computer user interfaces. This study is being conducted by Dr. Robert Pastel of Michigan Technological University Computer Science Department and Dr. Pastel's Human-Computer Interaction (HCI) courses. The students are performing the usability tests as part of their project and to fulfill the HCI course requirements.

There are no known risks if you decide to participate in this research study. There are no costs to you for participating in the study. The information you and the tasks that you will perform will determine the usefulness and usability of user interfaces. The questionnaires and the tasks should take less than an hour to complete. The information collected may not benefit you directly, but the information learned in this study should provide more general benefits.

The questionnaires and tests are anonymous. No one will be able to identify you and your answers, and no one will know whether or not you participated in the study except for the instructor of the class who is giving you credit for participating. Should the data be published, no individual information will be disclosed.

Your participation in this study is voluntary. By completing the questionnaires and performing the tasks, you are voluntarily agreeing to participate. You are free to decline to answer any particular question you do not wish to answer or not to perform a task for any reason.

The testing may make use of video conferencing software which will record your tasks on computers screen and from your webcam. The webcam recordings will not be shared, and you may mute the webcam at any time. Before sharing your screen, you should clear your desktop of any open apps except your browser. Also you should clear your desktop of any icons or widget that you wish not to be observed.

If you have any questions about the study, please contact Dr. Robert Pastel, Associate Professor, Computer Science Department, Michigan Technology University, Houghton, MI 49931. The MTU Institutional Review Board has reviewed the request to conduct this project. If you have any concerns about your rights in this study, please contact Joanne Polzien of MTU-IRB at 906-487-2902 or email jpolzien@mtu.edu.

Pre-test questionnaire:

Google form link:

https://docs.google.com/forms/d/e/1FAIpQLScc31YyNX-2U6fF2w5I4P467qQX-E6uAFAXi8okrq1VN41oTg/viewform?usp=sf_link

1. Please indicate your level of agreement to the follow statement:

I am very interested in the testing of this application.

1. Strongly agree
2. Agree
3. Neutral
4. Disagree
5. Strongly disagree

I am very interested in picking berries.

1. Strongly agree
2. Agree
3. Neutral
4. Disagree

5. Strongly disagree

2. How many years have you used a smartphone?

3. Do you have any expectations before using this website/app?

Test Scenario #1

Name: Fill the harvest questionnaire

Goals:

- To check if questions in harvest questionnaire are clear for participants
- To check if harvest questionnaire can be submitted successfully after participants finish it
- To check how to deal with illegal input

Scenario description:

You just finished berry picking. You would like to share your information with others. You enter the harvest questionnaire part and answer their questions. You should first input normal values to test if functions work fine. Next, you should simulate a user who happens to enter some illegal input, such as a negative age. Try to detect if some error message occurs.

Task list:

- Open the app
- Click “Take Harvest Survey” in navigation bar

- Enter all information required such as date of harvest, types of berries and wild or farming, etc.
- Click “submit” after you finish first part
- Enter your personal information, such as age, gender etc
- Click “submit” after you finish
- Repeat the processes above but try it with illegal input. For example, you can enter a negative value in “Quantity”

Quantitative measurements:

- Responding time of system after click “create”
- The number of errors occurred during the test
- The number of participants who have questions or confusions during the test
- The number of participants who can successfully finish the questionnaire once

Qualitative measurements:

- Any questions or comments during the test
- Any errors appeared during the test
- Tips from the system when participants enter an invalid input (e.g., a negative age)

Potential observations:

- Participant’s confusion about questionnaire
- Participant’s responding time after one operation
- The interactions between participant and developer
- Whether system will crash when participants enter an invalid input

Post scenario interview and questionnaire questions:

Google form link:

Test Scenario #2

Name: Fill the Demographic Survey

Goals:

- To check if participants can successfully submit form
- To check how to deal with illegal input

Scenario description:

You finished your berry harvest and already filled the harvest survey. There is another survey you have to fill which is the demographic survey. This survey asks you to fill your personal information, such as your age or gender. You don't have to input your real demographic, some faked information is okay, but it should be reasonable. Also, you should enter some illegal value such as a negative age to see whether the web will provide some error messages.

Task list:

- Open the app
- Click “Demographic Survey” in navigation bar
- Enter all information required such as age, gender.
- Click “submit” after you finish first part
- Repeat the processes above but try it with illegal input. For example, you can enter a negative value in “age”

Quantitative measurements:

- Responding time of system after click “create”
- The number of errors occurred during the test
- The number of participants who have questions or confusions during the test
- The number of participants who can successfully finish the questionnaire once

Qualitative measurements:

- Any questions or comments during the test
- Any errors appeared during the test
- Tips from the system when participants enter an invalid input (e.g., a negative age)

Potential observations:

- Participant’s confusion about questionnaire
- Participant’s responding time after one operation
- The interactions between participant and developer
- Whether system will crash when participants enter an invalid input

Post scenario interview and questionnaire questions:

Google form link:

Test Scenario #3

Name: Log in as a scientist and download data

Goals:

- To check if scientist can register successfully
- To check if scientist can download data from this app successfully
- To check how system deal with network corruption during download

Scenario description:

You are a scientist who works on the diversity of berries in Great Lakes region. You happen to know this app from other people. You are interested in this project and download it. You register a new account and log in as a scientist. You use this app to find some data which can help your work.

Task list:

- Register as a scientist
- Click “Berry Patch Location Map” in navigation bar
- Check some berries’ information

Quantitative measurements:

- The amount of data which are presented in this page
- The number of participants who have questions or confusions during the test

Qualitative measurements:

- Any questions or comments during the test
- Tips from system when network corrupts
- The quality of the downloaded data (e.g., is downloaded data consistent with the original data?)
- Whether the figure is clear enough to understand

Potential observations:

- Participant's confusion about questionnaire
- Participant's responding time after one operation
- The interactions between participant and developer

Post scenario interview and questionnaire questions:

Google form link:

https://docs.google.com/forms/d/e/1FAIpQLScKuXJZoUMUdbF-eXeojLBSQ3uZC7Vts5eIJ7nR8u22o9ydNA/viewform?usp=sf_link

1. Do you think the functions provided are enough for scientists? If not, please specify what functions are needed.
2. Do you think the figures in this page are clear and easy to understand?
3. Do you think the scientists should pay for the data or not? Why?

Bug report form:

Post-test questionnaire:

Google form link:

https://docs.google.com/forms/d/e/1FAIpQLSdgHSZ9iTwn5S9zv2N7DsGfN3nPgH83l8w-wKQTKZNaKQi-bw/viewform?usp=sf_link

1. Please indicate your level of agreement to the follow statement:

Overall, this application was easy to perform the task.

1. Strongly agree
2. Agree
3. Neutral
4. Disagree
5. Strongly disagree

2. Please indicate your level of agreement to the follow statement:

I enjoy using this application.

1. Very much
2. A little bit

3. Neutral
4. Not very much
5. Not at all

3. Please indicate your level of agreement to the follow statement:

I would use this application again.

1. Strongly agree
2. Agree
3. Neutral
4. Disagree
5. Strongly disagree

4. Please indicate your level of agreement to the follow statement:

I will recommend this app to my friends.

1. Strongly agree
2. Agree
3. Neutral
4. Disagree

5. Strongly disagree

5. Do you prefer a website application or a mobile app? Why?

6. Any other suggestions or comments about this app?

Appendix A:

1. Explanation about bug report form

Bug ID: this is a unique number for each bug occurred during test

Bug name: give a name for this bug

Bug location: specify where this bug occurs

Bug description: this is a short description of the bug, 1 or 2 sentences

2. How to record bugs

Every time a user encounters a bug, a unique bug number is given and the bug name. When a bug is first encountered, put an asterisk by the bug. If the bug occurs across multiple users or even the same user, you do not put an asterisk and do not have to enter the description or location a second time, but do record the same name.

The CS students should be able to help you identify and record bugs.

Appendix B:

Testing Challenging Form:

Challenge ID	Challenge Name	Description
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