Füdger

CSC318H1: The Design of Interactive Computational Media
Assignment 7b7c- usability study instrument (updated)
Group X

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Research Protocol

1. Project Title: Direct observations of users using the design interface of a high fidelity prototype (Fudger)

2. Investigators: KANWAR, Pratyush (pratyush.kanwar@mail.utoronto.ca), OSBORNE, Kyle (kyle.osborne@mail.utoronto.ca), YUFENG, ZHOU (yufeng.zhou@mail.utoronto.ca), LE Michael (mich.le@mail.utoronto.ca), THIO, Sharene (carleen.thio@mail.utoronto.ca) , OABEL, John (john.oabel@mail.utoronto.ca)

3. Purpose: The purpose of our research is to understand users reactions/steps to help us derive insights for the design of a novel interactive mobile application that is intended to be useful to grocery shoppers. A brief description of our design concept is: to help grocery shoppers waste less food due to their unplanned and bulk purchases which ultimately ends up in landfills producing a large amount of harmful gases which in return leaves a negative impact on the environment.

4. Process to be followed: We will brief the participants about the purpose of the study, explain the consent form to them, and ensure that they sign the consent form. We will then engage the participants in a 20 minute-long semi-structured usability test of our high-fidelity prototype by giving them specific scenarios for each task that we want them to accomplish.

5. Participant selection: Participants will be chosen from our CSC318 lecture.

6. Relationships: No relationships with participants

7. Risk and benefit: There will be minimal risk to the participants, for example, that they feel that they have wasted their time. The only benefit will be to contribute to the education of the investigators. Participants are free to withdraw before or at any time during the study without the need to give any explanation.

8. Consent details: We will brief the participants about the purpose of the study, and explain the attached consent form to them, and ensure that they consent to participate and sign the consent form.

9. Compensation: Participants will receive no compensation.

10. Information sought: The information to be sought is described in the attached semi-structured direct observation plan.

11. Confidentiality: Information will be kept confidential by the investigators. Names or other identifying or identified information will not be kept with the data. The only other use will be to include excerpts or copies in the assignment submitted, but names and other identifying or identified information will not be submitted

Consent Form: Usability Test of High-Fidelity Prototype (Fudger)

I hereby consent to participate in a research study conducted by KANWAR, Pratyush (pratyush.kanwar@mail.utoronto.ca), OSBORNE, Kyle (kyle.osborne@mail.utoronto.ca), YUFENG, ZHOU (yufeng.zhou@mail.utoronto.ca), LE Michael (mich.le@mail.utoronto.ca), THIO, Sharene (carleen.thio@mail.utoronto.ca) , OABEL, John (john.oabel@mail.utoronto.ca) for an assignment in the University of Toronto Computer Science course *CSC318 - The Design of Interactive Computational Media*.

I agree to participate in this study the purpose of which is to understand users reactions/steps to help us derive insights for the design of a novel interactive mobile application that is intended to be useful to grocery shoppers.

I understand that I will receive no compensation for my participation. I am free to withdraw before or any time during the study without the need to give any explanation. All materials and results will be kept confidential, and, in particular, that my name and any identifying or identified information will not be associated with the data.

PARTICIPANT

Name (please print)

_____

Signature

_____

Date

_____

INVESTIGATOR(s)

Name

_____

Signature

_____

Research Instruments

a. **Briefing/**Pre-study questionnaire to gather all relevant demographic data Questions:

1. How often do~~Do~~ you make a grocery ~~lists~~list before going to buy groceries?
1. ~~Does your food go bad often?~~

2. ~~Do~~On a scale of 1-10 (where 1 being never and 10 being always) how often does food go bad?

~~2.~~3. How do you ~~enjoy~~feel when it comes to managing food (such as making a grocery list and keeping track of the expiry date of food)?

Before test script:
Before we start the test session, here is the app, tell us what you think while going through the tutorial.
After going through the tutorial, participants would be asked if they are comfortable using the application now.

b. **Test scripts including detailed questions you will ask users (testing ~~scenario,~~scenarios and tasks)**

Scenario 1: Your friend has their hands full and gave you their phone to check what fruits they have had the longest. Show me how you would:

1. ~~Check what~~Look up all the fruits they have
2. Report back with the fruit they have had the longest

Scenario 2a: You have been using the app recently, and your friend just gave you a small gift basket containing 2 ~~zucchini~~watermelons and a carton of milk. Show me how you would:

1. Keep track of these new items you obtained in the gift basket using the app

Scenario 2b: But then you ate one ~~zucchini~~watermelon later during the day. Show me how you would:

1. Update the new amount of ~~zucchini~~watermelon.

Scenario 3a: ~~After inputting all the food you have, you~~You decided that you need to make lunch the next day. So you looked up a recipe for carbonara (3 eggs, parmesan cheese, and an onion) and want to buy all the ingredients. Show me how you would:

1. Keep track of all these items you need ~~want~~ to buy from the recipe

Scenario 3b: You went to the grocery store and found all the ingredients except the onion. Show me how you would:

1. Update what you own with the items you just bought.

Scenario 3c: You went to ~~the~~a shady supermarket and found some onions. Show me how you would:

1. Keep track of the new food item you just bought.

Scenario 3d: You finished cooking your carbonara and really enjoyed it. So you decided that you will make ~~them~~it again tomorrow, which means you have to buy the same ingredients again. Show me how you would:

1. Create/reuse the grocery list for carbonara.

c. Observation and performance measurement plans

Record users first focus of the app when they perform each task. (may not be observed every time)

Record the number of attempts tried before successfully achieved the task.

Record the time it takes for each task.

Criteria (Time measurement):

	Good	Acceptable	Bad
Scenario 1	Time < ~~5s~~20s	~~5s~~20s < Time < ~~10s~~50s	Time > ~~10s~~50s
Scenario 2a	Time < ~~10s~~1:00min	~~10s~~1:00 < Time < ~~20s~~2:00	Time > ~~20s~~2:00
Scenario 2b	Time < ~~3s~~20s	~~3s~~20s < Time < ~~8s~~40s	Time > ~~8s~~40s
Scenario 3a	Time < ~~15s~~1:00min	~~15s~~1:00 < Time < ~~25s~~2:00 min	Time > ~~25s~~2:00
Scenario 3b	Time < ~~5s~~30s	~~5s~~30s < Time < ~~10s~~50s	Time > ~~10s~~50s
Scenario 3c	Time < ~~3s~~20s	~~3s~~20s < Time < ~~8s~~40s	Time > ~~8s~~40s
Scenario 3d	Time < ~~3s~~20s	~~3s~~20s < Time < ~~8s~~30s	Time > ~~8s~~30s

d. ~~Debriefing/~~Post-study questionnaire / interview
Questions:

1. What do you think this app is ~~after the testing?~~for now?
2. ~~Do~~On a scale between 1-10 (1 being not useful, and 10 useful), where do you ~~think~~place this app ~~is useful~~in terms of food management?
3. ~~Do~~On a scale between 1-10 (1 being not useful, and 10 useful), where do you ~~think~~place this app ~~is useful~~in terms of reducing food waste?
4. ~~Do~~Is there any functions you ~~think~~would like to see in this app~~needs to have more functions or it is good enough?~~?
5. Do you have any other suggestions about how we can improve this app?
6. ~~How~~On a scale between 1-10 (1 being not important ~~is~~, and 10 being important), what is the value of keeping track of what you have to you?

Appendix: Assignment attribution

Yufeng (Bob) Zhou	Creating plans for group meeting and group assignment, responsible for the pre-study, post study questions and task assessment criteria in the usability study instrument document.
Michael Le	Helped come up with scenarios. Updated prototype with new feature such as implementing a reset button and getting add item to work for zucchinis. Added pictures to show differences of screens between prototypes.
Sharene Carleen Thio	Participated in creating the usability study instrument and the heuristic evaluation and formatted them. Made the test script with Michael. Added tooltip in the prototype and updated the homepage. Wrote the high-fidelity prototype write-up and formatted it. Updated the debriefing questions and added a new prompt to explore app first.
Pratyush Kanwar	Participated in creating Consent forms and Research protocol. Helped in combining results from heuristic evaluations into one. Helped in refining high-fidelity prototype and edited documents to make sure they were ready to be sent.
Kyle Osborne	Completed cognitive walkthrough writeup, made edits and adjustments to inventory page in high fidelity prototype. Contributed to heuristic evaluations. Proofread and formatted documents
John Oabel	Made adjustments in adding inventory pages. Added gamification aspect towards the application. Added messages for users to be aware certain actions have been completed. Contributed to heuristic evaluations. Edited and documented documents.

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