Assignment #7a: Usability Study Instruments

CSCC10 Human-Computer Interaction
Summer 2020

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Introduction

The purpose of this study is to have users test our prototype, so we can figure out any issues that need to be fixed. Throughout our research, we have found that wait times are the biggest barrier to accessing healthcare. Our goal is to diversify the patients to different clinics, reducing the overall load of the clinics. This prototype models our solution and we are looking forward to you using it.

See consent/confidentiality form below.

Our prototype is an interactive website aimed to provide Canadians with the shortest times to access healthcare. Our web-based application, OnTime is designed to help users find the closest clinics and their waiting times. Not only will users be given a list of medical centers pertaining to their requirements, but users will also be able to select any of the suggested clinics and get the directions to it. OnTime provides a map view of the search results and directions, as well as a plethora of different filtering and sorting options, so that the user can find the clinic that best suits their needs.
The expectations for our study is that we will be able to diagnose design issues in our prototype.
We promise that the data from this study is confidential.
We ask that you express your thoughts aloud as you work through the problems during this study. We will occasionally remind you in case you forget!

Usability Testing Instruments

Background (Pre-Study) Demographic Questions
- How old are you? 20, 20 **, 20,**
    - Pi: 24
    - 19
    -
- What is your occupation? Student, student, student
    - Pi: student
    - student
- Were you born in Canada? No, Canada , no
    - Pi: No
    - no
- Do you have any children? No, no , no
    - Pi: yes, 5

- no
  - How often do you visit clinics/hospitals in a year?
    - Pi: 3-4
    - In canada havent been, in china: once or twice a year

5, 12, 1

Test Script

Scenario:

You are a 1st year student at UTSC, living on campus residence. You are fairly new to Toronto, so you don't know much about where everything is. One day you start feeling slightly ill and start feeling worse as the day goes on. By the time you decide to go to the doctors, the medical facilities on campus have already closed. You have a lot of assignments due soon, so you don't want to spend a lot of time waiting for treatment. Desperately, you go on google and find an app which gives you a list of waiting times of nearby clinics/hospitals and decide to try it out.

By using this system, please complete the following tasks:

Task 1			
Question 1	**Answer/Screenshot**	**Score**	**Notes**
Can you navigate away from the homepage and find a list of medical centers near your current location that you can arrive to by travelling on a bus if you leave right now?	User will need to click on **find clinics/hospitals near you** button on the homepage User will to click on the **use current location** checkmark box User will need to set the **departure time** to the current time User will need to click on the **bus** icon as their method of commute User will need to find results by clicking on the **search** button		Jessica - clicked button before task even started - found use current location fairly easily - Was confused on what to select for current time as no option to choose current time was available - Decided to look through the time dropdown, but still wasn't able to choose current time, just chose 5:30pm as it was the closest time

			Bryan
			- Had trouble sorting like finding the sort option
			Myron
			- Visits hospitals once (per what?? idk) a student 22 yrs old
			- Clicks a button navigate easily from home page
			- Had issues remember the task (too long)
			- Was able to clik on bus
			Siying
			- Confused about which method of transport to choose
			3.14
			- Gotta change the font for the slogan
			- Clicked on current location
			- Clicked on car and search
			- Fairly quickly
			- Found it confusing that there was no indication of chose method
			Cheryl
			- She noticed the website Url
			- Her reasoning to click the button on the homepage was cuz its the only button
			- Found it odd that the button for commute doesn't indicate when

			clicked

Task 2

Question 1	Answer/Screenshot	Score	Notes
Can you change your starting point location to 611 Savoline Rd , and your departure time to 4pm?	Change location and departure time from the given buttons from results page		Jessica - knew where to go to change location - Knew that she would have to type up the location Siying - Hesitated a lil, but got it easily 3.14 - Went back to search screen, didn't notice starting point tab on top - Saw departure time though Cheryl - "Wow thats a lot" - For departure time, she would click on the dropdown - For changing starting point, initially thought that she could drag the "you are here" icon

Question 2	Answer/Screenshot	Score	Notes
Can you show me how you would find directions of a medical centre with the shortest commute time?	Sort by wait time from the results page		Jessica - She was confused by clinic labels at first, and wasn't sure if it meant a medical center or clinic (?) (wording of task may have been

			confusing) - Decided to sort by commute time so that she could easily find shortest commute time - Struggled to find the correct sort option (text was a bit too small) - Had a hard time (4 sec to find the sor button) Siying - hesitated , didnt know how to sort 3.14 - Found the result with the shortest commute time manually - Used filter to find the results with only the shortest time Cheryl - She could she commute time clearly and identify what it means - Was confused by "wait time" as it being the wait time for the bus etc
Task 3			
Question 1	**Answer/Screenshot**	**Score**	**Notes**
Please show how you would go about making the	Click full screen on map		Jessica - She quickly found the fullscreen button

map take up the size of your screen			Bryan
			  - Brian did easily
			  - Did it easily
			
			Siying
			  - Easily found it
			
			3.14
			  - Easily made the map full screen
			
			Cheryl
			  - Found it easily

Question 2	**Answer/Screenshot**	**Score**	**Notes**

Can you show me how to make this page show directions and no map?	Click Hide Map		Jessica
			  - She clicked on get direction by text (?)
			  - After hearing the task a couple of times, she managed to understand what to do and clicked the hide map button
			Byran
			  - Bryan wasnt sure if he should click hide map first
			
			Siying
			  - Wasnt sure about answer but got it easily
			3.14
			  - Was confused by the get directions by text
			Cheryl
			  - Ez pz

Question 3	**Answer/Screenshot**	**Score**	**Notes**
Can you show me how to make this page show both	Click show map		Jessica - She struggled to find the show map

directions and map?			button, it seemed to be struggling to read it due to size Bryan - He clicked exit screen easily.. He also rationalized by undoing what he did Siying - Easy 3.14 - Knew he had to click on show map Cheryl - Found that having the buttons in the same general are helped for usabilty
Question 4	**Answer/Screenshot**	**Score**	**Notes**
Please show how you would find the route to your destination by walking?	Change transportation method to walking		Jessica - She easily found the walk icon and explained that she would click on it **He was confused and asked "should I click" instead of actually clicking** Siying - Easy 3.14 - Easily found the walk icon and clicked it - Was confused if it worked because there was no indication if the method of commute had changed Cheryl

			- Knew she had to click on the walk icon - Found it confusing to know which method commute was currently selected
Question 5	**Answer/Screenshot**	**Score**	**Notes**
Can you show me how would you change the destination to something else?	Change destination from directions page		Jessica - she was stuck, couldn't find out how to change destination for the current page (directions default) - she went all the way to the back to search screen - Went back and choose another one very quickly Siying - Did it easily 3.14 - Went back to search to change "destination" - Once he understood the task, he quickly went to results and click on a different center Cheryl - Ez pz
Task 4			
Question 1	**Answer/Screenshot**	**Score**	**Notes**
Can you show me how to only see medical centres	Filter by 4 hearts rating		Jessica - She was unsure on how to show

that are rated higher than 4 hearts?			results that are greater than 4 hearts - She tried looking at sort first, before finally clicking on filter - She clicked on the rating dropdown first, rather than the checkbox for minimum rating Bryan - Bryan was easily able to filter - He went and did it with almost no struggle Siying - Wasnt sure how to sort by ratings. Had no clue. After clarification she knew to click filter 3.14 - Hesitated between choosing sort or filter. Took a while (~10 seconds) to eventually choose the correct filter option Cheryl - Knew what to do - Found that the buttons were too small and text was too small
Question 2	**Answer/Screenshot**	**Score**	**Notes**
Please show how you would get the directions of this	Click get directions by text		Jessic - Back button wasn't working so user

| medical centre as a message to your phone? | | | couldn't get to the text directions herself
- Unsure of which medical center they were meant to select

- Bryan was able to figure this out easily
- Was confused about which medical center.. But once he knew it he did it very easily

Siying
- Wasnt sure about which result to choose
- Wasnt sur about if the get directions was a button
- Knew to type her number and click submit
3.14
- Knew he had to click on a location first
- Clicked on get directions by text
- And knew he would enter his number and click submit

Cheryl
- Ez pz |

Observation and Performance Measurement Plans
(a) High Level Questions - Questions related to our designs that we want to have answered,

but we wouldn't ask the user directly:
1. Is the functionality clear to the users (function)
2. Are language and icons clear (language & visuals)
3. Can users figure out how to use our system (usability)
4. Would users find this system useful (usefulness)
5. Would our target users use our system (would use?)

(b) Screen & data capture
(c) Video & audio recording
(d) Note taking
(e) Usability test software tool: Excel data logger

Note-Capturing Tools/Template to Facilitate Live Data Entry During Live Testing
Observations: objective, factual statement, eg. "user paused for a couple of seconds"
Inferences: conclusions based on observations & assumptions eg. "paused because: user didn't know format of data entry/process steps/tried to remember something"
Opinions: use "should" & "need" "need clearer data entry format instructions"

	Test 1	Test 2	Test 3	Test 4
Observations	-user was confused how to find the shortest times on the search page. -Didn't pay attention to the method of commute - Clicking on the map, the user confused. Is aware of the sorting method.	- User paused on the results page when trying to find the shortest wait times on the results page.	- 20, no children, visits once a year, not born in canada - easy to navigate - no trouble sorting	- User took a long way to hide the map from full screen map directions page. They first clicked "show directions" then "hide map" instead of just "hide map" on the full screen directions map page. - Confused to between go to directions or hide map when map in full screen - After filtering, the user went back to search page instead of

				unfiltering
Inferences	User was confused because they thought they had to click on a button to find the shortest times to a healthcare centre from the search page.		**User was confused what was meant by different destination**	
Opinions	We should clarify the search oage			
-	-	-	-	-
	User took a long pause when asked to display results of hospitals/clinics with a minimum of 4 hearts.	On the results page, user took a pause when asked to get directions to a place sent to her. When she navigated to the directions page, she was able to get a text to directions without confusion/delay.		- User thinks of this app as a map - There should be a go home button
	User was confused between using sort and filter.	User was confused if she would be able to receive a text to direction from		

		the results page as there is no indication that there is such an option to do this from the results page.		

Post-Test Questionnaire
- How was your overall experience with the prototype? Describe it in only one word
    - Jessica
        - Her one word was: Clear
        - She found it easy to use, "Better than google maps"
    - Siying
        - 8/10 is her one word, she liked how she knew what the buttons did, but on the last task she wasnt sure bc the get directions button isnt meaningful
        - One word is Good lmao
    - 3.14
        - One word: satisfactory
    - Cheryl
        - straightforward
- Were there any missing functionalities?
    - Jessica:
        - Suggested having a functionality that could at this info to their schedule
        - Suggested an integration with Uber or similar rideshare/taxi service
    - Siying
        - No
    - 3.14
        - Departure time and starting point could be separate lines (they were hard to click)
        - Put them more apart
    - Cheryl
        - Maybe include waiting times for buses etc
- Explain this product/experience to your friend
    - Siying
        - Very good and convenient, app purpose was clear
    - 3.14
        - "Ik an app that can help u find clinics with less/no waiting times"
    - Cheryl
        - Ez to use, buttons are clear, but commute wasn't clear
        - Faster to find clinics/hospitals to go to
- From a scale of 1-10, how likely are you to recommend this to your friends and family?

- Jessica
    - Forgot acc number but it was high around 8
    - "If I were feeling sick I would definitely use it"
- Siying
    - 8/10
- 3.14
    - 8/10
    - Disappointed he didnt say 3.14/10
- Cheryl
    - 8/10
- What did you dislike about the prototype (3 things)?
    - Jessica:
        - Didn't have any particular dislikes, just would have preferred the ability to use this with Uber
        - Mentioned the schedule functionality again
    - Siying
        - Change where we put the buttons, move departure time and starting point
        - Change car bus bike walk to another place
    - 3.14
        - Buttons were a bit to small
        - Font on front map
    - Cheryl
        - Small buttons/writing, hard to see
        - Departure time and starting time
- What did you like about the prototype (3 things)?
    - Jessica
        - She liked how it was clear and easy to follow
        - Like the idea of it
    - Siying
        - Convenient
        - Labels help a lot, like how the test is labelled
    - 3.14
        - Its like google maps, so he knew where to look
    - Cheryl
        - Likes how the hospitals are listed, times were listed nicely
        - Directions were clear

- Were you able to get the results you were looking for?
    - Jessica:
        - She misunderstood the app to be a replacement for google maps, so she focused on the actual locations rather than waiting times,
        - Based of the above, she found the results she was expecting

    - Siying
        - Yes

- 3.14
    - Yes
- Cheryl
    - Yes, good to know theres are hospitals around her and can get directions
- How would you rate this system:
    Ease
        Very Difficult to Use-1 2 3 4 5-Very Easy to Use
            -4.5
        Pi:4
        C: 4 or 5, rlly intuitive
        , could add dentist LMAO
        OSMan U SUCK
    Usefulness
        Not at All Useful-1 2 3 4 5-Very Useful
            -4
        C: depends on situation, given the scenario we gave: 4
        Pi:3 -> not sure if waiting times would be accurate
    Usage
        I would not use it-1 2 3 4 5-I would definitely use it
            - 3
        Pi: 3 -> man doesn't trust our waiting times styll
        C: 4

Sho (cutie <3): very clustered results page, especially the starting point and departure time - make these buttons 3 times larger and place it underneath the commute settings. We can use vertical scrolling, just make the page taller in figma wow. Filter page is very small, use more space on the screen - maybe twice as large the page should be. Different coloured arrows, can we show these arrows on the map so its improved? Make text directions more clear (get directions by SMS rather than 'text').

Section 1: Research Protocol

1. **App prototype user testing** of **Canadians aged 18+ from various age ranges and education/literacy levels who are eligible for Canada's publicly funded healthcare services.**

2. **Investigators:**
Muhammad Osman (Osman) Amjad (m.amjad@mail.utoronto.ca),
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Jenisha Thomas (jenisha.thomas@mail.utoronto.ca).

3. The purpose of our research is to understand the different challenges people with **various age ranges and education/literacy levels** will face in
Canadians aged 18+ from various age ranges and education/literacy levels eligible for Canada's publicly funded healthcare services to help us derive requirements for the design of novel interactive computational media that is intended to be useful to **the target audience**. A brief description of our design concept is: we want to make healthcare more accessible for people of all education levels.

4. The 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 an online questionnaire, which is expected to take 10 minutes max.

5. Participant selection: Participants will be chosen from people of different education levels. They will be identified via social media and selected according to whether or not they fall into a unique education level. In general, they will be characterized by education level.

6. Relationships: Our relationship to the participants may be described as follows: none

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, explain the 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 questionnaire.

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.

Section 2: Consent Form

I hereby consent to participate in a research study conducted by Sumuhash Mannogaran, Mahamad Jawad Jawid, Riyasat Talukder, Jenisha Thomas, Sheeza Aziz, and Muhammad Osman Amjad for an assignment in the University of Toronto Scarborough, Computer Science course CSCC10 Human-Computer Interaction.

I agree to participate in this study the purpose of which is to identify user design issues in our prototype.

I understand that

• The process will be done through an interview using zoom.

• 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): N/A

Signature: N/A

Date: July 21, 2020

INVESTIGATOR(s)

Names: Sumuhash Mannogaran, Mahamad Jawad Jawid, Riyasat Talukder, Jenisha Thomas, Sheeza Aziz, and Muhammad Osman Amjad

Signature: N/A

Appendix - Assignment Attribution
- Everyone contributed equally to the high fidelity prototype created using figma
- Introduction Paragraph: Jenisha
- Consent Forms/Research Protocol: Sumuhash, Osman, Sheeza
- Observation and Performance Measurement Plans: Sheeza
- Note-Capturing Tools/Template to Facilitate Live Data Entry During Live Testing: Sumuhash
- Test Script: Jawad (most), Osman, Jenisha
- Background and Post-Questionnaire: Riyasat