Food Truck on Campus

By JavaNPython

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Introduction

Before we get into the findings of our research efforts, I would like to first state out our problem space and solution first. As mentioned in our previous assignments, our problem space highlights the problem of how U of T students have tight schedules and limited time in between breaks to get buy and consume food. Many students including us might have to starve for several hours while trying to focus in lectures. Food truck seems to be a logical choice since it is closer and fast in comparison to other restaurants around the campus; however, from our researches (field studies, questionnaires, and interviews) we found out that there are existing problems with the food truck waiting time that gives students no choice but to starve. Therefore, inspired by Ritual, we came up with the solution of our product "Food Truck on Campus", which is an online ordering website that allows students to (1) place order ahead of time, (2) pay with card, (3) avoid miscommunication, and so on.

Executive Summary

As a group, we first drew our individual low-fi prototypes and then did our first usability test. From our first usability test with students, we all found minor mistakes within our low-fi prototypes such as misleading buttons/descriptions and misplacement of buttons within pages. With these problems in mind, we analysed the results and then came up with solutions for each problem within our individual low-fi prototypes. Then, in assignment 6, in order to come up with the best joint prototype possible, we looked at each other's prototype together as a group and voted on the best ideas when we encounter overlaps.

Although the joint low-fi prototype is not well decorated, they helped us to review some of the important Heuristic Evaluations problems reflected by our participants during the Low-fi experiment; they include User Control and Freedom, Consistency and Standards, Flexibility and Efficiency of Use, and Aesthetic and Minimalist Design. Similar to when we were working on our individual low-fi prototypes, we reflected on our problems with the joint prototypes then managed to fix and improve it.

After discovering most of the lurking problems within our prototype, we designed our high-fi prototype during assignment 7 and conducted the second round of usability testing. From the usability test of our high-fi prototype with other students and experts, we found these following problems within the prototype that surrounds the category of Functionality and Visual design, particularly:

- Dead-end buttons
- Distracting information

Research Methods

Our group conducted our Usability testings in the classroom with other students and several experts as the participants. We did the one-on-one moderated usability test where our researcher (nick), will first explain the reason why we created this product then ask them to complete multiple tasks with given scenarios.

When we first found our participants voluntarily within the classroom, we let them fill in the consent form that briefly explains what our research is about and notify them things like how the results will be kept confidential and that the audio will be recorded during the experiments. Then, as mentioned, they are given multiple tasks from both sides of the product (Buyer's side and Owner's side):

(1) Log In & Sign Up
(2) Place or accept an order
(3) Create or edit owner's menu
(4) Change payment method

For each individual task, we wrote down what the users should do in order to complete the tasks. During the experiments, we ask them to say it out loud what they are thinking when they are accessing the website, we then observe and record down their choices. By doing this, we get to understand their thought process if they encounter any problems while trying to complete the tasks. Then, we compare their actions with what we initially thought they would do to see if our high-fi prototype have successfully did what we wanted it to do.

By the end of the experiments, we asked them for their opinions on the prototype and asked them to fill in a post-questionnaire to see if they were satisfied with the product and the usability test itself.

Participant Demographics Summary

As mentioned above, we gathered our participants for the usability testing voluntarily within the classroom. We had a total of 6 participants, 3 of which were experts including our TA, and 3 students from other groups. Our participants range from second year U of T students to experts in other fields, there were also an equal amount of gender distribution.

Although our product is indeed designed for U of T students, it isn't important at all if our research participants are actually a part of the student body. This is because in our task

scenarios, we specifically told them to *pretend* they are an U of T student that wants to buy and consume food in between classes.

Findings & Design Implications

Overall, the idea of our product was accepted by most of our participants, but there are still some possible improvements. Here are the details;

What we found successful from our product:

- Students no longer need to order and wait outside of the buildings. They can choose a proper pickup time and grab the food.

- Students can pay online with their debit/credit card while most of food trucks are not providing this service.

- Since students can order online, it reduces the chance that the food truck owner misunderstands the buyer and gives wrong food. This happened a lot surprisingly since not all food truck owners or students are English native speakers!

- We made a relevant and user-friendly interface!

- For food truck owners, they can earn more profits by preparing food a bit earlier based on online ordering.

- They have a chance to allocate time properly since students have a chance to order earlier.

- Similar to students, owners have a less chance to make a wrong food and give it to the buyer.

What can still be improved (things that are challenging for users):

(1). Some buttons are not working as expected. This happened a lot during the high-fi prototype testing and might interrupt participants' thinking.

(2). Since our website doesn't have "preorder" function, i.e. you cannot choose a pickup time by yourself, if a lot of students are using the website at the same time, this means most of students cannot get their food in 10 mins, which was our initial goal. And my group had a discussion and believed this is possible.

(3). The screen isn't big enough. Some participants pointed out that it didn't look like an actual website.

(4). The most important was "estimated waiting time", but most of participants had trouble seeing it.

(5). We used "I want a name-specify one" instead of "search", and our participants pointed out that "search" is much clearer and commonly used.

Challenges to users	Severity Scales	Solution
(1). Buttons not working	MED	It is our problem, and the solution is fixing them : P
(2). No "preorder" function	HIGH	As I mentioned above, this function is possible.
(3). Screen display	LOW	It is almost impossible to make it look like a website display...
(4). Can't see features we made	HIGH	We made the font bigger and more obvious to see.
(5). "Search" Button	LOW	We renamed button "I want a name-specify one" to "search" button with a nice looking icon.

Recommendations of changes from our participants:

- A navigation bar when searching a food truck by name will be helpful for users to find the one they want.

- Users might be confused by "clear the cart" in both shopping cart and order confirmation.

- It is good to add a name when the user is adding a new card as payment method.

- "Estimated waiting time" is not obvious.

- Users might not know what to do with the order number they get after ordering successfully.

- "I want to see the cards I saved in my profile!".

- "Do you need all these information? They seem private" says by one of experts when signing up as a food truck owner.

- Some typos…

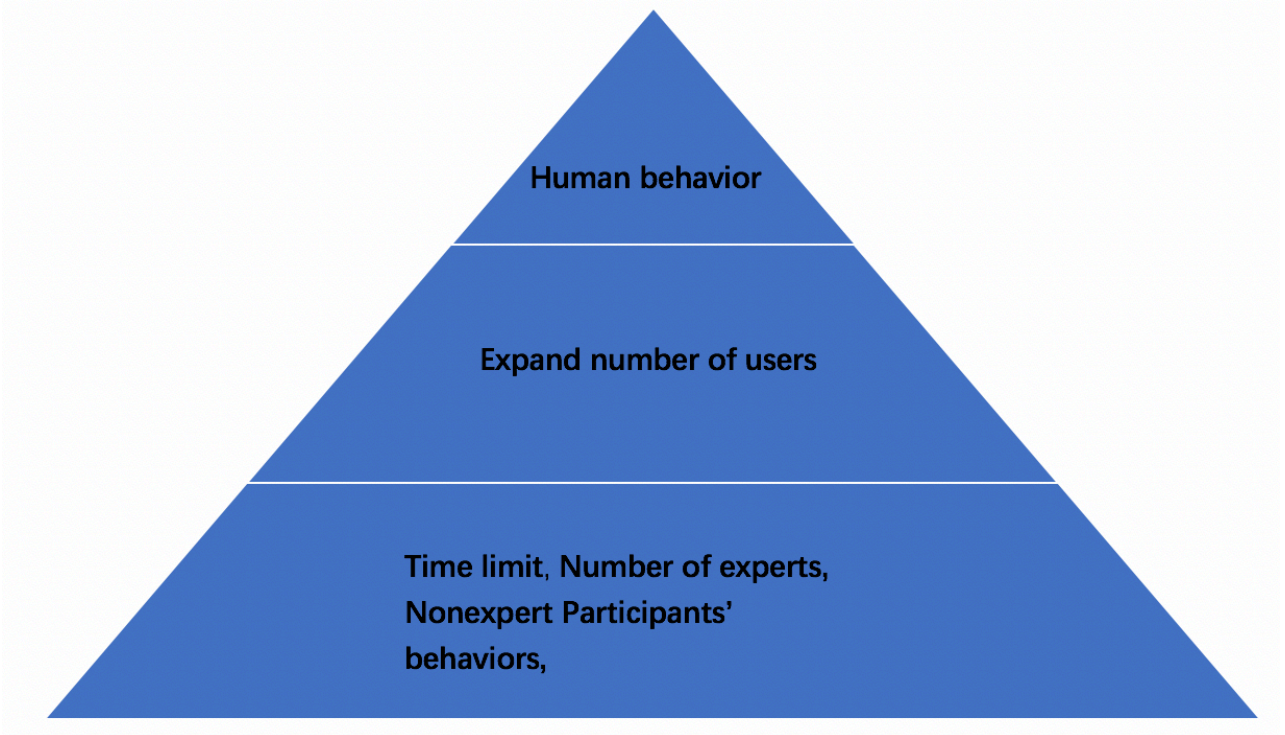
Success rate on tasks and analysis:

Tasks as a buyer: Find a closest/fastest food truck, get food as much as you want, pay with cash/debit card.

Tasks as a seller: Sign up as a new food truck owner and assume you have all the necessary documents, Keep tracking online orders, finish all the orders assuming you have already prepared the food in real life.

	Tasks as a buyer	Tasks as a food truck owner
Success rate	5/6	6/6
Average complete time	3 min	5.4 min
Understand everything they see during tasks	4/6	5/6
"I prefer not to use the website"	1/6	???

Discussion of Research Limitations



Human Behaviour: It is hard to find out what our users want exactly

Expand number of users: The idea can be used to any university/college with food trucks near campus, but we didn't make it expandable

Time limit: Everyone was busy on other assignments…

Number of experts: We only had 3 experts and we believe this is not enough.

Non-expert Participants: They tend to focus on good features instead of bad ones, while our participants did well.

Unclear instructions: Our tasks was too specific and it sounds like we are "leading" our participants to do tasks as instructed.

Link for a small part of Usability Test:
https://youtu.be/sQHUH0vidkA

Reflections

At the beginning of the course, we started with some assumptions on our target users. The one I assumed was: people who walking through the long lines feel annoying especially when students in the long line don't pay attention to them.

After some researches and observations, we found that this is unnecessary and no one actually cares (Canadians are nice!). But they still believe waiting for 10+ mins outside is suffering if they are buying food at any food truck. Thus, even if my assumption was bold, the goal for us didn't change: to reduce the waiting time.

Then we started conducting researches on food trucks owners as well since they have to use our website to interact with students who are ordering food. And we realised that sellers also encounter problem preparing multiple orders at the same time, and this will cause a loss of money due to them not being able to take in so many orders. Therefore we had to twist the goal of our project, to satisfy both the students body and the owners of food trucks.

Furthermore, we have to take care of students who are allergic to some ingredients such as peanuts and mushrooms. This is extremely important since this will cause big problem on both the students and the sellers (yes, not all the sellers will tell the buyer what ingredient is used for a food). And that is where "displaying ingredients" comes from.

Our initial goal was to reduce waiting time, with online ordering, our solution is showing the estimated waiting time to the buyer so they can decide immediately if they have to change a food truck for a shorter time. This is essential since students only have a 10 minutes break if they have continuous classes.

Therefore, by combining these ideas, we have designed a well looking website for our product "Food Truck on Campus", which allows students to buy food online with ease, and assist food truck owners who is struggling with the exceeding amount of consumers.