

Wegmans

Curbside Delivery App

TEST PLAN

Rochester Institute of Technology Usability Evaluation (UE) Team:

Chih-Jung (Sharon) Chen
cc7916@rit.edu

Chirag Ghube
cg8265@rit.edu

Madhura Valvaikar
mv6145@rit.edu

Pengkai (Kai) Liao
pl5851@rit.edu

Urvashi Kokate
uk4890@rit.edu

Wentao (Vincent) Lei
wl6505@g.rit.edu

Janhavi Verma
(Point of contact)
jv2227@rit.edu

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INTRODUCTION

Wegmans Food Market recently updated their shopping application in January. They made some adjustments and included new services - Curbside Pickup and Delivery - in the new version. To better serve their customers, Wegmans expressed the need to test and improve their application, and recruited our team to focus on the Curbside Pickup feature.

PURPOSE

The new features that have been launched on the Wegmans application have made it significant to understand the different challenges and usability issues faced by users. Our evaluations will focus on the users' interactions with the Curbside Pickup feature within the new application. We will recruit volunteers from within the existing and potential users, to evaluate various aspects of the Curbside Pickup feature in a guided manner, and document their experiences and interactions. This information will be analyzed by our team to provide insights into the user's perception of the feature and the app, as well as tangible suggestions to make the Curbside Pickup interface more user-friendly. In this way, we hope to enable the Curbside Pickup development team to improve their customers' shopping experience.

RESEARCH QUESTIONS

List-Related (Creating a Shopping List)

How long does the user take to add pre-decided items to the list?

How long does it take to find the create list option?

Can new users discover lists easily?

Is deletion of multiple lists easy?

How many clicks does it take to edit/delete the lists?

How quickly can a user add items in the list to the cart?

Cart-Related (Getting Your Cart Ready)

Is the cart icon optimally located? (Fitts Law) (Time to find and open a cart)

Can the users easily filter out items from their cart?

Is the lack of error prevention mechanism on the filter menu noticed by the users?

How can the cart better assist the people with dietary restrictions? (For example, Lactose Intolerance)

Is the frequently used option of deletion optimized?

How easy is it for the users to add special notes and substitutions?

Checkout-Related

How fast is the checkout process?

Does the checkout process have unnecessary clicks?

Are constraints during the checkout process clearly displayed? (e.g., Cannot checkout an order under \$10)

Can the user quickly change the pickup location and time?

Can the user cancel transactions before payment easily?

General Questions

Did the user have a smooth shopping experience?

Will the user prefer this method of shopping over in-store shopping?

Will the user recommend this app to a friend?

Can the users easily voice their feedback or comments in-app?

PARTICIPANT CHARACTERISTICS

TABLE 1: Participant Distribution

Group participants	% of Sample	# of Participants
Used the Wegmans Curbside App (A)	50	3
Not used the Wegmans Curbside App (B)	50	3

TABLE 2: Participant Characteristics

	Characteristic	Participant Totals
Participant Type	Pilot	1
	Regular	6
	Backup	2
Gender	M	3
	F	3
Age	18-25	6
Expertise	Used the app	3
	Not used the app	3

Inclusion Criteria

- Must own a mobile device.
- Must be familiar with one conferencing tool..

Exclusion Criteria

- Has no desire to participate.
- Has limited experience with online shopping.

METHODOLOGY

The objective of this study is to understand the different challenges and usability issues faced by users while they interact with the Wegmans Curbside Pickup Application to perform basic tasks such as creating a list of their desired products, adding those to the cart, selecting the right location for pickup and finally buying them. We will be conducting a Between-Subjects test on two participant groups - Group A, with some level of expertise with the application and Group B, with little or no experience with the application.

Participant Recruitment Process -

Due to the current COVID-19 quarantine norms, we have limited access to the participant pool. Thus, to recruit potential participants who represent the target users of this application, we will send out *Screeners* - A questionnaire to screen and filter people based on the inclusion criteria.

Each of the survey responses will be carefully reviewed by the UE team, and those who satisfy the inclusion criteria (See *Participant Characteristics* section-*Inclusion Criteria*), will be contacted via email to schedule the usability evaluation session. We will recruit 7 participants (See *Participant Characteristics* section) in total - 3 participants for each of the two groups (Group A and Group B), 2 participants for pilot study and 2 participants as backup, each representing the two groups.

The Study

Setup before the test: The Usability Evaluation will take place online, through one of the platforms - Zoom or Google Meet. These sessions with each of the participants will be conducted over a period of one week, depending on the availability of the users. Selected participants who have no experience with either the Wegmans mobile application or the Curbside pickup, will be asked to download the application on their phones before the scheduled time of the meeting. Similarly, we will also confirm that the participants who have some experience with the mobile application as well as those who are regular users of the Wegmans Curbside application, have the application installed before the evaluation process begins.

Pre-session Setup - Before the evaluation process starts, the video and audio quality of the communication platform will be checked. The option to visually show screen taps will be enabled on participants' phone to track their tap patterns as they interact with the application.

Introduction and Background Questionnaire - After the pre-session setup, the *Moderator* (See *Personnel Roles*) will introduce the study to the participant, read the orientation script, and key parts of the informed consent. The participant will also be asked to review the contents of the informed consent form and the non-disclosure agreement before signing them. A background

questionnaire will then be completed by the participants, consisting of a combination of Yes/No Binary questions and Likert scale.

Performing the tasks: A Moderator will be communicating with the participant throughout the study, an *Observer* will observe minute interactions and take notes whereas a *Technical Supervisor* will ensure that there are no interruptions caused by the system(See *Personnel Roles*). Each participant will perform a certain number of assigned tasks that are divided into two sessions - *Time-on-Task* Session and *Think Aloud* Session. *Time on task* sessions will gauge the amount of time taken to complete time-sensitive tasks whereas *Think Aloud* sessions will help discover participant's thought processes as they navigate through the application. Pilot tests will be first conducted with two participants to check whether the sequence of the Time on Task session and Think Aloud Session has considerable impacts on the results. If there is no significant effect, participants will first be asked to perform tasks within the Time-on-task session followed by Think Aloud Session. They will also be asked to take a 5-minute break between the two sessions. For the time-on-task session, both the moderator and the observer will take notes while the participant interacts and ask questions if required after all the tasks within the session are completed. Whereas for the Think Aloud Session, the moderator can ask questions while the participants perform the tasks. During this time, if the observer has a time-sensitive question for the participant, she/he can contact the moderator through a chat service on the phone.

Each session will be recorded and then analysed post the Usability Evaluation by the team.

TABLE 3: Session Outline and Timing

Phase	Time	Details
Pre-session setup	5 minutes	Communication platform(Zoom) will be checked. Make sure the participants' tap patterns could be tracked.
Introduction and informed consent	7 Minutes	Moderator will introduce the study, read orientation script. Participants will be asked to review and sign the informed consent and Non-disclosure agreement.
Background questionnaire	5 Minutes	A background questionnaire will then be completed by the participants.
Task - Session One	15 Minutes	Participants will perform assigned tasks. (Either Time on Task or Think Aloud)
Break	5 Minutes	Participants will take a break before session two to minimize cognitive load
Task - Session Two	15 Minutes	Participants will perform assigned tasks. (Either Time on Task or Think Aloud depending on the first session)
Post task questionnaire	5 Minutes	Participants will be asked to fill a questionnaire to summarise their experience
Post-session debrief and questionnaire	5 Minutes	Moderator will ask for general feedback, thank the participant for their time, and compensate them with a gift card

TABLE 4: Task List

Task	Detail	Starting Point	Success Criteria
1. List tasks	(1) Create a shopping list (2) Add items to list (3) Delete items from list (4) Add list to the cart	Home screen (user has logged in)	Added the list successfully to the cart.
2. Cart Tasks	(1) Add items to cart (2) Filter items (3) Add notes and substitutions	Home screen (user has logged in)	Added and edited items in the cart successfully.
3. Checkout	(1) Initiate checkout (2) Change pickup location (3) Select pickup time slot (4) Cancel checkout process	Cart screen(user has logged in)	Checkout process completed.

EVALUATION ENVIRONMENT

Location and Setting: Due to the present quarantine norms, all usability evaluation will be performed online, via Zoom or Google Meet. The set up will include the participant, moderator, and observer joining a conference simultaneously. A technical supervisor will be required to join the conference if the user and moderator are not in the same room. Only the moderator and participant (if possible) will turn on their phones' front-facing cameras for the entirety of the evaluation. We hope that the moderator being the only one with their video turned on will simulate the effect of the observers being concealed and independent.

The participant will present their screen whenever they are ready to begin, and the moderator or technical supervisor will record the session. If possible, we will record the participant's face and reactions parallel to their interaction with the app, using their phone's in-built front-facing camera. All team members will maintain their microphone on mute, except for the moderator, and only when they must respond to or communicate with the participant.

EVALUATION PERSONNEL ROLES

For this study, evaluation team members will take turns playing the roles of various personnel, as described below:

Moderator: The moderator will be visible to the participant at all times, guiding the participant during the whole evaluation. They will greet the participant, and explain the purpose of the study and may assist them with any pre-evaluation support. They will also discuss the consent form and non-disclosure agreement with the participant, conduct all questionnaires, and ask any additional questions (as they come up) to better understand a participant's comments or actions during or after a task. If necessary, the moderator may intervene during a task in order to help the participant. Finally, the moderator will debrief the participant and make any closing statements.

In the absence of the technical supervisor, they will also assist the participant with any technical issues independently.

Observer(s): The observer(s) will take note of anything interesting that occurs, keep tracks of the participants' facial reactions and comments, and assign timestamps to all of the above, for ease of reference in future analyses of the recordings. They will remain in contact with the moderator via direct messaging.

In the absence of the technical supervisor, they will also control the recording and set-up of the session.

Technical Supervisor: The technical supervisor will be in charge of the set-up, recording, and any other Zoom/Google Meet related technical support. They will ensure the smooth working of the test, and work to minimize the disruptions caused by the expected awkwardness of conducting the evaluation remotely. They will remain in communication with the moderator via direct messaging.

DATA COLLECTION AND EVALUATION MEASURES

We will collect both quantitative data and qualitative data from the strategies of how our participants tackle the tasks that we designed and a survey comes right after the completion of the tasks. All data that we collect will be in line with our research questions.

Quantitative Data (QT):

- Demographic questions (age, gender, store preference...)
- The number of clicks taken to achieve a particular task.
- The number of clicks additional to the ideal pathways for certain tasks.
- Likert chart ratings on post-test debrief questionnaires, for questions regarding general preferences, intuitiveness, ease of use, etc.
- Time taken to complete tasks like checkout, identifying and removing items from the cart, etc.

Qualitative Data (QL):

- Demographic questions (open-ended questions)
- Participants' comments and expressions while thinking aloud.
- Participants' questions during test sessions.
- Any other relevant participant comments about issues not pre-defined by this test plan
- Screen recordings that display the user's app and in-app actions.
- Any errors discovered during the test.

TABLE 5 : Research Questions vs. Data Collection

Topic	#	Questions	Metric	Data
LIST CREATION				
Ease of Use	1	How long does the user take to add pre-decided items to the list?	QT	• Time On Task
Discoverability	2	How long does it take to find the "Create List" option?	QT	• Time On Task
Learning	3	Can new users discover lists easily?	QL	• Think Aloud Comments • Likert Scale
Ease of Use	4	Is deletion of multiple lists easy?	QL	• Think Aloud Comments • Likert Scale

Topic	#	Questions	Metric	Data
Ease of Use	5	How many clicks does it take to edit/delete the lists?	QT	No. Of Clicks
Intuitiveness	6	How quickly can a user add items in the list to the cart?	QL, QT	- Time On Task - Likert Scale
CART CREATION				
Discoverability	7	Is the cart icon optimally located? (Fitts Law) (Time to find and open a cart)	QL, QT	- Time On Task, - Reactions
Ease of Use	8	Can the users easily filter out items from their cart?	QL, QT	- Time on Task, - Reactions, - Likert Scales
Error Prevention	9	Is the lack of an error prevention mechanism on the filter menu noticed by the users?	QL	Think Aloud Comments
Convenience	10	How can the cart better assist the people with dietary restrictions?	QL	Think Aloud Comments
Convenience	11	Is the frequently used option of deletion optimized?	QL, QT	- Time On Task, - Reactions
Freedom of Choice	12	How easy is it for the users to add special notes and substitutions?	QL,QT	- Think Aloud - Comments - Likert scales
CHECKOUT				
Convenience	13	How fast is the checkout process?	QT	Time On Task
Optimisation	14	Does the checkout process have unnecessary clicks?	QT	- No. Of Clicks - No. of user interface selections
Discoverability	15	Are constraints during the checkout process clearly displayed?	QL, QT	- Time On Task, - Reactions
Ease of Use	16	Can the user quickly change the pickup location and time?	QT	- Time On Task, - No. Of Clicks
Error Recovery	17	Can the user cancel transactions before payment easily?	QT	Time On Task

DELIVERABLES

Final presentation to Professor and the class

- Testing methodology
- Findings
- Recommendations
- Future Research

TIMELINE

Plan of Action	Dates
Pilot Test	April 15 - April 18 ,2020
Deliver pilot test summary	April 19, 2020
Modify the Test plan according to the feedback provided by professor	April 22 to April 24,2020
Deliver Final Test plan to Wegmans	April 23 to April 25, 2020
Usability Testing with 6 participants	April 25 - May 2 ,2020
Final Presentation	May 5, 2020