In-person Usability Testing Report

Komal Dhillon, Hailey Harris, Laurita Mansour, Kenton Hoffman
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Introduction

Recently, Walmart launched an online shop where users can pick out groceries and pick them up at the nearest Walmart or have them delivered. By shopping online, users skip the hassle of walking around the store and having to search for products by shelves. We conducted four interviews using in-person usability tests to analyze how people navigated through the website to complete various tasks. During the interviews we logged the data to determine which tasks the interviewee completed or failed to observe usability issues. After finishing the tasks, we asked follow-up questions to get a sense of where challenges occurred and what parts of the website were easy to use.

Objective

The main objective of our this study is to analyze and find out if the customers found the Walmart website to be rather confusing or easy to use. Through listening to user concerns about design, navigations, and website content, we can offers suggestions to improve customer experience. These findings will help us implement users' recommendations to fix the website with the following research questions.

Research Questions:

How well can users navigate the Walmart website to find products they need and can they successfully purchase them?

Do users feel that shopping for groceries online and picking them up in- store is a better alternative than shopping for groceries in-person?

These questions are important because they help us determine how users view the Walmart website and if its design and usability features are accessible. Getting different user perspectives will determine how often a problem occurs and concerns that we have not seen before the study.

Methods

Data collection

Before selecting our participants, we identified our target audience as University of Michigan students. Participants were recruited by word of mouth, as most were friends or classmates. After participants were recruited, researchers followed the script in Appendix 3 to carry out interviews. Researchers conducted group interviews due to the positions needed for a successful in-person usability test. Each researcher moderated, data logged,

recorded audio, and observed at least once. Interviewees signed a consent form before starting the recording process.

Participants

P01_KDhillon: Female Undergraduate Junior at the University of Michigan studying international studies with a minor in political science, she works for the Rec sports department. She did not know much about the Walmart website and was not a regular shopper at Walmart due to nearest location being 25-30 minutes from users home.

P02_LMansour: Female Undergraduate Senior at the University of Michigan studying Biology. She is not currently employed and is not a regular shopper at Walmart.

P03_KHoffmann: Male Undergraduate Junior at the University of Michigan studying Information Analysis at the School of Information. Currently unemployed but traveling for an internship in the summer. Never used Walmart's website before, but knew about the superstore.

P04_HHarris: Male undergraduate Junior at the University of Michigan studying neuroscience. The nearest Walmart is about 2 miles from his home but usually shops at Meijer. Has used the Walmart website once before to schedule an in-store pickup for a TV.

Data analysis

In order to make an accurate comparison between the four interviews, a data logging form was created. The data logging form standardized users' required tasks, whether or not they were completed successfully, and if participants used an unexpected method for tasks (See Appendix 3). Once interviewers completed all sessions, they rewatched the session that they moderated and took more detailed notes, comparing participants' thoughts, reactions and difficulties as a group. Most participants became frustrated with the same tasks, as observed through the data logging sheets. These comparisons led to the findings and recommendations described below.

Findings and Recommendations

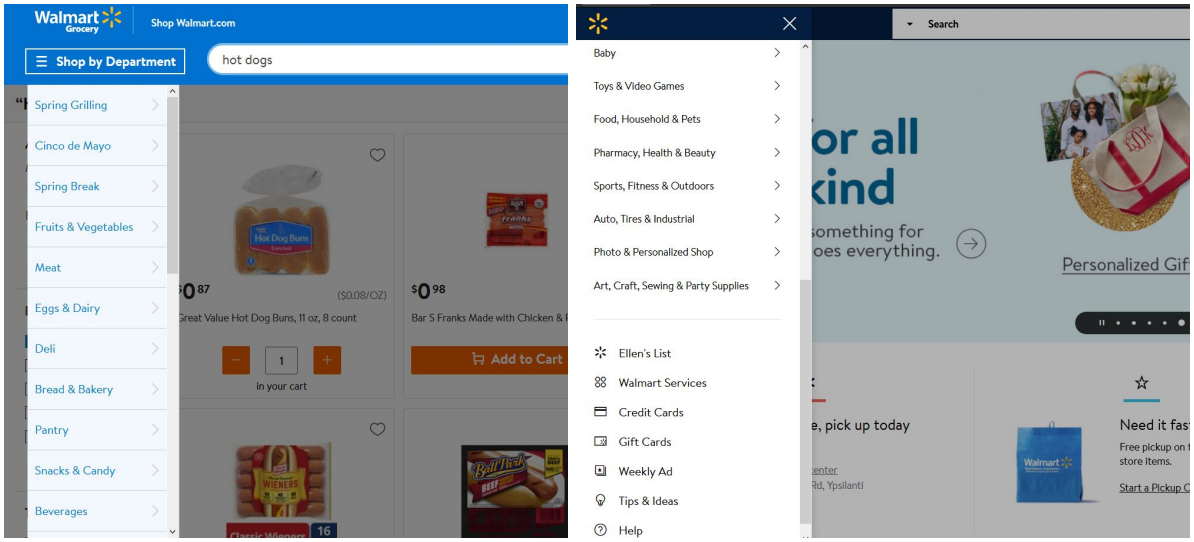
Summary Results

During our study, certain tasks proved more difficult than others, causing users to become frustrated with the usability of the Walmart website. The layout of the website provided the most confusion because there were separate shopping carts and departments for different products. At times, users were able to complete tasks such as increasing a quantity of an item in their cart or removing an item, without difficulty. However, there were specific tasks that users spent a significant amount of time just trying to figure out

how to complete them. We believe that these tasks led users to have a neutral or negative impression of the Walmart website.

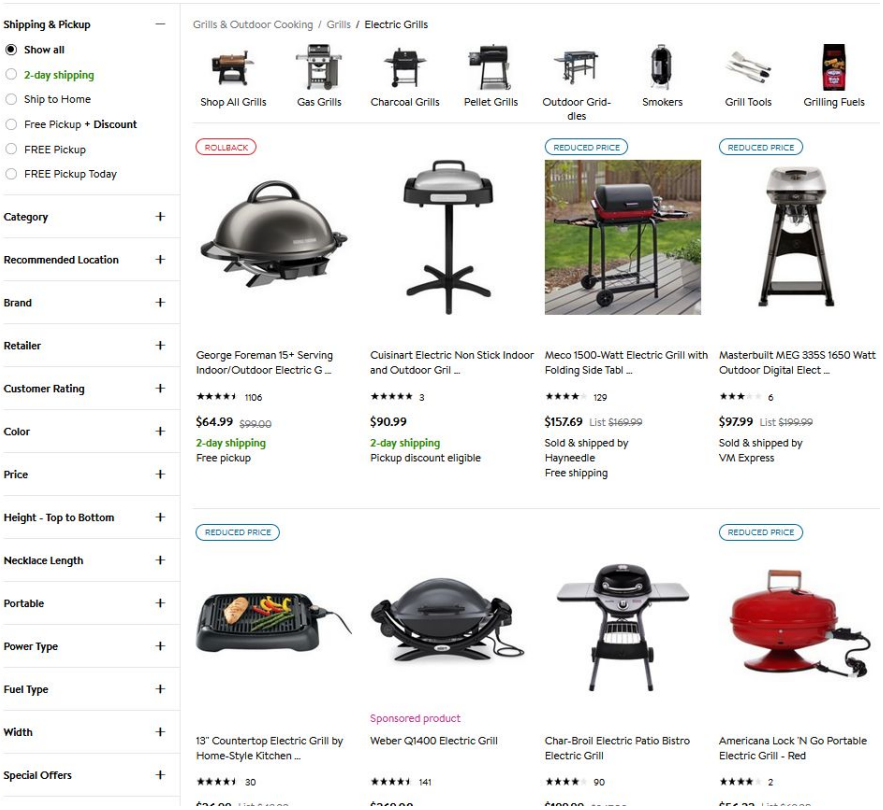
Key Findings

1. Users found the separation of Walmart's Grocery site and Home site to be confusing
    a. Halfway through our test, we required users to check out the "Grocery pick-up and delivery" option, which redirected them to Walmart's Grocery website. This complicated the check-out process because users had created separate shopping carts to finish some of the tasks. Walmart's reasoning behind this split probably revolves around the $30 minimum that they require users to spend before they are eligible for pick-up service.



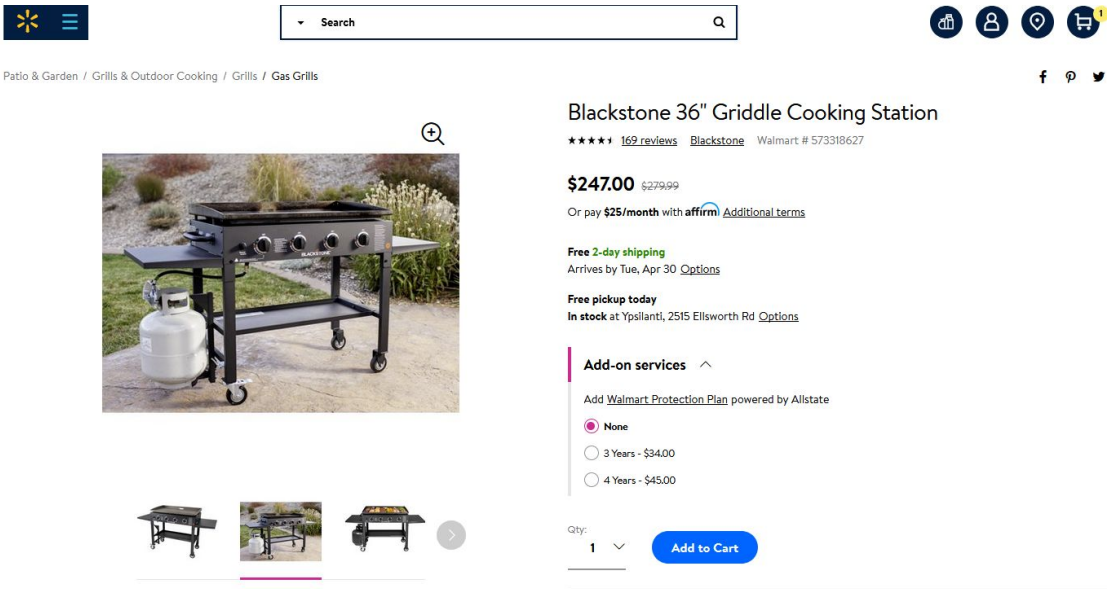
Not only does the Pick-up and Delivery system have its own site (left), the department names differ from the main site as well.

2. Instead of using the filter options to complete the tasks, users typically scrolled through a product page to find the product that matched the criteria.
    a. When searching for a grill in the $200-$300 price range or a $10 spatula, all the users started the task by scrolling through the inventory manually when there was an option to filter prices automatically. Some of our users eventually found this price filter, but not before spending a considerable amount of time hoping to find a grill at this price by chance. Looking at the website, it's apparent that the problem stems from users having to scroll down just to see all the filter options.



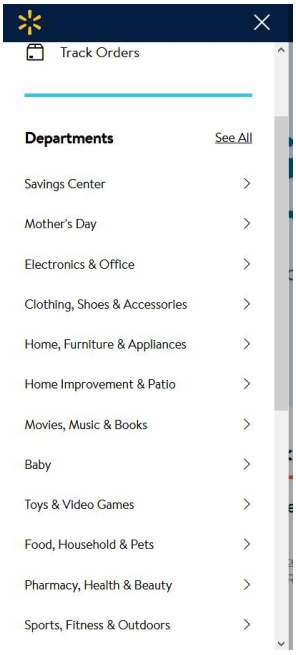
Users have to zoom out to 67% in order to see all the filter options on the left, otherwise they only see the first six when landing on the page.

3. Product descriptions were not always visible, and users generally had trouble finding products that matched *all* of the criteria we specified on the tasks.
    a. For the first task, we wanted to see how well users could review products and find a specific grill. Unfortunately, our participants struggled as they did not always read the full product description and just assumed that they found a matching product. Usually participants forgot to specify electric grills, and were looking through propane and charcoal grills. Additionally, product descriptions were located at the bottom of the product page underneath similar products that other customers viewed, so they were easily missed.



One of our participants found a Blackstone propane-fueled grill within the price range, but did not realize that it is not an electric grill.

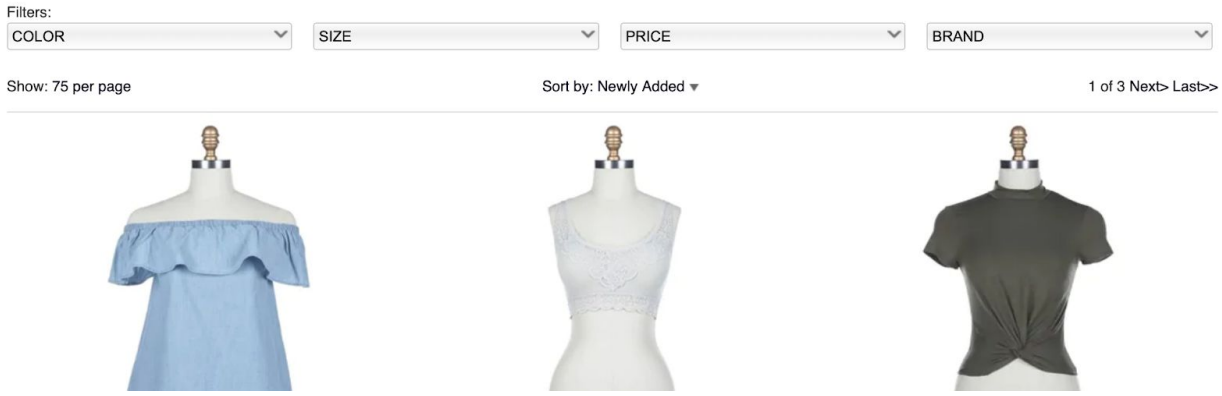
4. Participants found that the drop down bar was not intuitive as department categories were vague and interpretations varied between individuals
    a. A task had our users find an electric grill without the use of the search bar. However, users found it difficult to find the initial drop-down bar to find the categories. Once they found the list, users were confused as to where the product would be located. They began to click on categories that sounded applicable but in fact were not. Out of all the tasks this was one of the longest timed tasks for all participants.



Two of our users initially thought that a grill would be located under "Sports, Fitness & Outdoor", when in reality, it was located under "Home Improvement and Patio"

Recommendations

1. The grocery pick-up website should become more integrated with the regular website.
    a. Not only is the grocery pick-up website difficult to find from the regular Walmart website, but half of the interviewers expressed confusion about having separate carts between the two websites. To clear up this confusion, there should only be one shopping cart, but have the cart divided between pick-up items and shipped items. If the user doesn't have any items in the Pick-up and Delivery section, the system can remove the $30 minimum required so the user can continue checking out. This way, users can keep track of all their items in one place.
2. The names of the departments in the drop-down menu should be re-adjusted to better represent the products within them.
    a. While most users found it very difficult to locate grills by using the dropdown bar, only one came up with suggestions for better categories. This user recommended that categories be organized by where products would be used (i.e. outdoors, in the kitchen, etc.). More research should be done to better define these categories using a card sorting method. Card sorting would not only better organize the categories into groups that make sense to users, but would also help Walmart find names that are more comprehensive and intuitive.
3. Product descriptions should be higher up on the product page, and there should be more bullets points for product highlights.
    a. When users land on a product page, the only options a user typically sees is an add-to-cart button and warranty options for the product. Even if they did scroll down to see product highlights, there were only three bullet points that were typically broad generalizations that could be applied to several other products. Walmart should not only specify product highlights to help users distinguish identical products, but should also consider rearranging the product page so that users see its features right away when viewing the page.
4. Filters should be more prevalent on the page.
    a. Provided that most users did not use the filters, it can be assumed that they just did not see them right away. We recommend that Walmart move their filters to the very top of the search results so that users see the filter options before they even begin scrolling. This shortens the time that users spend looking for items and overall increases satisfaction. It is important to shorten time spent on the website because many participants expressed choosing to shop in-store rather than online since they felt they weren't saving any time online.



An example of filters appearing at the top of the search results which exemplify this recommendation, from DryGoods.com

Conclusion

After having participants use Walmart.com to complete specific tasks, we understood where the website had design issues. In-person usability tests allowed us to watch participants complete tasks and observe which ones appeared difficult. Overall, we found that Walmart should change the way it requires users to search for groceries versus home goods. All items should be added to the same shopping cart to provide an easier way of organization for users and their shopping experience. Furthermore, we found that filter options were not always present during search pages, which required users to spend more time searching for their product. We recommend making the filter results appear at the top of the page so that they are more noticeable. Walmart's website has an abundance of affordable products, so improving the design and usability of the site will help users utilize the site more frequently.

Appendices

Appendix 1. Team Collaboration

Name	**Tasks** *What tasks did you perform as a team member or individually?*	**Contributions** *What parts of final deliverables did you contribute?*
Komal Dhillon	- Met with group to create script - Met with group to do interviews	- Appendices 2,3,4,5,7 - Collaborated on Introduction w/

	for 4 participants - Recruited one Participant - Was a moderator, observer, recorder and data logger at least once for all 4 interviews	Kenton - Data Collection Part of Methods section - 1 Key Finding in findings section - Consent form - Proofread over report and made edits
Hailey Harris	- Met with group to create script - Met with group to do interviews for 4 participants - Recruited one Participant - Was a moderator, observer, recorder and data logger at least once for all 4 interviews	- Data analysis - Recommendations - Data Logging Form - Consent Form
Laurita Mansour	- Met with group to create script - Met with group to do interviews for 4 participants - Recruited one Participant - Was a moderator, observer, recorder and data logger at least once for all 4 interviews	- Conclusion - Summary results - Proofread over report and made edits
Kenton Hoffman	- Met with group to create script - Met with group to do interviews for 4 participants - Recruited one Participant - Was a moderator, observer, recorder and data logger at least once for all 4 interviews	- Collaborated on Introduction w/ Komal - 3 Key Findings - 1 Recommendation - Appendices 6,8, 9 - Reduced word count

Appendix 2: Recruiting criteria and participants information

Demographics:

- Gender: Male/Female
- Age: 18-25 years old
- Education: In college

Geographics:

- At the University of Michigan, Ann Arbor

Psychographics:

- Average web user
- Generally not tech-averse

Behaviors:

- Users who regularly pick up items from grocery stores
- Users who are comfortable online shopping

Appendix 3: Usability Test Plan

Introduction to Test

Hello, thank you for taking the time to meet with me today for my SI 422 Project. My name is _____, I am a student at the University of Michigan. Before we start I want to give you a little background of what we are going to be doing today. We will be recording you testing out the Walmart website. This will help us find out if the website has any usability or design issues. We will be giving you specific tasks that will have you navigate through the website and we would like you to speak aloud while doing so. If this sounds okay to you, we ask if you could sign this form allowing us to use this data in our class as well as allowing us to record you doing them. All participant information regarding your identity will remain confidential. Thank you.

Pre-test questionnaire

1) How old are you?
2) Are you a student at the University of Michigan?
3) Are you currently employed? If so, where?
4) How much money do you typically spend each week on non-essential items?
5) Have you shopped at Walmart before?
6) What kind of items do you typically purchase from Walmart or a similar superstore?
7) In your hometown, how far was the nearest Walmart?
8) Have you ever purchased an item from Walmart online?
9) Have you ever used Walmart's in-store pick-up option?
10) What are your general impressions of Walmart?

User Tasks

- **Objective:** You have invited some friends over for a barbecue this weekend in your new home. You realize that you still have some items that you need to buy before you are ready to host them. Using the Walmart.com website, you are going to gather items and schedule to pick them up in-store. As you are asked to conduct these tasks, please think through them out loud so that we can understand your thought process.

1) Add an electric grill to your shopping cart between $200 - $300 and has 1 burner. Please do this without using the search bar.
2) Add one spatula to your shopping cart that is stainless steel and less than $10. Please use the search bar to find the spatulas.
3) Your neighbor offers to let you borrow their grill. Remove the electric grill from your cart.
4) Add hotdogs and buns to your shopping cart. You will need to locate the grocery pickup part of the website. Feel free to use the search bar once you are there.

5) Add two containers of potato salad to your cart, using the grocery pickup part of the website. Please do not use the search bar.
6) You realize you need more hot dogs than what you originally planned for. Go to your cart and increase the quantity of both the hot dogs and buns by one.
7) Begin checking out and select store pickup (not shipping). You will need to exit the grocery pick-up side to get back to your normal cart. Stop once you have chosen the pick-up store location nearest to you.

Post Test questionnaire

1) What were your thoughts while navigating through the Walmart website?
2) What was your approach to finding a specific product?
3) What aspects of the site were the most intuitive?
4) What aspects of the site were confusing?
5) Do you think shopping for groceries online is faster than going to the store and shopping in-person?
6) Would you use Walmart's online shopping over in-store shopping in the future?

DATA LOGGING FORM

S = Success | F = Failure

Add grill to cart - Start Time:

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Find Home Improvement and Patio category				
Find Grills & Outdoor Cooking category				
Click electric grills				
Filter prices between $200-$300				
Click on grill and add click "add to cart"				

Add spatula - Start Time:

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Search “spatula” in the search bar				
Filter by “stainless steel” material				
Find spatula under $10 and click on it				
Add to cart				

Remove grill from cart - Start Time:

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Click on cart icon at top right of page				
Click “remove” under grill				

Add hot dogs and buns - Start Time:

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Find free grocery pickup section of website				

Search “hot dogs” in search bar				
Press “add to cart” once hot dogs are located				
On that same page, press “add to cart” for hot dog buns				

Add 2 potato salads to cart - Start Time:

	Data Logger		**Observer**	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Find search by department and locate the “Spring Grilling” category, then click on “sides”				
Click “potato salads” on left filter section				
Change quantity to 2 and add to cart				

Increase hot dogs/buns - Start Time:

	Data Logger		**Observer**	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
On sidebar, click “more details” button for hot dogs		-		

Click the + to increase quantity by 1				
On sidebar, click “more details” button for hot dogs	-	-		
Click the + to increase quantity by 1				

Set location - Start Time:

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Exit the grocery pickup site and get back to normal Walmart site				
Find cart and click “check out”				
Check out as a guest				
Select “pick up free” and choose the location nearest participant				

Appendix 4: Usability test recordings.

Test	Google drive links of the test recordings

Usability test 1	https://drive.google.com/file/d/1LsjN9gNjP1RAnLRF_SGfNpPC2nZmj1ni/view?usp=sharing
Usability test 2	https://drive.google.com/file/d/1F1JMGnDvxUJl7nzEErr0UCD2otiJgKdf/view?usp=sharing
Usability test 3	https://drive.google.com/file/d/1TZbw-tYRXot0uFS13hrH-ORo_ZG_u_ly/view?usp=sharing
Usability test 4	https://drive.google.com/file/d/1zkVquo_o87zgkCANUzcL5Zt6Si9qk6mH/view?usp=sharing

Appendix 5: Data Logging forms of all four 4 tests.

DATA LOGGING - User P01

S = Success | F = Failure

Add grill to cart - Start Time: 11.57:10 pm

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Find Home Improvement and Patio category	S	1:13	D	Chose “sports and outdoors” instead of “Home improvement and patio”
Find Grills & Outdoor Cooking category	F	-	D	Did not click on the desired category
Click electric grills	F	-	D	Did not click on the desired category
Filter prices between $200-$300	S	0:10		Used the side filter bar as expected

Click on grill and add click “add to cart”	S	0:45	P	Added to cart easily

Add spatula - Start Time: 11.59:45 am

	Data Logger		**Observer**	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Search “spatula” in the search bar	S	:10		Correctly searched Spatula
Filter by “stainless steel” material	S	:05		Found first stainless steel spatula
Find spatula under $10 and click on it	S	:4		Found first stainless steel spatula without filtering
Add to cart	S	:2		Added to cart easily

Remove grill from cart - Start Time: 12.00:10 pm

	Data Logger		**Observer**	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Click on cart icon at top right of page	S	0:25	D	Cart was present on the main page without clicking on anything
Click “remove” under grill	S	0:15		

Add hot dogs and buns - Start Time: 12.01:00 pm

	Data Logger		**Observer**	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**

Find free grocery pickup section of website	S	2:39	A	Needed assistance
Search “hot dogs” in search bar	S	0:05		Used search bar as expected
Press “add to cart” once hot dogs are located	S	:03		Easily added to cart
On that same page, press “add to cart” for hot dog buns	S	:02		Easily added to cart

Add 2 potato salads to cart - Start Time: 12.04:59 pm

	Data Logger		**Observer**	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Find search by department and locate the “Spring Grilling” category, then click on “sides”	S	1:38	A	Had difficulty with finding correct category for Potato salad, needed assistance
Click “potato salads” on left filter section	S	0:04		Found easily once directed to correct spot
Change quantity to 2 and add to cart	S	0:02		Easily added

Increase hot dogs/buns - Start Time: 12.07:13 pm

	Data Logger		**Observer**	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**

On sidebar, click “more details” button for hot dogs	-	-	D	Cart was present on side of screen so there was no need to click on “more details”
Click the + to increase quantity by 1	S	0:04		Cart was always located on side of screen, easily added 1
On sidebar, click “more details” button for hot dogs	-	-		Cart was present on side of screen so there was no need to click on “more details”
Click the + to increase quantity by 1	S	0:04		Cart was always located on side of screen

Set location - Start Time: 12.07:04 pm

	Data Logger		**Observer**	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Exit the grocery pickup site and get back to normal Walmart site	S	0:04		Clicked on Walmart logo to go back
Find cart and click “check out”	S	0:01		Easily located checkout
Check out as a guest	S	0:01		Easily checked out as guest
Select “pick up free” and choose the location nearest participant	-	-	X, N, B	Error with our study - item not available for pick up/ Grocery items did not transfer over to new cart when hitting back

DATA LOGGING - User P02

S = Success | F = Failure

Add grill to cart - Start Time: 12.23:30 pm

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Find Home Improvement and Patio category	S	1:10	M	Initially was going to click on grills on the featured section of the home page, but decided to check menu options first.
Find Grills & Outdoor Cooking category	S	0:10	N	Can't buy best seller due to price constraints
Click electric grills			X	Didn't filter for electric grill, just searched through all of them.
Filter prices between $200-$300	S	1:10	V	Didn't even realize there was a price filter option on the side
Click on grill and add click "add to cart"	S	1:22	G	Forgot to add grill to shopping cart

Add spatula - Start Time: 12.26:50 pm

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Search "spatula" in the search bar	S	0:13		
Filter by "stainless steel" material			D	Searched for steel spatula instead, skipping this part
Find spatula under	S	0:44		

$10 and click on it				
Add to cart	S	0:15	M	Got a two-in-one bundle

Remove grill from cart - Start Time: 12:28:55 pm

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Click on cart icon at top right of page	S	0:45	M	Forgot to add grill to cart the first time, went back and added one.
Click “remove” under grill	S	0:10		

Add hot dogs and buns - Start Time: 12.29:14 pm

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Find free grocery pickup section of website	S	0:30		
Search “hot dogs” in search bar	S	0:07		
Press “add to cart” once hot dogs are located	S	0:14	G	Searched for hot dog buns first before hot dogs
On that same page, press “add to cart” for hot dog buns	S	0:15	C	Didn’t recognize any of the brands.

Add 2 potato salads to cart - Start Time: 12:30:24 pm

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Find search by department and locate the “Spring Grilling” category, then click on “sides”	S	2:30	A, F	Think potato salad is in deli. Had no idea where to go. Deep sigh, visibly frustrated.
Click “potato salads” on left filter section	S	0:25	D	Didn’t filter for potato salads, just looked through all of the “sides”
Change quantity to 2 and add to cart	S	0:05		

Increase hot dogs/buns - Start Time: 12:33:44 pm

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
On sidebar, click “more details” button for hot dogs	S	0:05		
Click the + to increase quantity by 1	S	0:03		
On sidebar, click “more details” button for hot dog bun	S	0:04		
Click the + to increase quantity by 1	S	0:03		

Set location - Start Time: 12:34:03 pm

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Exit the grocery pickup site and get back to normal Walmart site	s	0:15		
Find cart and click “check out”	s	0:05		
Check out as a guest	s	0:22		
Select “pick up free” and choose the location nearest participant	F	0:18		Couldn’t progress. Spatula in cart was only available for shipping.

DATA LOGGING - User P03

S = Success | F = Failure

Add grill to cart - Start Time: 12:51:00 pm

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Find Home Improvement and Patio category	S	12:56	D,H,F	Went to the grocery pickup side of the website rather than staying on Walmart.com website. Loud sighs. Clearly getting frustrated

Find Grills & Outdoor Cooking category	S	12:58:25	X,F	Very difficult to locate, thought he was in the right category but his mouse had scrolled to another so he was confused
Click electric grills	S	12:58:50		
Filter prices between $200-$300	F			Just scrolled through grills without filtering
Click on grill and add click “add to cart”	S	1:00:30		

Add spatula - Start Time: 01:01:00 pm

	Data Logger		**Observer**	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Search “spatula” in the search bar	S		D	Searched “stainless steel spatula”
Filter by “stainless steel” material	F		D	Didn’t need to filter because already searched
Find spatula under $10 and click on it	S			
Add to cart	S			

Remove grill from cart - Start Time: 1:01:55 pm

	Data Logger		**Observer**	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Click on cart icon at top right of page	S	1:02:10		

Click “remove” under grill	S	1:02:30		

Add hot dogs and buns - Start Time: 1:02:41 pm

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Find free grocery pickup section of website	S	1:02:50		
Search “hot dogs” in search bar	F	1:03:15	D	Added buns instead
Press “add to cart” once hot dogs are located	S	1:03:55		
On that same page, press “add to cart” for hot dog buns	F	1:04:20	D	Added hot dogs instead

Add 2 potato salads to cart - Start Time: 1:04:30 pm

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Find search by department and locate the “Spring Grilling” category, then click on “sides”	F	1:06:19	H	Needed assistance in finding or would have given up
Click “potato salads” on left filter section	S	1:06:23		

Change quantity to 2 and add to cart	S	1:06:30		

Increase hot dogs/buns - Start Time: 1:06:55 pm

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
On sidebar, click “more details” button for hot dogs	S			
Click the + to increase quantity by 1	S			
On sidebar, click “more details” button for hot dogs	S			
Click the + to increase quantity by 1	S			

Set location - Start Time: 1:07:30 pm

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Exit the grocery pickup site and get back to normal Walmart site	S	1:07:45		
Find cart and click “check out”	S	1:08:05		

Check out as a guest	S	1:08:10		
Select “pick up free” and choose the location nearest participant	F	1:08:20		There was no option to pick up in store because the spatula that was chosen could only be shipped

DATA LOGGING - User P04

S = Success | F = Failure

Add grill to cart - Start Time: 01.20 pm

	Data Logger		**Observer**	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Find Home Improvement and Patio category	S	1.21	n	
Find Grills & Outdoor Cooking category	S	1.22	f	
Click electric grills	s	1.22	m	
Filter prices between $200-$300	s	1.22	m	
Click on grill and add click “add to cart”	s	1.22	m	

Add spatula - Start Time: 1.22 pm

	Data Logger		**Observer**	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**

Search “spatula” in the search bar	s	1.22	M	
Filter by “stainless steel” material	s	1.22	F	
Find spatula under $10 and click on it	s s	1.22 1.22	V M	
Add to cart	s	1.22	M	

Remove grill from cart - Start Time: 1.23 pm

	Data Logger		**Observer**	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Click on cart icon at top right of page	s	1.23	C	Found it Easily
Click “remove” under grill	s	1.23	M	

Add hot dogs and buns - Start Time: 1.24 pm

	Data Logger		**Observer**	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Find free grocery pickup section of website	F	1.26	A	(not intuitive) need assistance did not know where to go
Search “hot dogs” in search bar	S	1.26	F	
Press “add to cart” once hot dogs are located	S	1.26	M	

On that same page, press “add to cart” for hot dog buns	S	1.26	M	

Add 2 potato salads to cart - Start Time: 1.26pm

	Data Logger		**Observer**	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Find search by department and locate the “Spring Grilling” category, then click on “sides”	S	1.27	C	
Click “potato salads” on left filter section	s	1.27	C	
Change quantity to 2 and add to cart	s	1.27	A	

Increase hot dogs/buns - Start Time: 1.27pm

	Data Logger		**Observer**	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
On sidebar, click “more details” button for hot dogs	s	1.27	F	
Click the + to increase quantity by 1	s	1.27	M	
On sidebar, click “more details” button for hot dogs	s	1.27	M	

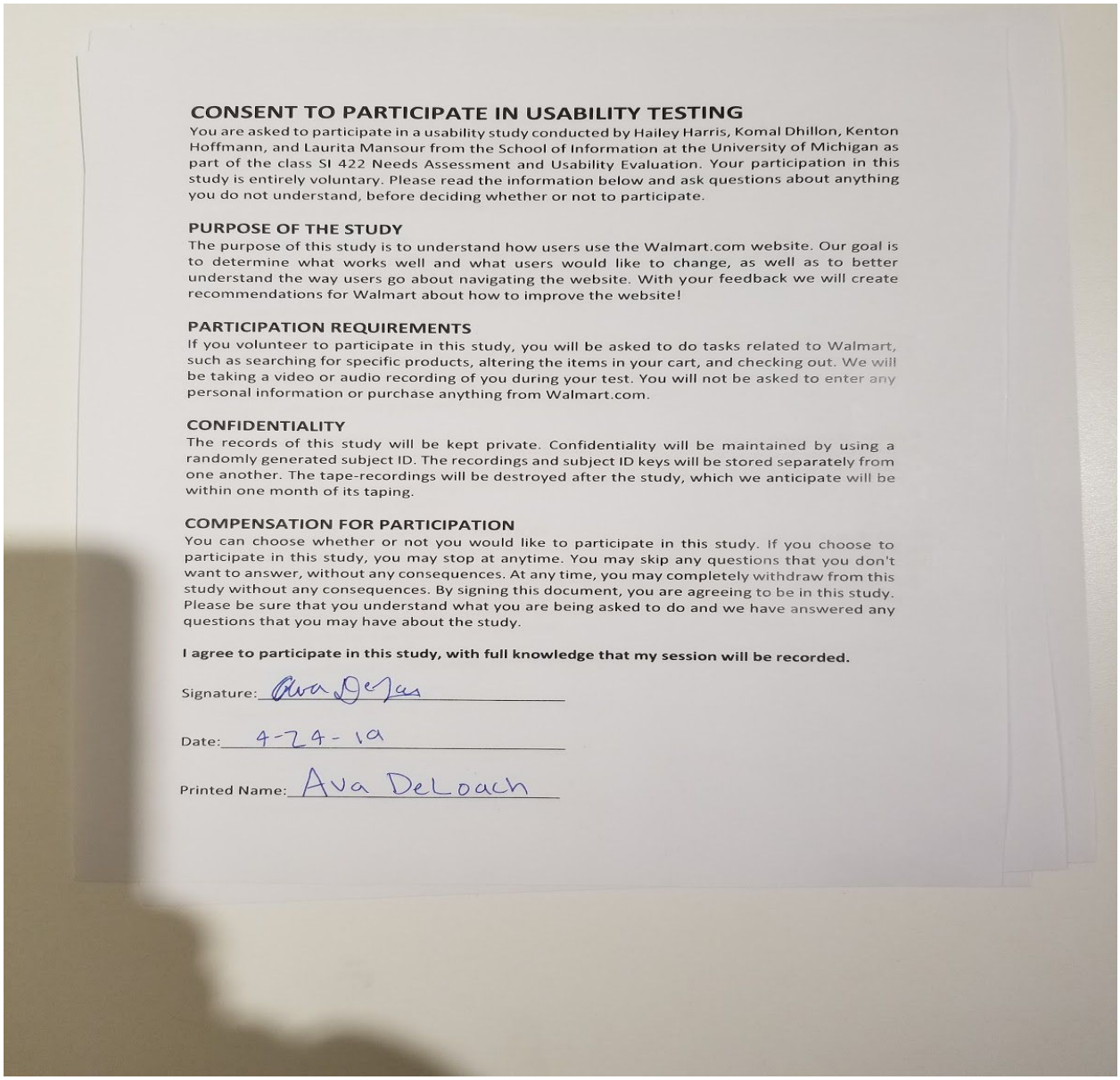
Click the + to increase quantity by 1	s	1.27	M	

Set location - Start Time: 1:28 pm

	Data Logger		Observer	
Subtask	**S/F Code**	**Time (task completed)**	**Data Code**	**Notes**
Exit the grocery pickup site and get back to normal Walmart site	S	1:28	N	
Find cart and click “check out”	S	1:28	Q	
Check out as a guest	S	1:29		
Select “pick up free” and choose the location nearest participant	F	1:29	N	Was not way to pick up in store thought the 2 cart thing was pretty confusing

Appendix 6: Consent forms from each of the test Participants.

Participant 1:



CONSENT TO PARTICIPATE IN USABILITY TESTING

You are asked to participate in a usability study conducted by Hailey Harris, Komal Dhillon, Kenton Hoffmann, and Laurita Mansour from the School of Information at the University of Michigan as part of the class SI 422 Needs Assessment and Usability Evaluation. Your participation in this study is entirely voluntary. Please read the information below and ask questions about anything you do not understand, before deciding whether or not to participate.

PURPOSE OF THE STUDY

The purpose of this study is to understand how users use the Walmart.com website. Our goal is to determine what works well and what users would like to change, as well as to better understand the way users go about navigating the website. With your feedback we will create recommendations for Walmart about how to improve the website!

PARTICIPATION REQUIREMENTS

If you volunteer to participate in this study, you will be asked to do tasks related to Walmart, such as searching for specific products, altering the items in your cart, and checking out. We will be taking a video or audio recording of you during your test. You will not be asked to enter any personal information or purchase anything from Walmart.com.

CONFIDENTIALITY

The records of this study will be kept private. Confidentiality will be maintained by using a randomly generated subject ID. The recordings and subject ID keys will be stored separately from one another. The tape-recordings will be destroyed after the study, which we anticipate will be within one month of its taping.

COMPENSATION FOR PARTICIPATION

You can choose whether or not you would like to participate in this study. If you choose to participate in this study, you may stop at anytime. You may skip any questions that you don't want to answer, without any consequences. At any time, you may completely withdraw from this study without any consequences. By signing this document, you are agreeing to be in this study. Please be sure that you understand what you are being asked to do and we have answered any questions that you may have about the study.

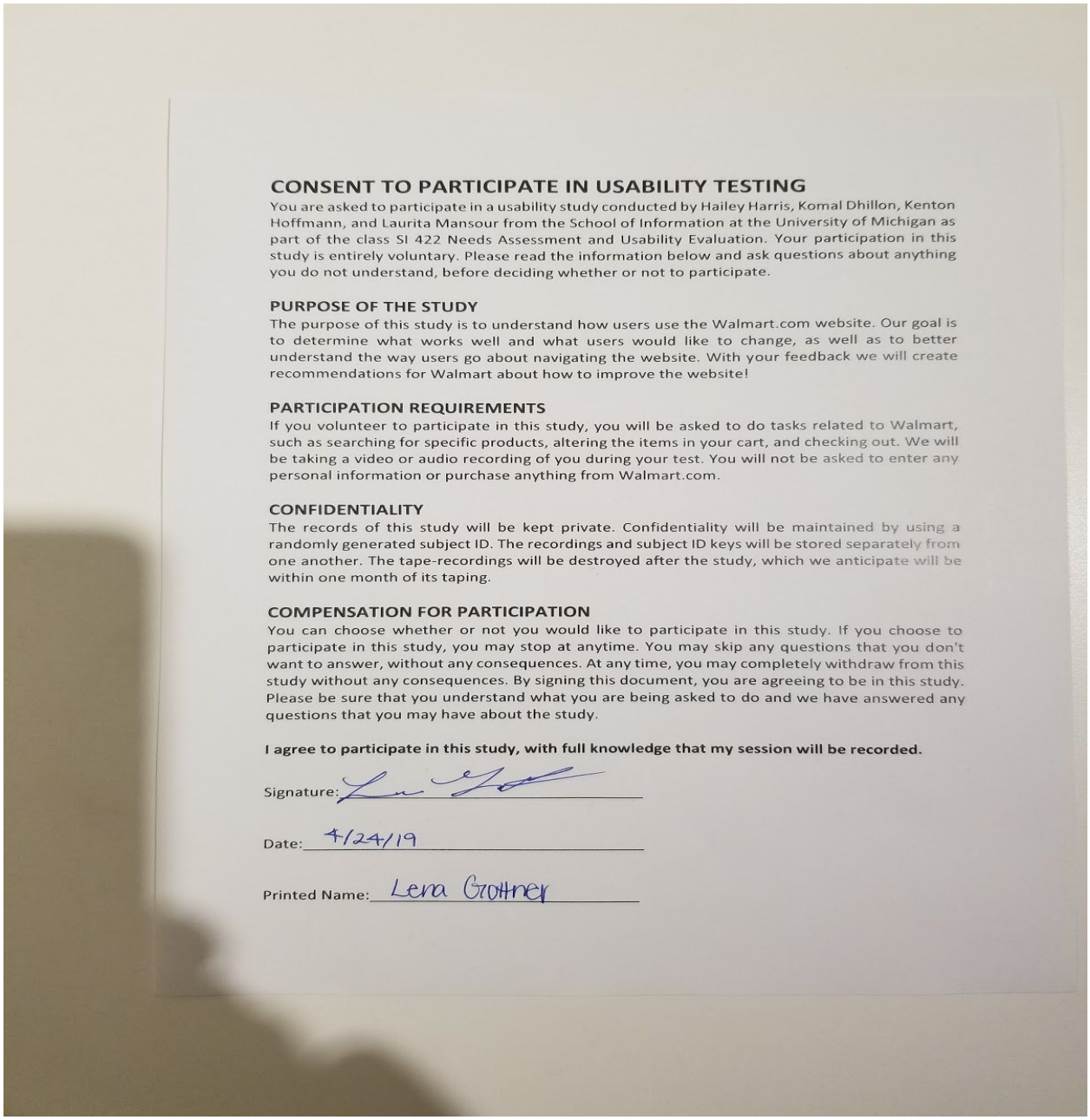
I agree to participate in this study, with full knowledge that my session will be recorded.

Signature: Ava DeLoach

Date: 4-24-19

Printed Name: Ava DeLoach

Participant 2:



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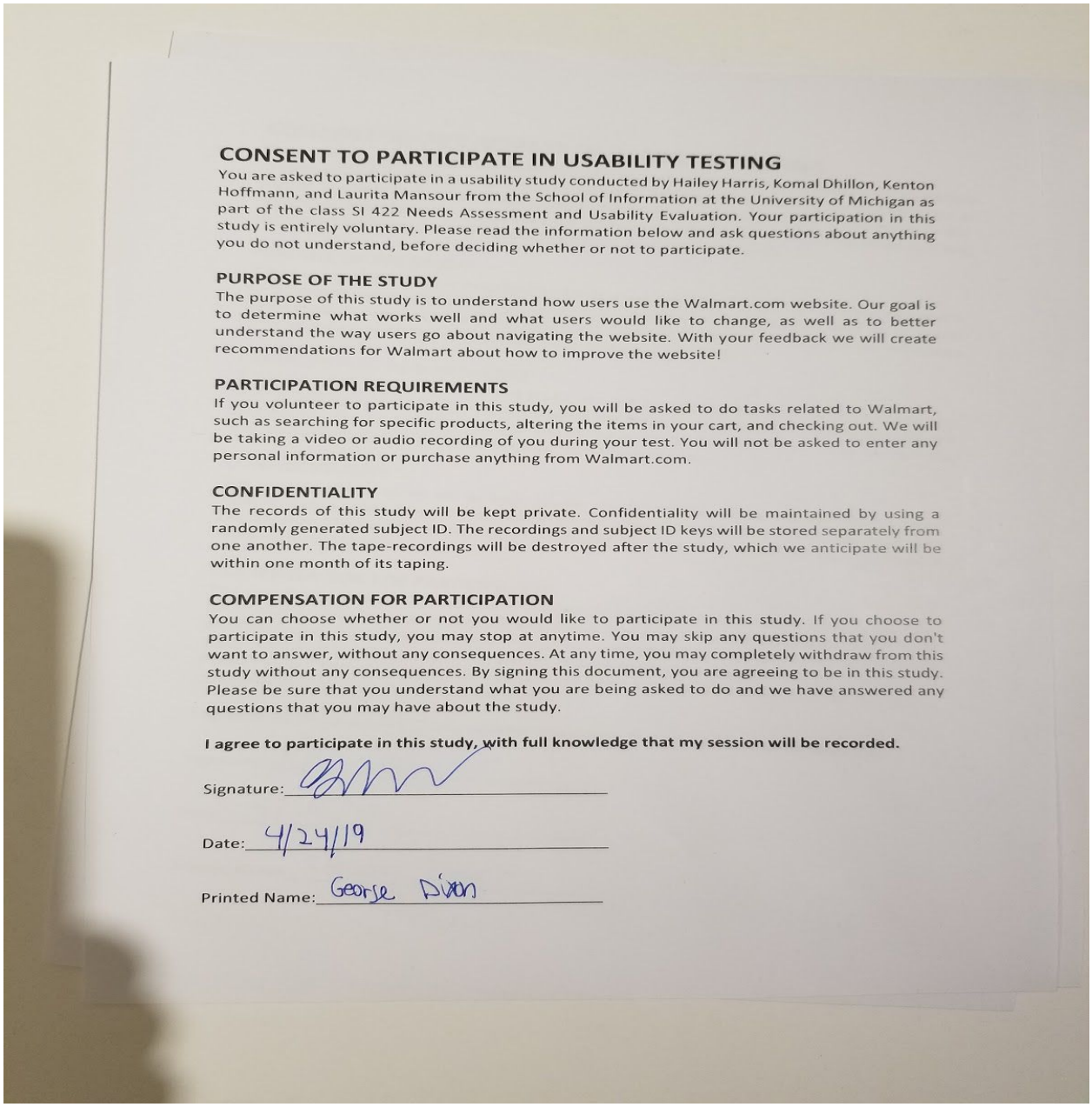
I agree to participate in this study, with full knowledge that my session will be recorded.

Signature: Lera Grothner

Date: 4/24/19

Printed Name: Lera Grothner

Participant 3:



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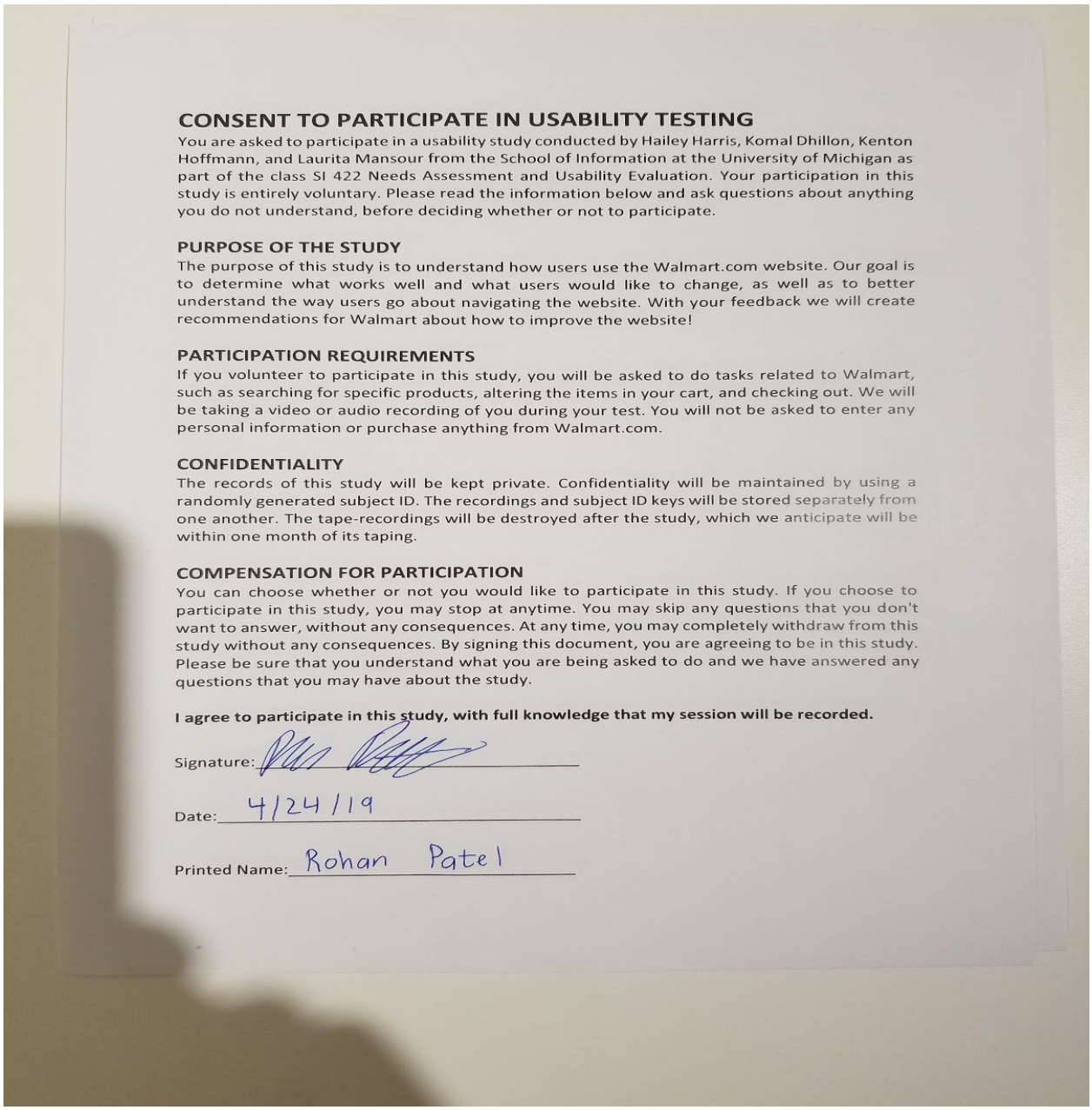
I agree to participate in this study, with full knowledge that my session will be recorded.

Signature: _____

Date: 4/24/19

Printed Name: George Dixon

Participant 4:



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I agree to participate in this study, with full knowledge that my session will be recorded.

Signature: _____

Date: 4/24/19

Printed Name: Rohan Patel

Appendix 7: Table defining the team member role for each of the usability tests.

Test	Moderator	Audio/ Video Operator	Data Logger	Observer
Usability test 1	Komal Dhillon	Hailey Harris	Laurita Mansour	Kenton Hoffman
Usability test 2	Laurita Mansour	Komal Dhillon	Kenton Hoffman	Hailey Harris
Usability test 3	Kenton Hoffman	Laurita Mansour	Hailey Harris	Komal Dhillon
Usability test 4	Hailey Harris	Kenton Hoffman	Komal Dhillon	Laurita Mansour

Appendix 8: Pilot Test observation and changes you did to your test plan.

Pilot Test	
Observations	When searching for hot dogs for pick-up, user didn't realize that he had to go to the Walmart Grocery website, so when they tried to add hot dogs on the regular site, he couldn't.
Changes	Specified in the task that users had to go to the grocery pickup section of the site when adding hot dogs to their cart.
Observations	User couldn't check out in the grocery pick-up website because his cart value was under $30.
Changes	Specified in the checkout task that the user had to go back to the regular site to complete this task.

Appendix 9: Summary of the post-test questionnaire .

Test	Post-test questionnaire Summary
Usability test 1	Felt that finding products without using the search bar was difficult. Thought that the departments should be more specific so that it's easier to look for products. The participant would take advantage of using the site if they needed to buy a specific product. Thought overall that the tasks were easy but the site made it more difficult.

Usability test 2	Felt that the checkout process was pretty easy. List of departments were confusing, not being able to use the search bar made it tricky not knowing what department a product would be in. Thought departments could be more specific or better categorized. Think shopping online could be faster since you don't have to move around to find groceries like in-store shopping. Would consider online shopping in the future if she knew what she needed beforehand.
Usability test 3	Felt that the drop down menus where not helpful at all that they were a tad bit confusing especially the names of the categories. You would think that a certain item is in a certain category but you are completely wrong. The user felt like the search bar is the greatest form of finding things for the website because it is faster! The user would consider using the website in the future if they had a really good deal!
Usability test 4	Felt that menus were "good enough". Found it difficult to find the online grocery part of the website. Was confused by the separate carts between the grocery and the items. Didn't think it made sense for the grills under the section they were and recommended to organize the sections by where the product would be used. Would still prefer shopping in store versus online.