

Michigan State University

Assignment 4 - Usability Study Analysis and Report

Mitchell Schuldinger

Understanding Human Centered Technology – MI 350

Dr. Heerin Lee

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Introduction:

Our team conducted a usability study for our class, MI 350. This document serves as a study plan document that compiles all of the materials and information we used for our user study. We tested the consumer goods delivery service app, GoPuff. GoPuff focuses most on snacks and drinks, but it also does have a smaller selection of groceries, household supplies, alcohol, and frozen meals. One of the biggest users of this app are college students - many areas in which GoPuff operates are in college towns, and GoPuff ambassadors are commonly seen on college campuses handing out GoPuff information cards and coupons (*Business Wire*, 2021). College students are a great audience for apps such as GoPuff since many of them are familiar with delivery service apps, and it is an easy way for them to get food and snack items. Their motivation in using this app is to have various food and consumer goods delivered to them with just the use of an app, which is easier than going to a grocery store themselves. Their goal from this app is to have an effortless experience in ordering items seamlessly.

Purpose and Goals:

This usability study focuses on the ease of use of the interface of the GoPuff app. The goal of this study is to find out what, if any, parts of the app interface are hard to use or unclear to the user. Our questions and tasks will reflect this goal by asking users to navigate through various specific scenarios. Our focus and goal was chosen to investigate any pain points the app may have so it can be improved to better compete with other delivery services in the market. Our objectives we plan to achieve by conducting this usability study is to reflect this reason; we plan to have a list of interface problems and critical incidents of the GoPuff app from our studies.

Method and Participants:

We conducted a series of usability studies on each of our participants. The participants were given a set of tasks they were to complete on the GoPuff interface while saying their thoughts out loud for us to gain insights. Each session began by covering the basic background of the GoPuff application. The moderator will go over what this study is for, how to properly use the think aloud method, and lastly they will hand the participants the list of tasks. These usability studies were conducted via Zoom or in-person.

The participants for this usability study were other college students at Michigan State University. Our target users were people who were familiar with other delivery services like GoPuff, such as Doordash, Uber Eats, and Instacart. Each potential participant was asked if they were familiar with any delivery service apps before they were recruited. Recruitment of our participants was through word of mouth. We had six participants for our usability study, all ranging in age from 19-21.

Findings and Recommendations:

Findings (grouped by tasks):

- Task 1: Without use of the search bar, find a Lay's product that you like and put it in your cart
 - All participants were able to swiftly navigate through the interface and found their favorite Lay's chip product.
 - Participants either scrolled through the homepage to locate the snack section or they utilized the filter dropdown to navigate to the snack option.
- Task 2: Without using the search bar, use the filter menu to find a dog toy and put it in your cart
 - Participant was not able to select the pet filter because the icon for the bag in the navigation bar was covering it.
 - Some participants were not able to find the filter menu right away.
 - When looking through the dog items, participant was not able select the “see more” button as it was covered by the navigation bar
 - The dog toys and treats are mixed within each other and caused issues when participant was trying to complete the task.
- Task 3: Learn more about the rewards program
 - Many participants mixed up the “rewards” and “referral” links.
 - There was no clear description to find the rewards program
 - Most users did not take the most direct route to get to the rewards screen
 - The sidebar menu displays how many points a participant has, but no indication to learn more about the program.
- Task 4: Share your referral link
 - Many participants mixed up the “rewards” and “referral” links.

- Participants were quickly able to notice the rewards option in the navbar
- Participant were able to quickly complete this task

Recommendations:

A few main problems that our users faced was not having clear distinction between terms and not having a clear path to a few solutions. The main problems were the confusion between the “rewards” and “referral” terms/links. Users confused the two and we need to implement a way to clearly differentiate these two terms and paths to these links. Our recommendation is adding a “rewards” section/button on the navigation and sidebar. The “referral” section is already included and this could probably be why a user gets confused because they only see referral and not rewards. Another major recommendation is to also add a learn more link to the “rewards” section/button as well when this has been implemented. Small UI fixes will also need to be cleaned up and fixed as users had buttons covering up filters specifically in our second task. Making sure buttons are placed correctly with no bugs will solve this problem and also having clear sectioning with items (specifically dog treats or dog toys) is very helpful for the user and will also need to be implemented. Overall the apps performance is very good, a few changes and minor tweaks are recommended to help the user experience.

Appendices:

Consent form:

Usability Study Background

Thank you for taking the time to consider our study. We are asking you to participate in a usability study to help us evaluate GoPuff, as part of our coursework for MI 350, Evaluating Human Centered Technology. The purpose of this consent form is to give you the information you will need to help you decide whether to participate. Feel free to ask any questions of us that

you have before or during the study session. The usability study session should take about 10-20 minutes to complete.

In the usability study session, we will ask you to do various tasks in the app to evaluate the ease of use of the app's interface.

We will record audio of the study session, for later analysis. We will also take notes about your on-screen actions. Any information we collect will remain confidential and will be disclosed only to the other students in class and to our professor, Dr. Heerin Lee. No personally identifying information will be associated with any of the information we collect from you. Your information will be given an anonymous ID number, and we will only use that ID number and not your name to refer to your information.

You have the right to stop participating at any time. Your decision regarding participation will have no adverse consequences. If you wish to stop participating, please let us know any time throughout the study session.

Although you may not benefit directly from participation in the study, others may ultimately benefit from the knowledge we obtain. Your participation in this study will aid our understanding of how people use GoPuff, and may help us to design products and systems that are more useful and usable for people.

Participant Consent

I understand that the information collected during this study session is for research and teaching purposes only and that my name and image will not be used for any other purpose.

I understand that participation in this usability study is voluntary and I agree to immediately raise any concerns or areas of discomfort during the session with the study administrator.

Please sign below to indicate that you have read and you understand the information on this form and that any questions you might have about the session have been answered.

Participant:

Signature _____ Date _____

Moderator:

Signature _____ Date _____

Permission to Record

I give my permission for video and audio recording of this study session by students in MI 350, Evaluating Human Centered Technology, and Dr. Heerin Lee. I relinquish any rights to the recording and understand the recording may be copied and used by students in MI 350, Evaluating Human Centered Technology, and Dr. Heerin Lee, without further permission.

_____yes _____no (Please initial here _____)

Usability study script:

Introduction

In this study, I'll be asking you to complete several tasks designed to help us evaluate the GoPuff interface. The most important thing for you to remember is that this is not a test – there is no right or wrong way to complete the tasks. The point of the study is to learn about the ease of use

of this app, and your honest responses will be extremely useful in helping us figure out how to improve GoPuff's interface in the future.

We're looking for places where the GoPuff interface should be changed; so if it seems like something doesn't make sense please don't feel bad. That is exactly the kind of information we are looking for. Also, participation in this study is completely voluntary. If you become uncomfortable in any way at any point in the study, feel free to stop at any time.

In this session, I'm interested in two things: how you go about completing the tasks, and what you think about as you complete the tasks. You'll be asked to "think aloud" – and I'll teach you how to do this and give you a chance to practice in just a second. It's very easy to do, and we get a lot of good information from these kinds of studies about where people run into problems with the GoPuff interface. It's basically like you're talking to yourself, but loud enough for other people to hear.

Explain Thinking Aloud

Now, when I say "think aloud", what I mean is that you should say whatever is on your mind while you complete the tasks. I want you to tell me EVERYTHING that you are thinking from the time you begin a task until you finish it. I would like you to talk aloud as CONTINUOUSLY as possible – even if the only thing you are thinking is "I'm drawing a blank."

I want to hear about what you're looking for or what you're trying to do, even if it seems obvious. If you hesitate or are indecisive, describe what's causing your hesitation. Don't try to plan out what to say or try to explain to me what you are thinking. Don't hold back hunches, guesses, wild ideas, or negative comments – these things will all help us a lot. Just try to act as if you are alone, speaking to yourself – only a little louder.

You can also ask me questions, but I can't explain anything about the GoPuff interface to you right now. If you do have questions, go ahead and say them out loud anyway so we can learn about the kinds of questions and problems people have, and I'll answer your questions at the end of the session. And don't worry, if you forget to "think aloud" I will jump in and remind you to keep talking.

Let me demonstrate thinking aloud for you as I try to multiply $5 * 5$ in my head. [Illustrate thinking aloud for the participant.]

Now, you try thinking aloud. Here's a problem: please think aloud while you answer the question, "How many windows are there in your best friend's house or apartment?"

[Participant practices thinking aloud.]

Good!

Now, those problems were solved entirely in our heads. However, when you are using GoPuff, you'll also be looking for things, and seeing things that catch your attention. These things you are searching for and things that you see are as important for our observation as thoughts you are thinking from memory, so please verbalize these too. For example, listen to the types of things I say as I think-aloud if I were to disable the screensaver on this computer.

[Illustrate thinking aloud for the participant.]

Now it's your turn to think aloud as you are using the computer. Please think aloud the steps you would take if you were to change your wallpaper.

[Participant practices thinking aloud.]

Great! I'm just going to give you some final instructions now.

As you're doing the tasks, I won't be able to answer any questions. But if you do have questions, go ahead and ask them anyway so that I can learn more about what kinds of questions the GoPuff

interface brings up. I'll answer your questions after the session. Also, if you forget to think aloud, I'll say, "Please keep talking."

Do you have any questions about thinking aloud?

Now, I have some tasks printed out for you. I'm going to go over them with you and see if you have any questions before we start.

Task – Navigate the app and find your favorite Lays Chip product and add it to your shopping cart without use of the search bar

[Hand them the task and ask if they have any questions.]

Here is the task you will be working on. Do you have any questions about the task?

[Answer their questions. Hand them the task and ask if they have any questions.]

Task descriptions:

1. Without use of the search bar, find a Lay's product that you like and put it in your cart
2. Without using the search bar, use the filter menu to find a dog toy and put it in your cart
3. Learn more about the rewards program
4. Share your referral link

Performance metric summary table:

<i>Participant</i>	<i>Task 1</i> <i>(Minutes:Seconds)</i>	<i>Task 2</i> <i>(Minutes:Seconds)</i>	<i>Task 3</i> <i>(Minutes:Seconds)</i>	<i>Task 4</i> <i>(Minutes:Seconds)</i>
<i>P1</i>	0:25	0:15	0:34	0:16
<i>P2</i>	0:27	0:22	0:51	0:20

<i>P3</i>	0:20	3:48	0:36	0:43
<i>P4</i>	0:28	0:35	0:26	0:05
<i>P5</i>	0:52	2:03	0:35	2:58
<i>P6</i>	1:09	1:10	1:02	0:27

Summary paragraph:

The performance metric we measured was the time it took for each participant to complete each task. Ideally, each task would be completed in less than a minute or so with an efficient UI. With so many other competing delivery apps in the market, it is essential that the UI of the app makes sense and enables users to quickly find what they are looking for. The times for each task was measured by the note taker in each session.

Critical incidents:

- P1
 - Task 1: User was able to navigate the home page easily to find the lays product which then gave the user a smooth transition with adding this product into his cart to purchase!
 - Task 4: User was able to navigate to his personal referral code and was able to share this code with his contacts with no issue within seconds!
- P2
 - Task 1: User was able to find the lays product of his choice quickly by using the home page and scrolling.

- Task 3: User used the support option to find more information about the GoPuff rewards program and what it has to offer.
- P3
 - Task 2: When an item is in the bag, the last item on the filter drop down get covered by the bag icon.
 - Task 2: “View more” button is too close to the bottom navigation bar; kept getting sent to the bag screen
- P4
 - Task 1: Was quickly able to navigate to find the lays chip products.
 - Task 4: Was quickly able to get to the share referral code screen by hitting the referral button in the navigation bar.
- P5
 - Task 4: Got confused between referral code and referral link; tried finding a unique code instead of just copying a link
 - Task 2: Could not find the filter for dog toys for a while
- P6
 - Did not notice the filter menu or the nav bar, but was still able to get by from the home page banners.
 - Task 4: Was able to find the referral screen quickly by the “refer your friends” banner on the home page.

UARs:

ID: OM#1 - P1	Name: Lays Chip - Positive
Explanation: The user was tasked to find their favorite Lays chip product without using the search bar on the home page/menu. The user was very quickly able to find a way on the homepage to find their favorite Lays chip product!	Evidence: 4:27 "I see Lays sour cream and onion and I am adding it to the cart right now to purchase"
Severity: The user chose the most popular way in terms of finding this specific product even though there are a few other ways to complete this task also.	Interpretation: The user was able to complete the task very easily as he got to add his favorite lays product and add it to his cart so he can make the purchase
Solution: No need for anything to change in this specific scenario as the user was able to quickly find his favorite product with no problems.	

ID: OM#2 - P1	Name: Referral Code - Positive
Explanation: The user was tasked to find his referral code and then share it with his contacts. The user was able to find where his	Evidence: 5:34 "I press referrals...I will press share code and I can text it to someone now"

referral code was located using the navigation bar and then he was able to share this code with his contacts of choice.	
Severity: The user was able to find his referral code in one of the most popular ways which was using the navigation. There are plenty of other ways to obtain your referral code but the user chose the easiest route.	Interpretation: The user was able to find the referral code of his easily and was easily able to share the code to his friends of choice.
Solution: No need for changes or improvements on the app regarding this specific tasks due to the user being able to complete this task very easily and fast.	

ID: OM#3 - P2	Name: Lays Chip - Positive
Explanation: The user was tasked to find his favorite Lays chip product without the use of the search bar. The user was quickly able to scroll through the home page and find his favorite Lays product which then led him to add it to his cart and purchase.	Evidence: 4:21 “ I see the snacks category.... I now see a bunch of sub categories and I see chips” 4:35 “ I see the Lays chips and i am picking the bbq flavored ones”

Severity: As stated before, there are many different ways a user can use in this specific scenario to complete the task. The user chose the easiest and most efficient way to complete this task.	Interpretation: The user easily found a way to find his favorite Lays chip product which was the bbq flavored chips and add it to his cart.
Solution: Due to the user being able to complete this task very easily and efficiently, there is no need for any change or additional support in improving the route to complete this task.	

ID: OM#4 - P2	Name: Rewards Program - Positive
Explanation: The user was tasked to find a way to learn more about the GoPuff rewards program and what they have to offer! The user was able to use the support option in the app which allowed them to find different sections of customer service and they found the section regarding the rewards program.	Evidence: 5:25 “ I see the help center... now it's taking me to safari...I see the rewards program in customer service”
Severity: In this case the user was able to find	Interpretation: The user found a way from the

more information about the rewards program but having a more similar and efficient way will be very useful for users in the future.	home page to find more information about the rewards program, his route was unique and it completed the task fairly quickly.
Solution: Implementing a rewards program section in the navigation or a FAQ section in the navigation section could potentially be of benefit for users who may not know where to find this.	

ID: MS#1 - P3	Name: Bag Icon Covers Filter Dropdown - Problem
Explanation: The participant was tasked to find a dog toy using the filter menu. An item was in the bag from the task before and the bag icon was covering the last item on the filter menu, so the user was not able to select the proper section.	Evidence: 7:04 "except the interface is...is screwin' up." 7:10 "At the very bottom when I try to scroll to pets, it's kind of blocked, and it won't go all the way down, I actually can't even hit it."
Severity: There is only one way to access the filter menu, and when it is active the whole screen is filled. When an item is in the bag	Interpretation: Participant was trying to click on the pet's filter, but because the menu bar interface was in the way, the participant was

already, the last option of the filter menu is no longer accessible. This filter is a common feature used and is an issue if not properly accessible.	not able to do so.
Solution: Scale down the size of the navigation bar bag icons, and make sure that the icon will not resize when items are in / out of it.	

ID: MS#2 - P3	Name: “See More” button - Problem
Explanation: The participant was tasked to add a dog to the bag. The participant went to click the “view more” button on the pet item screen and was not able to successfully click it. The button was either covered by the navigation bar, or was too close to the navigation bar to where the participant would be brought to a different page.	Evidence: 8:40: “keep scrolling..view more...see when I click view more, it delays it a little bit, and now I keep clicking my bag.” 9:14 “I finally got to view more...ope, nope. No I didn't”
Severity: The only way that the user can view more items is by clicking on this button. It is a largely used functionality. The interface and	The participant went through several ways to try to view more products, but the only way was to click the view more button. The

purpose of the screen becomes unusable when the button is hidden.	participant was unable to do so without removing the item from the bag.
Solution: Remove the “view more” functionality, and have all the items displayed on the one page. Have smaller categories within the filter that the user can click into.	

ID: MS#3 - P4	Name: Chip Product - Positive
Explanation: When the participant was tasked to find their favorite lays chip product and add it to the bag the participant was able to quickly navigate through the items and select their desired product.	Evidence: 6:00: “I'm going to go to the snacks option, and first...look at that, the chips are right there. I hit the plus sign and it's already in my bag.”
Severity: There are a lot of different routes that the user is able to take. The participant was able to immediately discover the quickest route to the Lays chip product.	Interpretation: The participant was able to quickly navigate through the app and found and added chips to his bag.
Solution: Clean up the interface by making more clear sections. There is a lot of information being displayed at once, and it	

feels very cluttered.	
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ID: MS#4 - P4	Name: Referral Code - Positive
Explanation: When the participant was tasked to share their referral code, the participant was able to quickly notice the “referral” tab in the navigation bar and was able to share the referral code link.	Evidence: 8:00: “So I’m assuming [clicks on rewards tab in navigation bar] okay there a refer your friends option. Okay, and I can text, snapchat or share the code”
Severity: While there are different options to be able to share the referral code, the quickest and most obvious route is by clicking the “referrals” tab in the navigation bar. This is a task that will be done often by other users and it is important to have a clear navigation bar.	Interpretation: The participant quickly noticed where he had to click to get to the share the code options.
Solution: As the participant was able to quickly complete the task with no error, nothing needs to be changed on the interface.	

ID: AI#1 - P5	Name: No actual referral code - Problem
<p>Explanation: When asked to share their referral code, they thought they had an actual code unique to each user that they could copy and paste, instead of just sharing a link.</p> <p>GoPuff itself has the text “Share Code” under the share link button, so that only confused the participant even more when there was no code seen anywhere.</p>	<p>Evidence:</p> <p>10:27 “I can share code with the blue arrow icon”</p> <p>10:48 “But that does not actually show me my referral code so that didn’t work”</p> <p>10:54 “I’ll click on the blue share code button..again that only brings me a pull-up menu that has the deal?”</p>
<p>Severity: While it is not the most severe problem, it still poses a challenge when the text does not follow what is being said.</p> <p>Although sharing a referral link is the most common way to refer someone, not all users will know that. The wording will undoubtedly confuse some users.</p>	<p>Interpretation:</p> <p>The participant really wanted to figure out her unique code, but GoPuff only has referral links. She tried searching the link to see if a code would show up but it didn’t.</p>
Solution: Change the text “Share Code” to “Share link” instead.	

ID: AI#2 - P5	Name: “Dog Toys & Supplies” filter - Problem
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<p>Explanation: This participant had a hard time finding the dog toy and did not see the “Dog Toys & Supplies” filter on the top. When she did find the filter, she did not recognize the toys at first.</p>	<p>Evidence:</p> <p>7:25 “I’m not finding anything related to dog toys”</p> <p>7:45 “There’s a tab that says pets”</p> <p>8:13 “There was not a dog toy in the first page..I’m going to “View more” at the bottom.. Oh, this took me to cat treats?”</p>
<p>Severity: Some users who are not familiar with using a filter system on apps may take some time finding something.</p>	<p>Interpretation:</p> <p>Since she did not click the “Dog Toys & Supplies” filter, she went to various pages trying to find a dog toy. Only food items were found in the grocery section and dog foods & treats section. When clicking “View more”, it led her to a cat treats section.</p>
<p>Solution: Make the filter options more noticeable by creating a bigger color contrast to attract the eyes at the top.</p>	

ID: AI#3 - P6	Name: Homepage banners - Good feature
<p>Explanation: This participant was able to navigate all tasks by just using the homepage</p>	<p>Evidence:</p> <p>6:02 “Found the section for snacks while</p>

banners. We expected participants to use the nav bar or the filter menu but she was able to do everything with just the banners.	scrolling” 7:17 “I start scrolling again..I guess I’m looking for pets? So I click on Pets.”
Severity: It is good practice to have the main functions of the app available on the homepage. It was great that the nav bar and the filter functions didn’t need to be used to complete all tasks.	Interpretation: From the home screen, this participant was able to find all of the pages needed to complete the tasks while scrolling down or scrolling through the banners.
Solution: Keep main categories of goods and functions available on the homepage, but also provide standard ways to navigate such as the filter menu and the nav bar.	

ID: AI#4 - P6	Name: “Good friends give GoPuff” banner - Good feature
Explanation: The participant was able to easily find their referral link through the banner found at the top of the home page. Even though the participant did not see the referral button on the nav bar, having another	Evidence: 10:02 ““Good friends give GoPuff”, it’s already at the top next to the ‘Join fam get free delivery’. So..literally says ‘Share & Save””

option to access the link page creates various ways to access the page.	10:22 ‘Then I can just click on ‘Share Code’’.
Severity: Referring friends is one way many apps try to expand their users. Having a banner to do so on the home screen is a good call to action since most users will see it.	Interpretation: This participant immediately saw the referral banner on the home page and was able to find the “Share Code” button quickly.
Solution: Having multiple ways to access a feature is always a good idea. One way to further improve this banner is to include something like “Refer your friends” so it is clear that it is a referral link.	

Sources:

American Campus Communities and gopuff team up to provide student residents with free instant delivery service of everyday needs. Business Wire. (2021, January 26). Retrieved April 28, 2022, from <https://www.businesswire.com/news/home/20210126006099/en/American-Campus-Communities-and-goPuff-Team-Up-to-Provide-Student-Residents-with-Free-Instant-Delivery-Service-of-Everyday-Needs>