Usability Study

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Low-fi Prototype

Our **DogWalker** app will show tips to select a dog walker which will affect non-tech-savvy users by helping users hire the right dog walkers. We will measure effectiveness by tracking the booking rate in the app.
Is this a good design?
1. Plan the usability study (Days 2 – 4)
2. Conduct usability study
   - Moderated or unmoderated
3. Synthesize data and gain insights
4. Improve your design (and then iterate)
Usability Study

- A research method that assesses how easy it is for users to complete core tasks in a design
Outline: Usability Study

- Plan
- Research
- Synthesize
- Improve and iterate
Outline: Usability Study

• Plan
• Research
• Synthesize
• Improve and iterate
7 Key Elements of a Good Plan

1. Project background
2. Research goals
3. Detailed research questions
4. Key performance indicators (KPIs)
5. Methodology
6. Participants
7. Script & interview questions
Goals

• Fundamental
  – Why we built the product?

• **Design**
  – *How to build the product?*

• Post-launch
  – Whether the product works as expected?

• E.g., “to make DogWalker app easier to use for non-tech savvy users”
Research Questions

• Research questions
  – Questions you want your research to answer
  – E.g., “what frustrated users most about finding a dog walker through the current design?”

• Should
  – Align with the goals
  – Be actionable
  – Be specific
  – Not lead users

• Not to confuse with interview questions (in script)
  – Questions you plan to asks testers
Key performance indicators (KPIs)

- Time on task
- Use of navigation vs. search
- User error rates
  - “Wrong icon clicked!”
- Drop-off rates
  - “How many users quit before finishing a purchase?”
- Conversion rates
  - “How many users complete the task?”
- System Usability Scale (SUS)
  - “Would you use the app in your daily life?”
- Net Promoter Score (NPS)
  - “Would you recommend this product to a friend or colleague?”
Moderated vs. Unmoderated

• Whether there’s a person guides participants through the study in real time

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
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<tbody>
<tr>
<td><strong>Moderated user studies</strong></td>
<td><strong>Bias</strong></td>
</tr>
<tr>
<td>• Guidance</td>
<td>• Less flexibility</td>
</tr>
<tr>
<td>• Follow up questions</td>
<td>• Agreement issues</td>
</tr>
<tr>
<td>• Rapport building</td>
<td></td>
</tr>
<tr>
<td><strong>Unmoderated user studies</strong></td>
<td><strong>No human guidance</strong></td>
</tr>
<tr>
<td>• In real-world</td>
<td>• No real-time follow up questions</td>
</tr>
<tr>
<td>• Time- and space-free</td>
<td>• Little control over the environment</td>
</tr>
<tr>
<td>• Feedback without others around</td>
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</tbody>
</table>
How Many Testers?

- *Five* is the magic number

- Should represent your key user segments
Script

Getting started
- Welcome participants
- Thank participants for their time
- Get consent to record
- Learn the participant’s basic information
- Remind participants they are not being tested
- Let participants ask questions

Usability tasks
- Based on research goals
- Specific
- Make participants take action
- Avoid providing clues on how to complete the task

Conclusions
- Ask clarifying questions
- End the recording
- Thank the participant
Tips for Writing Interview Questions

• Use the same set of questions for each interview
• Ask open-ended questions
• Encourage elaboration
• Ask the same question from different angles
• *Don’t mention other users*
• Don’t ask leading questions
### Introduction

- **Project background:** We’re creating a new app to help people find and schedule dog walkers. We need to find out if the main user experience, finding and scheduling a dog walker, is easy for users to complete. We’d also like to understand the specific challenges that users might face in the searching, scheduling, and reservation processes.

- **Research goals:** Determine if users can complete core tasks within the prototype of the dog walker app. Determine if the dog walker app is difficult to use.

### Research questions

- How long does it take a user to find and book a dog walker in the app?
- What can we learn from the user flow, or the steps that users take, to book a dog walker?
- Are there parts of the user flow where users get stuck?
- Are there more features that users would like to see included in the app?
- Do users think the app is easy or difficult to use?

### Key Performance Indicators (KPIs)

- Time on task.
- Conversion rate.
- System Usability Scale.

### Methodology

- **Unmoderated usability study**
- **Location:** United States, remote (each participant will complete the study in their own home)
- **Date:** Sessions will take place on March 12 (normal business hours) and March 13 (after hours)
- **Length:** Each session will last 5 to 10 minutes, based on a list of prompts
- **Compensation:** $25 Target gift card for participating in the study

### Participants

- Participants are all dog owners with full-time jobs and who go out for activities more than once a week.
- Two males, two females, and one nonbinary individual, between the ages
of 20 and 75. One participant is a person with a visual impairment.
- The study is accessible for use with a screen reader and a switch device.

During the unmoderated usability study
A list of prompts appears on the device screen
- **Prompt 1**: Pick a date and time to schedule a dog walker.
  - **Prompt 1 follow-up**: How easy or difficult was this task to complete? Is there anything you would change about the process of scheduling a dog walker?
- **Prompt 2**: Select a dog walker.
- **Prompt 3**: Confirm booking of a dog walker and complete the checkout process.
  - **Prompt 3 follow-up**: How easy or difficult was this task to complete? Is there anything you would change?
- **Prompt 4**: From the home page, figure out where you would go to edit your address.
- **Prompt 5**: How did you feel about this dog walking app overall? What did you like and dislike about it?

After the unmoderated usability study
Participants will complete the System Usability Scale
- Participants will score the following ten statements by selecting one of five responses that range from “Strongly Disagree” to “Strongly Agree.”
  - I think that I would use this app frequently.
  - I find the app unnecessarily complex.
  - I think the app is easy to use.
  - I need the support of a technical person to be able to use this app.
  - I find the app easy to navigate.
  - There is inconsistency within the app.
  - I imagine that most people would learn to use this app quickly.
  - I feel confident using the app.
  - I need to learn a lot of things before I can start using this app.
  - The main user flow is clear.

- Recruitment starts: March 1
- Study dates: March 12-13
- Results available: April 1
Example (CoffeeHouse)

- **Date:** 12/14/2020
- **Project background:** We’re creating a CoffeeHouse app to help people place and pick up multiple CoffeeHouse orders together at once, so they can skip in-store lines and the payment process is streamlined. Some patrons place orders for groups and ordering individually takes too long.
- **Research goals:** Figure out if collaborative ordering in the app actually saves people time when placing group orders.

**Research questions**

- How long does it take for 4–5 people to make a collaborative group order?
- What can we learn from the steps users take to order as a group, and on their own?

**Key Performance Indicators (KPIs)**

- Time on task
- User error rates
- Conversion rates

**Methodology**

- Unmoderated usability study
- Location: United States, remote (participants will go through the usability study in their own homes).
- Date: Sessions will take place on February 8 & 9
- Five participants complete the collaborative ordering tasks on their own. One of the participants is randomly chosen to submit the group order. Each participant completes a questionnaire on their experience privately.
- Each session will last 45 minutes, and will include an introduction, a list of tasks, and a short questionnaire.
Example (CoffeeHouse)

Participants

- Participants are people who place group coffee orders at least twice a month, whether it’s a business task or a social task. This could be for office meetings, friend groups, or family.

- They don’t have to be coffee drinkers themselves
  - 2 Male, 2 Female, 1 Nonbinary, all aged 20-75 years old
    - 1 user of assistive technologies (keyboard, screen reader)
- Incentive: $10 CoffeeHouse gift card redeemable at any location or online

Intro:
- Before we begin, do I have your consent to take both audio and video recordings of this interview?
- I want you to know that this isn’t a test. There is no “right” answer, and none of your responses will be considered wrong.
- If you have any questions, please don’t hesitate to ask.
- This data is being collected to help create an app that makes ordering coffee easier. Your answers will help us make the app easier for people to use.
- Basic questions:
  - Do you live in an area with lots of coffee shops?
  - Do you have a favorite coffee shop?
  - How many times a week do you order coffee from a store?
  - Do you usually order for yourself, or for a group?
  - Can you talk me through a normal day in your life?
- Great! If you’re ready, let’s move onto the tasks you’ll be working on.
Example (CoffeeHouse)

- **Prompt 1**: Open up the CoffeeHouse app on your phone and customize a drink order for yourself. Do your best to talk me through your thought process.
  - **Prompt 1 Follow-Up**: How easy do you feel it is to customize a drink the way you like it? What was easy and what was challenging?

- **Prompt 2**: If I said, “start a new group order,” would you know what to do?
  - **Prompt 2 Follow-Up**: Try it out now, please.
  - **Prompt 2 Follow-Up**: Did you find anything confusing?

- **Prompt 3**: From the existing group order screen, add your custom drink from a moment ago, then add multiple other custom drinks to the same order and proceed to the checkout screen.
  - **Prompt 3 Follow-Up**: How do you feel about the process of purchasing multiple drinks in the same order? What was easy and what was challenging?

- **Prompt 4**: Finally, checkout and complete the group order.
  - **Prompt 4 Follow-Up**: How do you feel about paying for different orders in the same transaction? What are your feelings about the amount of time it took to complete?

- **Prompt 5**: How did you feel about the CoffeeHouse app overall? What did you like and dislike about it?
Outline: Usability Study

- Plan
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- Improve and iterate

Understand how the user experiences the product → Specify the user’s needs → Design solutions → Evaluate solutions against the user’s needs
Get Your Prototype & Prompts Ready

• Prompt 1: “Pick a date & time to schedule a dog walker.”
Unmoderated Usability Study

• Ask each tester to *speak her mind out loud* when testing your prototype

• Record everything:
  – Tester 1
  – Tester 2
  – Tester 3
  – Tester 4
  – Tester 5
## Taking Notes

<table>
<thead>
<tr>
<th>Task</th>
<th>Click Path</th>
<th>Observations</th>
<th>Quotes</th>
<th>Task Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Write the task number and directions here.</td>
<td>Record what path the participant took to complete the task.</td>
<td>Note down behaviors, opinions, and attitudes along with any errors, issues, or areas of confusion.</td>
<td>Note any significant quotes (positive and negative).</td>
</tr>
<tr>
<td>3</td>
<td>Prompt 1: Pick a date and time to schedule a dog walker</td>
<td>Home &gt; &quot;Schedule&quot; &gt; &quot;Submit&quot;</td>
<td>- confused about what to press on home screen - wonders if there's a way to schedule a recurring dog walker</td>
<td>&quot;there needs to be a way to do a recurring booking&quot;</td>
</tr>
<tr>
<td>4</td>
<td>Prompt 2: Select a dog walker</td>
<td>Dog walkers &gt; &quot;Learn more&quot;</td>
<td>commented on number of options for dog walkers</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Prompt 3: Confirm booking of dog walker and complete the checkout process</td>
<td>Jane Doe &gt; &quot;Book&quot;</td>
<td>&quot;that was super easy!&quot;</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Prompt 4: From the homepage, figure out where you would go to edit your address</td>
<td>Home &gt; Profile icon</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Prompt 5: Would you use the dog walking app?</td>
<td></td>
<td>&quot;I don't know if it's that useful, especially since you can't book a recurring time.&quot;</td>
<td></td>
</tr>
</tbody>
</table>

• For each tester, done by each member
Outline: Usability Study

- Plan
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Insights

• Observations about people that help you understand the *user* or *their needs* from new perspectives
From Notes to Insights

- Via affinity diagrams

Scheduling

- A: Confused about “Schedule” button vs “Schedule”
- C: Scheduling a dog-walker was easy with the big button
- B: Wants to be able to book a dog regularly
- C: Wants book a recurring dog-walker
- A: Wants schedule to use calendar
- D: Wants a schedule to be able to schedule date and time for the dog-walker

Dog-walker selection

- C: Chooses dog-walker based on experience level
- E: Wants to filter dog-walkers by experience level
- D: Confused about “Dog walkers near you” vs “Schedule” button
- A: Doesn’t know who to choose a dog-walker from the list.
- E: Confused about how to select dog-walker from the list
- D: “I was just clicking on different buttons to try and figure it out?”

Booking + Checkout

- D: Surprised there’s no confirmation page
- E: Annoyed that there wasn’t confirmation page for booking
- D: Expected an add to cart button
- C: Thought tips are useful on home screen
- A: Frustrated that there’s no confirmation page
- D: Confused about “Confirmation”
- A: Couldn’t complete Prompt 4 because “Address” wasn’t clearly visible anywhere.

Other
Example (DogWalker)

• 4/5 participants wanted to be able to make a reoccurring appointment with a dog walker
• 3/5 users would like to pick a date when scheduling a dog walker
• 3/5 testers were surprised that there wasn't a confirmation page before they were charged
Qualities of Strong Insights

• Grounded in real data
• Answer your research questions
• Easy to understand
• Increase empathy for the user experience
• Inspire direct action
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Prioritizing Insights

• P0: must be fixed so users can complete the main flow
  – Confirmation page before charge
• P1: should be included in future version
  – Reoccurring appointments
• P2 ...
  – Date picker for scheduling a dog walker
Confirmation Page before Charge

AFTER
Reoccurring Appointments

BEFORE

2. Schedule page
   ← Schedule a time

Date
   May 2

Time
   3pm

Cancel  Submit

AFTER

2. Schedule page
   ← Schedule a time

Date

Time

☐ Recurring booking

Cancel  Submit
Date Picker

**BEFORE**

2. Schedule page

- Schedule a time

Date
May 2

Time
3pm

- Cancel
- Submit

**AFTER**

2. Schedule page: picker

- Schedule a time

Date
May 2

Time
3:30 pm
30 mins

<table>
<thead>
<tr>
<th>Date</th>
<th>3:00 pm</th>
<th>3:15 pm</th>
<th>3:30 pm</th>
<th>3:45 pm</th>
<th>4:00 pm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Apr</td>
<td>31</td>
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</tr>
<tr>
<td>May</td>
<td>1</td>
<td>15 mins</td>
<td>30 mins</td>
<td></td>
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<tr>
<td>Jun</td>
<td>2</td>
<td>3:30 pm</td>
<td>30 mins</td>
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<tr>
<td>Jul</td>
<td>3</td>
<td>3:45 pm</td>
<td>45 mins</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>4</td>
<td>4:00 pm</td>
<td>60 mins</td>
<td></td>
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</tr>
</tbody>
</table>

- Recurring booking
It’s your turn!
Demo 2

• Goal statements & competitors 20%
  – Unique value propositions
  – KPIs
• Storyboards & low-fi prototype 15%
  – Main user flow (happy path)
• Unmoderated usability study 20%
  – Research questions, prompts
  – P0 & P1 insights with data support
• Improvements 15%
Report (20%)

- Empathy maps, user journey map
- Problem statements & HMWs (photos) 10%
- Ideation process & Crazy 8s (photos) 10%
- Competitive audit (spreadsheet)
- Prototype details
  - More flows, edge cases, etc.
- More insights (>P1) and data
- More improvements

- **Up to 20% bonus!**
Peer Review (10%)

• Each team is rated by a tester
  – Did the team give enough background or context?
  – Were the prompts clear enough?
  – *Not* based on the design of the prototype

• Each tester is rated by a team
  – Did the mind spoken out loudly?
  – Was the feedback specific enough?
  – *Not* based on the number of insights