1.

Activity introduction

In this exercise, you're going to build out a research plan for your ongoing portfolio project, which you've been working on in this course. In the activity Build a low-fidelity prototype for a mobile app ⬀, you built a prototype. Now, it's time to prepare for a usability study of that prototype. This activity will help you better plan your project and achieve actionable results.

A research plan consists of seven key components that include:
Project background

Research goals

Detailed research questions

Key performance indicators (KPIs)

Methodology

Participants

A script

For this exercise, we'll also go over how to indicate a clear goal, outline at least one sample research question, define a measurable outcome, and describe how you intend to test this outcome. You should also indicate how you intend to recruit participants and briefly outline a sample script for an example test session.

Step-by-step instructions

Step 1: Access the template

To use the UX research study template , click the link below and select "Use Template."

Link to template: UX Research Study - Plan [Template] ⬀.
OR

If you don't have a Google account, you can download the template directly from the attachment below.

🔗 Google UX Design Certificate - UX Research Study Plan [Template]
DOCX File

Step 2: Start your introduction
You'll use the introduction section of the research plan to provide a high-level overview of the project for your audience.

To complete the first four parts of the introduction, you should:
. Write the project title, including a few words about your study's focus.

. Name the project authors, including their full names, job titles, and email addresses.

. Identify any stakeholders with their names and roles.

. Include a date in this section, which you should update every time you edit the plan.

Here's an example of these steps in the introduction of a research plan that was created for the dog walking app:

Step 3: Write your project background

For the next part of the introduction, you'll write your project background. The project background summarizes the need for this research and serves as a brief explanation you can give to anyone who asks why you're doing this research.

Establishing a project background is essential because it gets the team on the same page at the beginning of the study. Everyone on the team needs to understand the history leading up to the current situation. What you write for the project background section should answer the question, "What led you to conduct this research?"

Introduction

- **Title:** Usability study of dog walker app
- **Author:** Elena Ramos, UX researcher at Google, eramos@g.com
- **Stakeholders:** Dog walker app senior executives, including Lisa Gerber (VP of Sales) and Marie Martinez (Chief Marketing Officer)
- **Date:** 3/6/2021
- **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. This is the first research to be completed for this project.

Step 4: Write your research goals

The last part of the introduction presents your research goals. Your research goals will state the specific ideas you want to learn from the research or what you would like the research outcomes to be. That's why identifying your research goals is so important. Essentially, they drive the entire study.

The goals of your research will differ from project to project. They'll fit into one of these two categories, depending on when you run your research during the product life cycle. Foundational research goal: If you research before you start the design process, your research goal should help you understand why you should build the product or if there's a need for it at all.

Here's an example of a foundational research goal for our dog walking app:

Introduction

- **Research goal:** Determine whether there's a need for this dog walking app and whether it's a good financial investment.

Design research goal: If you conduct research during the design phase, your goal should help you understand how to build the product. Research in this phase is called design research, and it will give you the answers you need to proceed through the design process with confidence.

Here's an example of a design research goal for our dog walking app:

Introduction	● **Research goal:** Figure out if users can complete the core tasks within the dog walking app prototype.

When writing your research goal, first identify what part of the product life cycle you're running your research. Then, write either a foundational, design, or post-launch research goal. For this activity, you're in the design phase, so you should write a design research goal.

Step 5: Write your research questions

Your research questions are the handful of questions you plan to answer during the study. They'll provide focus and structure for your research study and are the main topics you cover during your presentation. You should write five research questions for your mock research plan.

Keep the following things in mind as you write your research questions:

A good research question should be actionable. You should be able to identify a clear way to attempt to answer the question. And you should know when you've found the answer you're searching for.

Make sure your research questions are specific and not too broad. You want to answer specific questions and produce meaningful data.

Make sure your research questions aren't leading. Be sure to phrase your questions neutrally so that they don't sound like you're assuming a particular answer to your question.

You should include at least one quantitative and one qualitative research question. Quantitative research focuses on data that you can gather by counting or measuring, think numbers. Qualitative research focuses on observations about why and how things happen, i.e., written descriptions. This will help you obtain a greater diversity of data.

Here's an example of research questions for the dog walking app:

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 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 experience in the app? ● Do users think the app is easy or difficult to use?

Step 6: Choose your KPIs

When conducting research, you'll want to have a way to measure the effectiveness of your product or prototype. For this, we use Key Performance Indicators (KPIs). These are critical measures of progress toward an end goal.

You should select at least two KPIs for your research plan based on your research questions. If you're having trouble coming up with KPIs, common ones for UX designs include:

Time on task: How long it takes a user to complete a task

Use of navigation vs. search: The number of users who navigate casually compared to those who use the search function

User error rates: How often users make mistakes

Drop-off rates: The number of users who give up without accomplishing a goal

Conversion rates: The number of users who reach their goal successfully

System Usability Scale (SUS): A series of 10 questions evaluating how easy your product is to use

You can also research more KPIs if you're having trouble finding one that works for you. Here's an example of three KPIs we might select for the dog walking app study based on our research goals:

Key Performance Indicators (KPIs)	• Time on task • Conversion rate • System Usability Scale

Step 7: Explain your methodology

Next, you'll outline your methodology. List the procedures you'll use while collecting the information you need to answer your research questions. This list should include the time and place of the product tests and interviews, who will conduct them, and how.

Outlining your methodology is important because it will inform your stakeholders of what will happen during the study, give them confidence in your study's results, and make it easier for researchers to repeat the study in the future.

Here's an example of a methodology section for our dog walking app research plan. This example includes the type of study, location, time, place, participant number, and study details, such as how the prototype will be tested (i.e., a mobile screen or a desktop device). You should do the same for your portfolio project research plan.

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

Step 8: Identify your participants

Your research plan should include a list of the primary characteristics of the people you'll recruit to participate in the study. The types of participants you select should be based on your research goals.

You should specifically identify your participants' characteristics, any relevant demographic information about them (age, gender, location), and the number of participants. You should also consider users with diverse perspectives and abilities for every product you design — which means considering how your product might function for people with visual impairments, auditory processing challenges, and more. Also, think through how you need to present and moderate the prototype. This may also affect what platforms are selected for the test itself, as not all remote platforms are accessible with various kinds of assistive technology.

In addition, you need to think about incentives to entice participants to be part of your study. The incentive provides a way to thank participants for their time and feedback. For example, you could compensate them with cash or a gift card or enter them into a raffle for a prize.

Here's an example of a participant group for the dog walking research plan:

Participants	• Participants are all dog owners with full-time jobs and go out for activities more than once a week. • Two men, two women, 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.

Step 9: Write your script

A script, also called a discussion guide, lists tasks and questions a researcher references when interacting with participants in the interview portion of a usability study. Using a script in your research plan gives you a clearer understanding of what users are trying to do, how they think and feel, and their problems.

At this point, you'll also need to determine whether you're conducting a moderated or an unmoderated usability study.

A moderated usability study requires the study participant and researcher to be in the same space, either physically or digitally. This type of study allows for interaction between the participant and researcher. It can help the participant clarify questions and dig deeper into any issues that arise. It's also possible for this level of interaction to be distracting to a participant.

An unmoderated usability study is completed by the study participant alone. In an unmoderated usability study, there's no real-time interaction between the researcher and participant. The researcher provides a set of questions that the participant answers. These questions are consistent for everyone taking part in the study. The researcher records this type of test to watch later. There is no opportunity for in-the-moment conversation between the researcher and moderator.

Choosing between these two options will depend on what you're trying to learn and the testing circumstance. Generally, an unmoderated study is quicker and best suited for testing specific elements of your design. Unmoderated usability studies offer the advantage of receiving faster results, and allow designers to interact with a testing group that might be spread over a large geographic area. A moderated study takes more time, but allows for a more conversational approach where a researcher can encourage the participant to think aloud.

As you're writing the script, regardless of the type of study you're conducting, remember a well-rounded script contains questions that are:

Consistent: Questions should be worded identically for each participant.

Open-ended: Questions should encourage discussion and reflection rather than short "yes or no" responses.

Objective: Questions shouldn't lead participants towards a particular answer or introduce the researcher's personal bias.

Goal-oriented: Questions should relate directly to the research goal.

In addition, interviewers should:

Encourage elaboration: In a moderated usability test, the interviewer should encourage the participant to elaborate when they get stuck or finish speaking without fully explaining their thought process.

Be flexible: The interviewer should change the wording of questions they've already asked to gain new insights into the original question.

Follow participant's lead: if the participant goes into a different area than what was otherwise expected but turns out to be important, leave time to explore that.

Maintain privacy: The interviewer shouldn't mention other participants during the interview to uphold each participant's privacy and remove any outside opinions that might affect the data.

Now that we've covered the elements of a successful script, let's examine how to begin an interview:

Welcome your participants and thank them for their time. Take some time to build rapport; for example, ask how their day is going. This gives everyone a chance to warm-up.

If the interview is being observed or recorded, ask for the participant's consent beforehand.

Ask for basic information such as name, age, and occupation.

Reassure the participant that the interview is not a test and that no answer is wrong.

Remind participants to think out loud throughout the interview.

Set their expectations around what works and doesn't work in the prototype they will be using.

Be an open book! Reassure your participants that it's okay to ask questions, ask for clarification, or take a break at any time. This is a good way to remind them that participation is voluntary.

Explain why you're collecting this data and what you will use it for.

Assure participants that you will respect their privacy and scrub any identifying features or information from video and notes.

In the interview, you'll be assigning tasks to your participants and recording how they respond. You'll write a prompt for each task you want your participants to complete. Here are a few tips when coming up with tasks for your usability study:

Tasks should be based on your *research goals.*

Tasks should be *specific.*

Tasks should make participants take *direct action.*

Tasks *shouldn't provide clues* on how to complete a task. This can be explicit clues and implicit clues, such as using the same name of a call to action in the UI as part of the question itself).

Once you've done that, you should identify your questions or the tasks you want users to perform as prompts, like in the example below for an unmoderated usability study:

Script	**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.

Step 10: Reflect on the completion of this activity
Be sure you've addressed the following elements in your completed deliverable:

Introduce your project by providing a project background

Define your research goals

Identify research questions that contain specific tasks being tested

Define KPIs detailing the elements that should be measured with goals that results can be compared against
Include your methodology

Develop a participant recruitment plan

Create a sample session script