

UI / UX Principles

Lecture 3: USER EXPERIENCE RESEARCH



Chapter 2

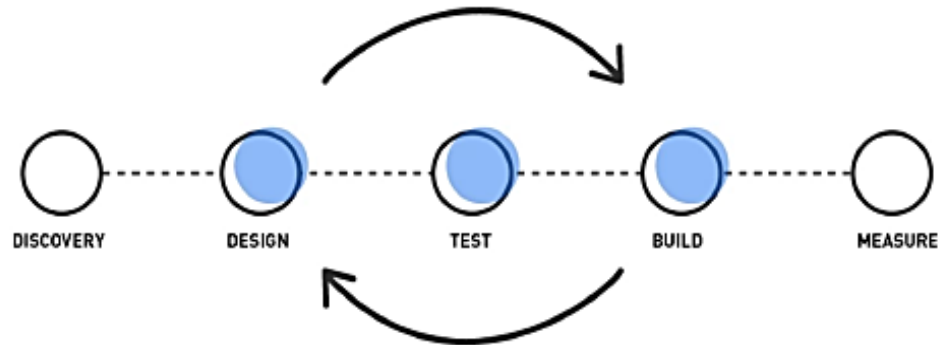


Chapter 2: User Experience Research

- What is UX research
- Benefits of UX research
- When to do UX Research
- UX research phases

What is UX research

- UX research is a specific product design & development phase focused on gathering functional requirements, researching target users along with their needs as well as constantly testing solutions on the target audience.



Benefits of User Experience Research

- To get to know and **understand your business**' end-users.
- To make sure the **assumptions** we make are **validated** and based on real data.
- To **save time** (and **resources**) for changes later in the product development process.
- To **reduce the risk** that the product will not fulfill its goal and will not survive on the market.
- To have a **full understanding** among the entire **team** of **what**, for **whom**, and **how** we want to develop the final product.

SKILLS TO GAIN IN UX DESIGN FIELD

You will have:

- Research Skills
- Psychology and Sociology
- Visual Design Fundamentals
- Usability Concepts
- Some Business Understanding
- Communication Skills
- Critical Thinking

Hierarchy of User Needs



Shallow Delight vs Deep Delight



SHALLOW DELIGHT

**Aesthetics, animations,
sound effects, cute mascots,
gamification, etc.**



DEEP DELIGHT

**Works exactly how
you think. Allows you
to get tasks done**

When to do UX Research

1. Creating a new product
2. Adding new features
3. Redesign
4. Attracting new audiences
5. Product's end-to-end lifecycle



UX Research phases



UX Research plan

- A research plan is simply a **document** that acts as an overview and helps kick off the project.
- It should be **co-created and shared with key stakeholders** so that everyone on the product team knows what to expect.



Project
Background



Research
Goals



Research
Questions



Key performance
indicator (KPIs)



Methodology



Participants



Script

Project Background

- Explain what led you to conduct this research or even give a quick description for your product.
- E.g, we're creating **app** to help people **order cars to drive** them where they are headed, **through their mobiles**. We **need** to know if our product is beneficial to our users or not.

Research Goals

- Ask yourself what design problems we're trying to solve and how will the results will impact our design decisions.

E.g,

1. Determine if “X” is difficult to use
2. Ability to complete the buying/reservation of buying journey.

Research Questions

What are the questions your research is trying to answer?

E.g.,

1. How long does it take the user to book a ride?
2. Are people able to complete the reservation journey?

KPIs [Key Performance Indicators]

KPIs are critical measures of progress towards an end goal.

E.g,

1. Conversion Rate
2. Drop-off Rate
3. User Satisfaction



Methodology

Documentation of the steps and **research methods** you'll take to conduct your research. How will you **collect data**? And how will you analyze the data when you get it?

E.g,

1. Survey

2. User Interviews

Participants

Determination of participants characteristics and who will you hire for your research.

E.g,

- People with full-time jobs who go for their work by taxi on a daily basis.

Script

- Script is called “Discussion Guide”, is the actual questions you ask your users as they test your product.

E.g,

- Did you face any challenges when you are trying to book a ride in the app?

Research Methods Types



Research Methods types according to (Type of data)

Quantitative vs Qualitative



Quantitative

Large sample, 100s or 1000s of people for statistical significance



Qualitative

Small sample, 5-7 users will provide insights into behavior and motivations

Research Methods types according to (Type of data)

Quantitative — giving answers to “what” and “how many” questions

Methods

- A/B testing
- Surveys
- Card sorting
- Eyetracking

Qualitative — providing answers to “why” and “how” questions

Methods

- Interviews
- Usability tests
- Diary studies
- Focus groups
- Immersion research

A/B Testing

A/B testing is a process of showing two variants of the same web/mobile page to different segments of web site visitors at the same time and comparing which variant drives more conversions.



A/B Testing

1- Choose what you want to test?

- Start with a **single element** you want to test.
- Make sure it's relevant to whatever metric you want to improve.

2- Set goals

- What do you want to achieve with you're A/B test?
- Are you interested in **improving conversion rate**?

3- Analyze data

- Look at your exist data, using a free tool like Google Analytics.

4- Select the pages that you'll test

- Start with your **most important page**.
- It could be your Products page.

A/B Testing

5- Create a variant

- Create a variant of your champion.
- Change **only the element you decided** on in the previous step and make only one change to it.

6- Choose the best A/B testing tools

- Optimizely
- VWO
- SiteSpect
- AB Tasty

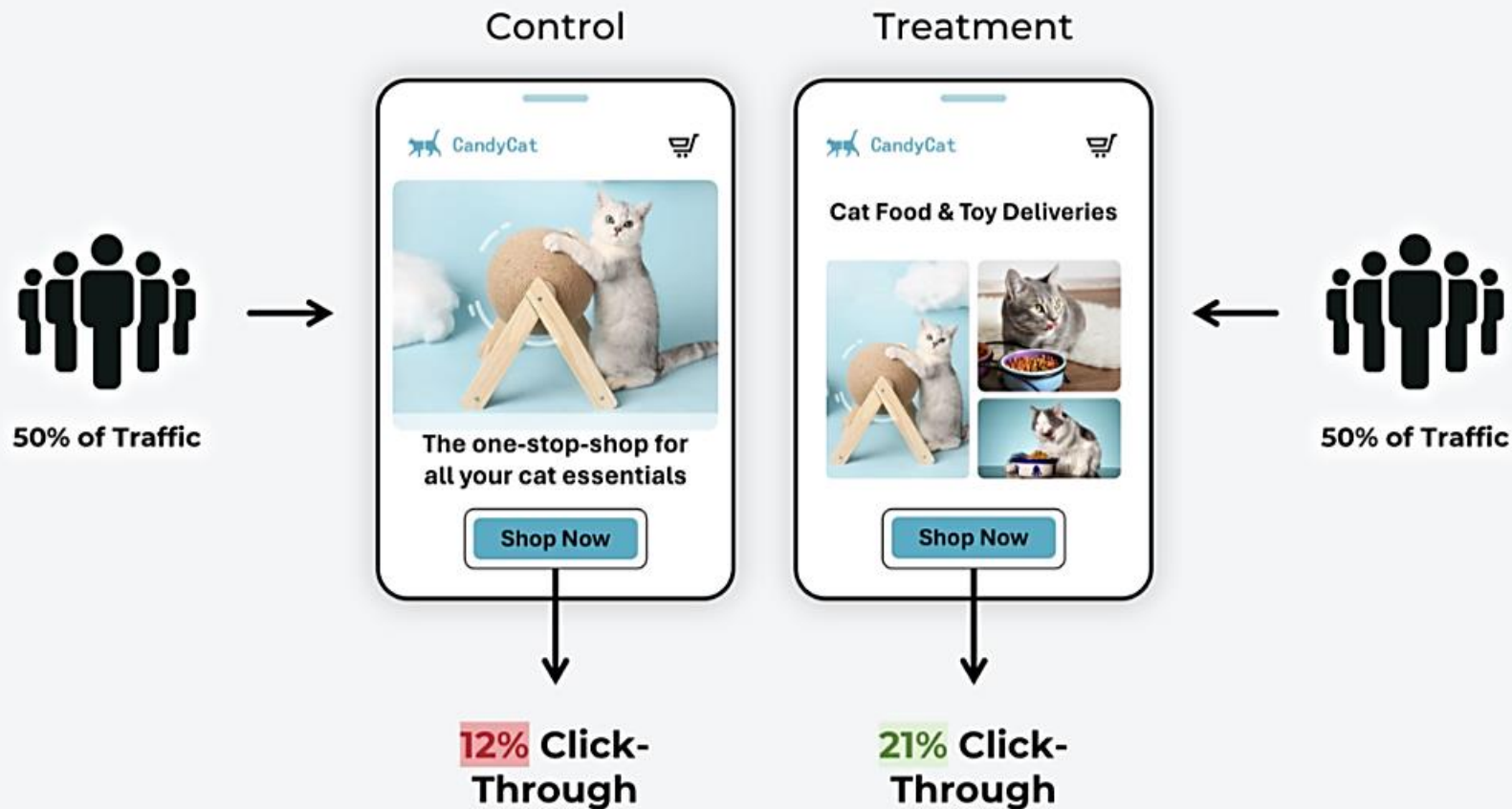
7- Accumulate data

- Data gets collected automatically; view the progress of your test at any time.

8- Analyze the A/B testing statistics

- Draw conclusions based on which variant won.

A/B Testing (Example)



Surveys

A UX research survey is a **set of questions**, sent to a targeted **group of users**, that probes their attitudes and preferences. Surveys can be a **quick, easy, and inexpensive** way to obtain the data questions you ask. A poorly designed survey won't yield valuable insights.

The image compares two survey designs. On the left is a desktop browser window, and on the right is a mobile phone screen. Both display two survey questions.

Desktop Browser Window:

1. Overall, how satisfied are you with our company?

Five circular icons representing a Likert scale: two sad faces (left), one neutral face (center), and two happy faces (right).

2. How would you rate our customer service?

Five yellow star icons, with the last one being an outline, representing a 5-point rating scale.

Mobile Phone Screen:

1. Overall, how satisfied are you with our company?

Five circular icons representing a Likert scale: two sad faces (left), one neutral face (center), and two happy faces (right).

2. How would you rate our customer service?

Five yellow star icons, with the last one being an outline, representing a 5-point rating scale.

Surveys (Best Practices)

Best practices for conducting UX surveys: The questions you ask in a UX research survey depend on what you're trying to discover. But there are some best practices you can follow that will maximize your chance of success.

1. Keep things short and simple

- Only ask questions that you plan to analyze and are **necessary** for what you're trying to discover.

2. Be clear

- **Pre-test your survey** to make sure each question is **asking about one thing only**.

3. Check for bias

- provide a range of options to choose from.

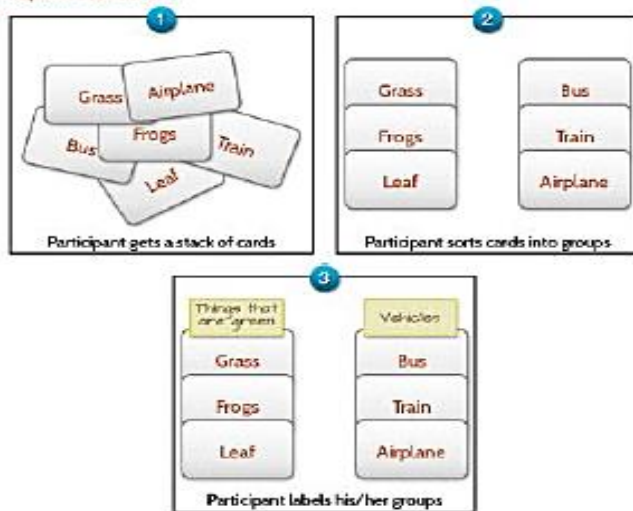
4. Structure the survey well

- One common way to structure a survey is to ask the **simplest questions first** and work up to more **complex questions near the end**.

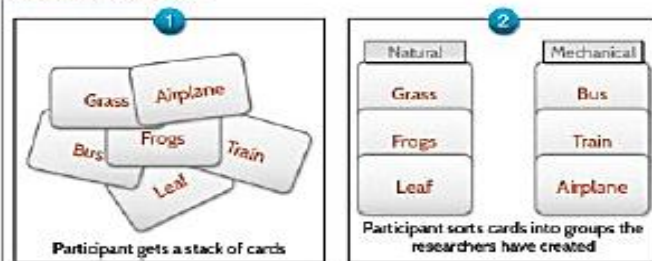
Card Sorting

- Card sorting is a UX research technique in which users organize topics into groups. Use it to create an **IA** (Information Architecture) that suits your users' expectations.

Open Card Sort



Closed Card Sort



Card Sorting

1- Choose a set of topics

- The set should include items that represent the **main content on the site**.
- Write each topic on an individual index card.

2- User organizes topics into groups

- **Shuffle the cards** and give them to the participant. Ask the user to look at the cards one at a time and place cards that belong together into piles.

3- User names the groups

- Give him blank cards and ask him to write down a name for each group he created.

4- Debrief the user.

- **Ask users to explain the rationale** behind the groups they created

5- Repeat with 15–20 users.

6- Analyze the data.

- Look for common groups, category names or themes, and for items that were frequently paired together.
- Combine the patterns you see with your qualitative insights from the debrief

Example on Open Card Sorting



PARTICIPANTS GET A STACK OF CARDS



PARTICIPANTS SORT CARDS INTO GROUPS



PARTICIPANTS ASSIGN NAMES TO GROUPS



Research Interview

- A user interview is a UX research method during which a researcher asks one user questions about a topic of interest (e.g., use of a system, behaviors and habits) with the goal of learning about that topic.

Why Do User Interviews?

- Interviews give insights into **what users think** about a site, an application, or a **product**.



Research Interview (how)

- 1-Set a goal for the interview.
- 2-Make the user feel as comfortable as possible. Create a friendly connection with the user.
- 3-Prepare questions before the interview.
- 4-Avoid leading, closed, or unclear questions.
- 5-Prepare more questions than you believe you will have time to ask.
- 6-Practice your go-to follow up questions.

Usability testing

Usability testing is a way to see how easy to use something is by testing it with real users. Users are asked to complete tasks, typically while they are being observed by a researcher, to see where they encounter problems and experience confusion. If more people encounter similar problems, recommendations will be made to overcome these usability issues.



The goals of usability testing vary by study, but they usually include:

- A. Identifying problems in the design of the product or service.
- B. Uncovering opportunities to improve.
- C. Learning about the target user's behavior and preferences.

Usability testing (how)

Step 1: Plan the session

1. Determine the nature of your study.
2. Logistical details of your usability testing sessions.

Step 2: Recruiting participants

1. Hire an agency/Use your website.
2. Use social media/Recruit your clients.

Step 3: Designing the task(s)

Step 4: Running the session

1. Introductions and warm-up.
2. Collect pre-testing data.
3. Transition into the first task.
4. Taking notes.
5. Follow-up questions and wrap-up.

Step 5: Analyzing the insights

How to do **Analysis and Synthesize**

Research analysis and synthesis is the process of sorting, categorizing, and **transforming raw data into valuable information**, and it is one of the **most important and challenging steps in the UX research process.**

How to do Analysis and Synthesize

How you conduct analysis and synthesis for your research output?

.. Now you've completed your study! Regardless of the type of study you did or how many participants you used, you've gathered a lot of information and data.

1. Review your research goals.
2. Collect and organize the data. Make your data manageable.
3. Discuss each pattern and point of synthesis as a team.
4. Identify insights. Discuss, and socialize your insights.

Synthesize Example

Company : Google

App : Google Maps

Place : Delhi, India and Jakarta Indonesia

Background : large densely populated cities traffic is real headache, man in car can stuck in traffic for several hours per day , so local have found a way around this obstacle, two wheeled vehicles like scooter and motorcycle, as they can take shortcuts car can't, and weave around traffic

Problem : mapping applications like google maps were built for cars. Scooter and car take same road but don't have same ability to use Google maps.



Synthesize Example



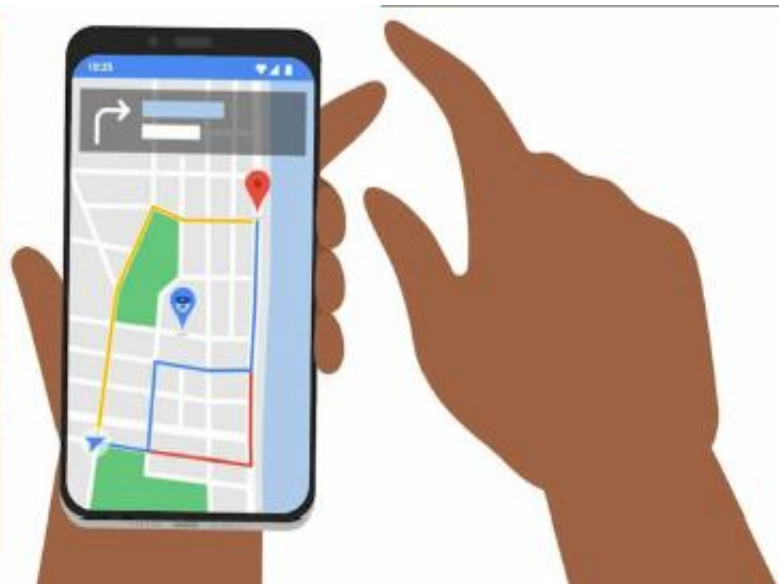
Synthesize Example

Research Insights

- It is difficult to follow a map while driving a motorcycle, so many drivers memorize their routes beforehand.
- Pointing out landmarks during the trip is especially important for drivers of two-wheeled vehicles.
- More language options are needed.
- Customizing the directions for drivers of two-wheeled vehicles.

Synthesize Example

- Now users can switch google maps to two-wheeler mood



End of Chapter 2

