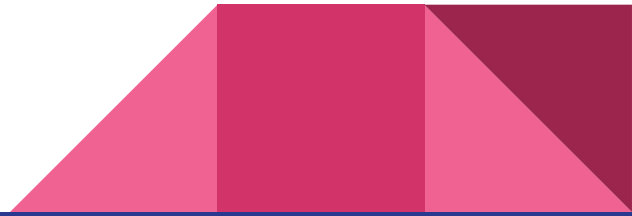
UX Research

Lesson 4: Interviewing

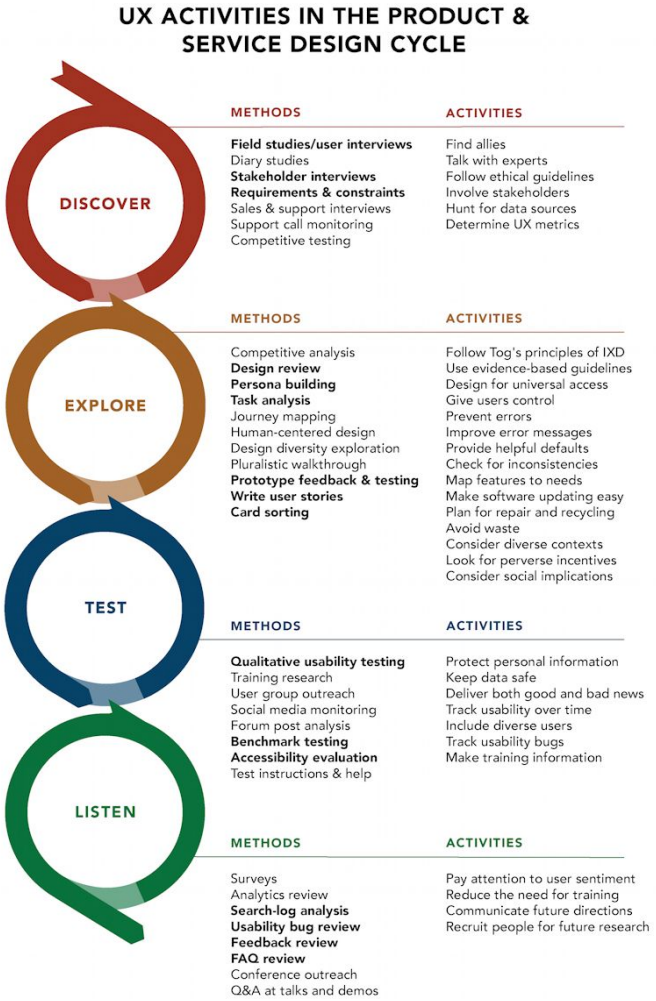
The Erdős Institute

UX

- Research on **end users** – the people directly using the (digital) product
- Examples
  - Understanding end users (defining personas, user journeys, purchasing trends)
  - Discovering product requirements (determining features and designs to meet user expectations)
  - Analyzing digital products (clicks to completion, abandonment rate)
  - User interface design (graphic and website design, creating prototypes)



UX Methods

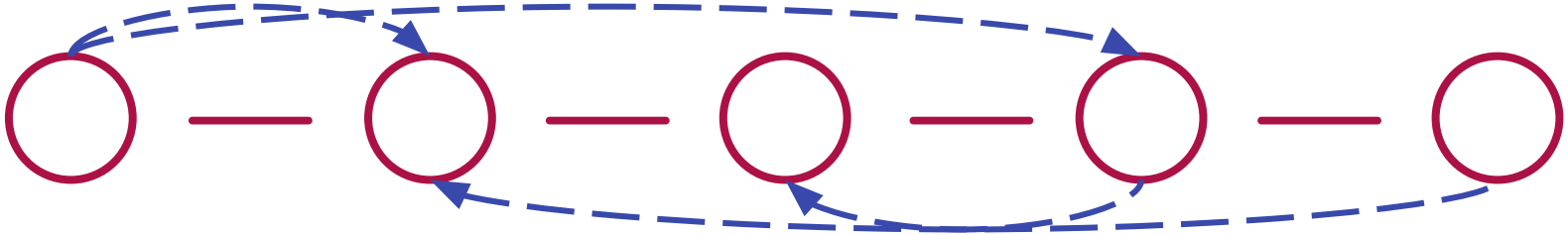


Link

Design Thinking

- Creative problem solving
- Focused on solutions
- User-centric
- Iterative – ongoing experimentation
- Goal – Reduce cost and time to market

Design Thinking



Empathize
Get to know users

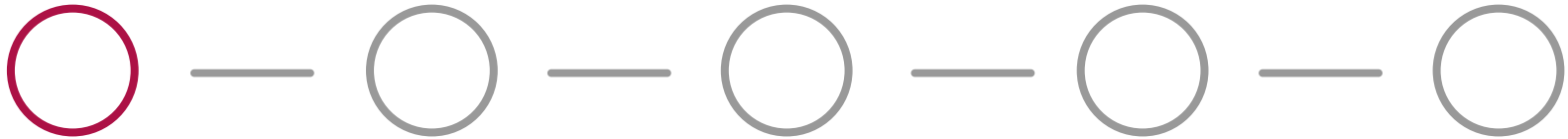
Define
Define problem in a user-centered way

Ideate
List all potential solutions; narrow down to a few

Prototype
Create a prototype

Test
Test prototype with users; get feedback

Design Thinking



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Learning from Others

- Talking to customers helps you understand their behavior
  - People stop using your product after about 5 minutes
  - The use case for your product differs than what you expected
  - People would pay extra money for new features

- Different types
  - User interviews
  - Diary studies
  - Focus groups
  - Panels

Learning from Others

Who	How
Colleagues (C-Suite, Data Analyst, Sales)	Problem Statement; Open Response
B2B Client: Employers & End Users	Focus Groups; Quantitative Surveys
B2C Client: User Market Segments	Group/Solo Interviews; NPS

User Interviews

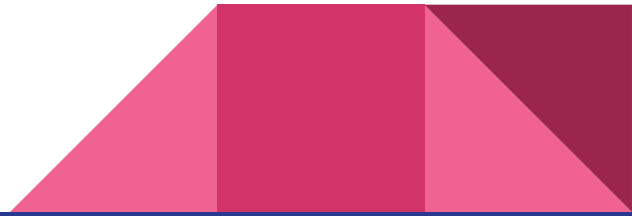
- 1-on-1 sessions
  - Can include questions and answers
  - Have people use the product (e.g., app) while you are with them to find bottlenecks, etc
  - Can screen people beforehand
- Can be used at all stages of the design process
  - Before you've built anything
  - After you have a prototype
  - After you have released a version
  - Before releasing a new version
- Make sure there is a concrete goal for the interview
- Make the interviewees feel comfortable. Have empathy.

User Interviews

- Plan out all questions before the interview
  - Tell me about yourself
  - Why would you use this product? How often would you use it?
  - What do you (dis)like about this product?
  - How is this different from other products?
- Open ended questions offer more insight than closed questions
  - Closed: Do you use Uber?
  - Open: How often do you use ride-share apps? (Follow-up: Which ones do you use?)
- Don’t use leading questions
  - Leading: Why do you like Uber more than Lyft?
  - Not Leading: How do you decide between using Uber or Lyft?

User Interviews

- Summarize all results into a PP deck
  - Listen to the interview after you conduct it. Pull out common themes and how frequently the themes arose.
  - Use direct quotes to showcase your results
- Sections
  - About the users
  - High level takeaway on needs
  - Personas, problem statements, and supporting evidence
  - Product Value
  - Pain Points
  - Ways Forward (design / feature related)
  - Executive summary



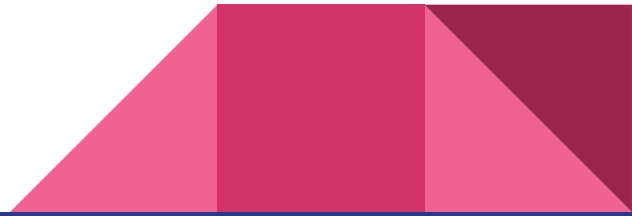
Usability Test

- Have people use the product (e.g., app) while you are watching
- The user is (sometimes) asked to think out loud so you can see their thought process
- The focus is often on people's behaviors – their actions when using the product

Link

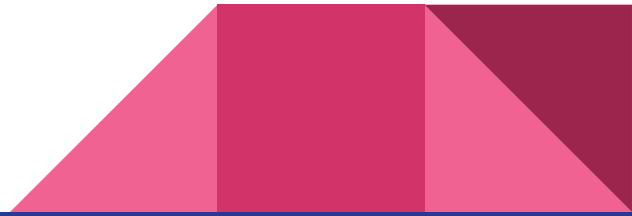
Diary Studies

- Longitudinal data collection (e.g., 1+ months)
  - In situ – participants write done everything that happened
  - Snippet – participants only record snippets of their interactions
- Product interactions
  - When do people use the product? For how long?
  - What are they doing when they use the product?
  - Is their opinion of the product changing over time? Do they use it less?
- Timeline
  - Talk to participants to get consent, discuss goals
  - Logging period (prompts are given to remind participants)
  - Post study interview



Field Studies

- You go to the participants to see them use the product as they would on a day to day basis
- Helps with big picture insights
- Not as directed as other methods – you observe and see what happens, rather than focusing on a particular goal
- Methods
  - Direct observations
  - Ethnographic research
  - Contextual inquiry



Group Interviews

- Group of (~6-10) individuals who meet together to discuss your product / service
- Interaction between participants is encouraged by the facilitator
- Participant selection is key

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Focus Groups

- One-time event – you get their opinions from a single session
- Individuals give input on (initial) stages of a study or product design or a marketing strategy

Panels

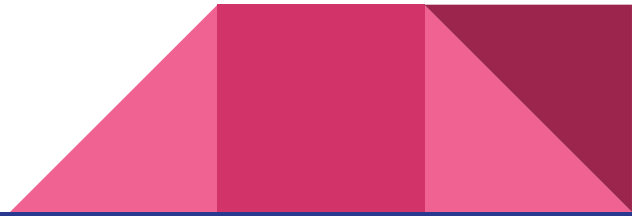
- Continuous – you meet multiple times to see how feelings evolve
- Can be trained at a task that requires subtle perception, like perfume evaluation

Tips

Debrief

Ask people questions at the end of the study

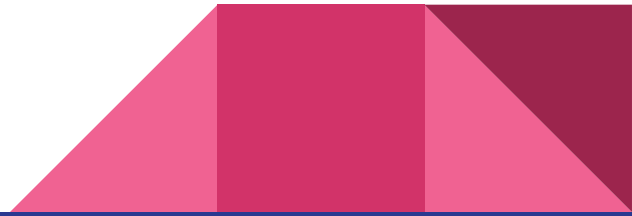
- Find out if they could figure out what you were studying (not good)
- Test if they understood
- Make sure everything is working



Tips

Beware of participant bias

- Question order bias
  - Example: people get bored and don't take the last few questions seriously
- Social desirability bias
  - People don't want to answer truthfully if they think others will judge them negatively for their responses
- Demand characteristics
  - People alter their response/behavior because they know they're part of a study
- Acquiescence bias
  - People agree with most questions you ask



UX Research

Lesson 5: Sampling Theory

The Erdős Institute

Sampling Theory

Goal

Get a subset of people that accurately represent the population they are taken from

- Who are you testing?
- Why are you testing them?
- Who is your customer segment?
- What is the expected result? How does it affect the KPI?

https://dictionary.apa.org/random-sampling

Sampling Theory

- Population
  - Entire group of people you want to study (e.g., all U.S. college swimmers)
  - Characteristic = *parameter* (e.g., average age of all swimmers)
- Sample
  - Subset of people taken from the population (e.g., 500 college swimmers)
  - Characteristic = *statistic* (e.g., average age of sample)

https://dictionary.apa.org/random-sampling

Sampling Theory

- To be a good sample, it needs to be **representative** – accurately reflecting the true population
- If the sample is not representative, the results from your sample can't be **generalized** to the population

https://dictionary.apa.org/random-sampling

Random Sampling

- A process for selecting a sample of study participants from a larger potential group of eligible individuals, such that each person has the same fixed probability of being included in the sample and some chance procedure is used to determine who specifically is chosen. The main value of this form of probability sampling is its positive impact on generalizability and external validity.

- **Example**
  Assign a unique ID# to each person that uses your website (easy, I know). Pick people for the study by using a random number generator.

https://dictionary.apa.org/random-sampling

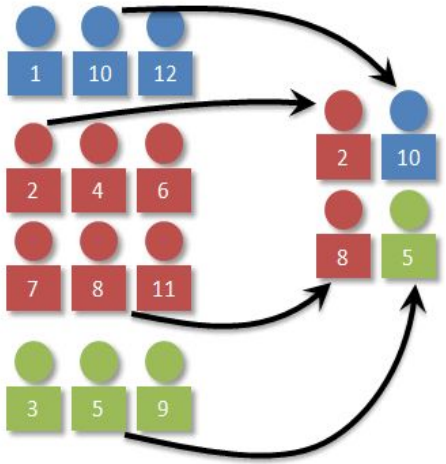
Non-Random Sampling

- Any process of choosing a subset of participants or cases from a larger population in which it is impossible to precisely determine each unit's likelihood of being selected
- Affects generalizability – your sample won't represent the population, but you won't know how different your sample and the population are!
- **Example**
  Have a "family and friends" trial period for a product before it is launched to the public.

https://dictionary.apa.org/nonprobability-sampling

Stratified (Random) Sampling

- The process of selecting a sample from a population comprised of various subgroups (strata) in such a way that each subgroup is represented
- You need a list of all people in the population with their associated stratum



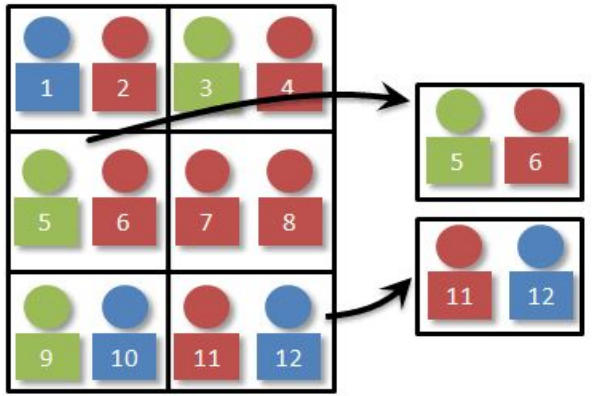
Examples of Strata:

- Gender identity
- Age
- How they found your website
- Purchase history
- Income

https://dictionary.apa.org/stratified-sampling
https://faculty.elgin.edu/dkernler/statistics/ch01/1-4.html

Cluster (Random) Sampling

- A tiered method of obtaining units for a study. A population is first subdivided into smaller groups or clusters (often administrative or geographical), and a random sample of these clusters is drawn. The process is then repeated for each sampled cluster until the required level is reached.



https://dictionary.apa.org/cluster-sampling
https://faculty.elgin.edu/dkernler/statistics/ch01/1-4.html

Convenience (Non-Random) Sampling

- Collect data from people who happen to be nearby and/or are available (students in your class, the next 1,000 people that visit your website, friends and family)

Volunteer (Non-Random) Sampling

- Advertising your study, paying people for taking your study, providing other incentives (like food) for taking your study

Snowball (Non-Random) Sampling

- Getting a few people from a certain network to take your study (e.g., your place of worship, your company, your Facebook friends.
- These first few people then spread the word to others in the network. Then the new people spread the word in the network, etc., etc.
- The sample size increases as the word spreads throughout the network.

Screening

- **Screening** = filtering all possible participants to the ones you will use for your study
  - **Inclusion criteria**: traits you must have
  - **Exclusion criteria**: traits that disqualify you

Screening

- Ensuring that the participants meet certain criteria that enables them to give meaningful feedback
  - Demographics (age, gender, education level)
  - Behavioral / Attitudinal Traits
  - Psychographics (lifestyles, interests)

Note: don't ask them any information about the research question to avoid bias

Screening

- Ensuring that the participants meet certain criteria that enables them to give meaningful feedback
  - Demographics (age, gender, education level)
  - Behavioral / Attitudinal Traits
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- Distractor questions conceal the purpose of the study, but can make sure participants are paying attention

Note: don't ask them any information about the research question to avoid bias

Screening

For video games:

- ***If you had two hours to spend on a rainy afternoon, what would you do?***
  - Read a book
  - Play a video game
  - Cook a meal
  - If ‘read’ or ‘cook’, exclude

- ***Have you ever played our game?***
  - If ‘no’, exclude

Screening

- **Recruitment platforms**
  - MTurk
  - Prolific
  - RecruitLoop

Building a Sample

Depends on:

- Research goals
  - *Exploratory*: smaller sample
  - *Confirmatory*: larger sample
- Methodology
  - *Qualitative*: smaller sample
  - *Quantitative*: larger sample
- Variability in population
  - *Homogeneous*: smaller sample
  - *Heterogeneous*: larger sample

Building a Sample

- Define the population
- Determine the sample size
  - Population size
  - *Confidence* in the results
  - Variability in the population
- Choose sampling method
  - Think about sampling bias
- Get sampling frame (list of names)
- Draw the sample
  - Think about access bias, non-response bias, survey language bias, etc.