UI/UX Design Portfolio Content(ARTICLE):

INTRODUCTION:

Immerse yourself in the captivating realm of UX research, where hidden gems of knowledge unlock extraordinary insights and pave the way for highly usable user interfaces. In this article,

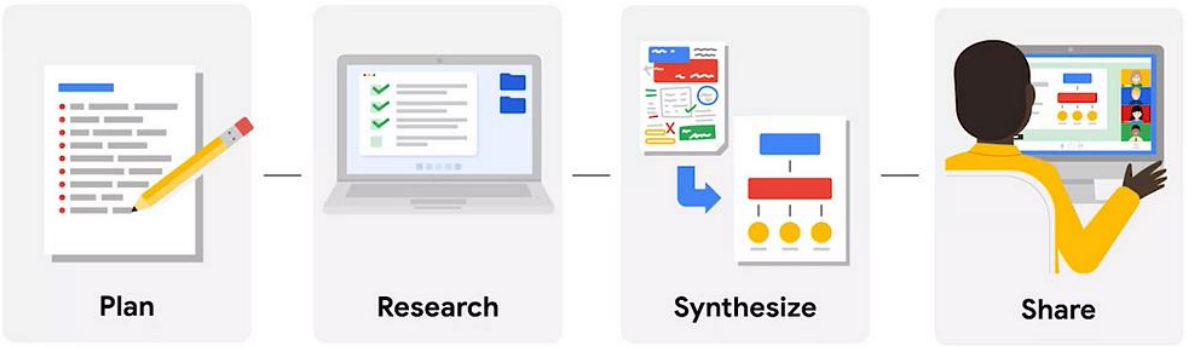
I share my consolidated notes and valuable learnings from my experiences, including the key topics: strategic planning of research studies, mastering usability testing, synthesizing observations into actionable insights, and refining designs based on invaluable research findings. Read on to learn more.

Explore all my complete article series for learning UI/UX Design:

1. Foundations of User Experience (UX) Design
2. Start the UX Design Process: Empathize, Define, and Ideate
3. Build Wireframes and Low-Fidelity Prototypes
4. Conduct UX Research and Test Early Concepts
5. Create High-Fidelity Designs and Prototypes in Figma
6. Responsive Web Design in Adobe XD
7. Design a User Experience for Social Good & Prepare for Jobs

Week 1: Planning UX research studies

Understand the UX research process



The four steps in a UX research study

- A **research study** in UX is a step-by-step examination of users and their needs, adding realistic context to the design process.
- ***Planning*** *the study* involves outlining the project background, setting research goals and questions, determining the study steps, and selecting participants.
- ***Conducting*** *the research* involves gathering data, focusing on usability studies to assess how users interact with designs and identify pain points.
- ***Analyzing*** *and* ***synthesizing*** *results* involves finding meaning in the data, looking for patterns in quantitative data and exploring trends in qualitative data.
- ***Sharing*** *and* ***promoting*** *insights* with stakeholders is essential, involving creating a presentation that includes the research method, collected data, conclusions, and recommendations.

Conducting a UX research study is important to prioritize the user, gain an understanding of user problems, and bridge the gap between business assumptions and user needs.

The seven elements of a UX research plan

Elements of a UX research plan

- *The project background* briefly explains why the research is being conducted.
- *Research goals* identify the design problems to be solved and how the research findings will impact design decisions.
- *Detailed research questions* help answer specific inquiries, such as user behaviour or user flow.
- *Key performance indicators (KPIs)* are used to measure progress toward research goals, such as the percentage of users who successfully finish a particular given task in a given time frame.
- *The methodology* outlines the steps for data collection and analysis, such as conducting surveys and using spreadsheets to identify trends.
- *Research participants* should be carefully selected based on their characteristics and alignment with research goals, avoiding bias in the results.
- *Scripting questions* for participants ensure the discussion guide aligns with the KPIs being measured.

Creating a UX research plan

Project background:

- Summarize the situation that led to the research.
- Establish a common understanding among the team.
- Explain why the research is necessary.
- Mention previous research and insights.
- Keep it concise.

Research goals:

- Specify what you want to learn or achieve through the research.
- Vary depending on the project phase (foundational, design, post-launch).
- Drive the entire study.
- Provide focus and structure.
- Align with the research type (quantitative or qualitative).

Research questions:

- These are not literal questions for participants but the questions you want the research to answer.
- It should be actionable and specific. Writing effective research questions helps in gathering meaningful data.
- Neutrally phrased and not leading.
- Guide the research and determine the research method (quantitative research or qualitative research). Consider both research methods for a comprehensive understanding.
- The research questions will be the main topics covered in the presentation.

Key Performance Indicators (KPIs):

- They are measures of progress in research.
- Choose relevant KPIs aligned with research goals.
- Ideal KPIs should measure progress toward a research goal, reveal meaningful insights into user behaviour and provide actionable feedback about how the design is performing.

Seven important KPIs for UX research:

1. ***Time on task:*** Measures how long it takes users to complete a task.
2. ***Use of navigation vs search:*** Compares user preference for site navigation or search functionality.
3. ***User error rates:*** Identifies design elements causing errors and areas for improvement.

4. ***Drop-off rates:*** Shows how many users abandon the experience before completion.
5. ***Conversion rates:*** Percentage of users who complete a desired action.
6. ***System Usability Scale (SUS):*** Questionnaire to measure usability with statements and rating scale.
7. ***The Net Promoter Score (NPS)*** *measures* how loyal users will be to your product or service. The NPS measures the likelihood of a user recommending your product to a friend or colleague.

Methodology:

- It involves the steps to conduct research, collect data, and analyze data.
- Consider the research method, steps, and data type.
- Include the procedures for the test, the time and location, and who is conducting the test.

Participants:

- Consider the characteristics of participants based on research goals and target users.
- Use a screener survey to determine if potential participants meet the study's requirements.
- Collect feedback from participants with diverse backgrounds and abilities to ensure accessibility and equity.
- Seek participants who use specific assistive technologies relevant to the study.
- Aim for a representative sample of participants, including both target and marginalized user groups.
- Recruitment methods include an existing user base, online platforms, hallway testing, and incentives.
- Five to eight participants are typically sufficient for a usability study.

Script:

- Ensures consistency and prevents forgetting important instructions during the usability study.
- Writing well-thought-out interview questions is crucial for obtaining valuable insights.
- Ask the same set of open-ended questions to understand users' goals, thoughts, and problems with consistency.
- Encourage elaboration by asking follow-up questions to gather more detailed information.
- Approach the same question from different angles to uncover deeper insights.
- Avoid mentioning other users and asking leading questions to prevent bias in participants' responses.
- Usability tasks should be specific and action-oriented and not provide hints on how to complete them.
- The script for a usability study includes welcoming participants, obtaining consent for recording, gathering basic participant information, clarifying the goal of providing honest feedback, addressing participant questions, presenting usability tasks, and wrapping up the study.

Make privacy a part of UX practices

Importance of keeping user data private:

- Ethical responsibility and acting with integrity.
- Compliance with privacy laws and regulations.
- Protection against hacking and data breaches.
- Safeguarding the company's brand and maintaining user trust.

Types of data that need to be protected:

- Personally Identifiable Information (PII): names, addresses, emails, phone numbers,
- Sensitive Personally Identifiable Information (SPII): social security numbers, financial account numbers, medical information, etc.

Best practices for ensuring user privacy:

- Transparently communicate data collection practices.
- Collect only essential data for the study.
- Obtain active consent from participants.
- Explain how data will be used and protected.
- Allow participants to withdraw at any time.
- Inform users about data access by others.
- Clearly define data storage and deletion policies.

Privacy concerns related to research data:

- Data recording: consistent documentation for future reference and audits.
- Data storage: secure storage to prevent hacking and physical damage.
- Data retention: adhere to regulations and company policies on data retention.
- Data ownership agreement when leaving the company.

Tools for maintaining privacy:

- De-identification: removing identifying information from user data during sharing and analysis.
- Non-Disclosure Agreement (NDA): a legal protection against idea theft when participants test confidential products or features.

Week 2: Conducting research with usability studies

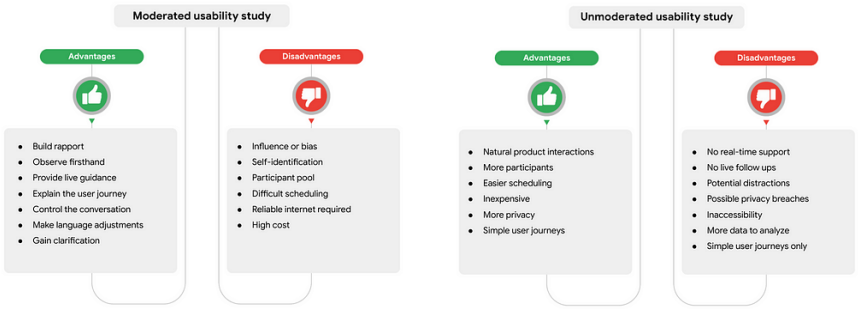
Language and communication in UX research

- The language used in research affects participants' language and comfort level, so appropriate language is essential for understanding their perspectives.
- Understanding your own biases and being aware of different language varieties and expressions is essential to avoid misinterpretation in research and create an inclusive environment.
- Considering the research context, including physical space and cultural differences in communication styles, helps establish an equitable dynamic and fosters effective communication with participants.

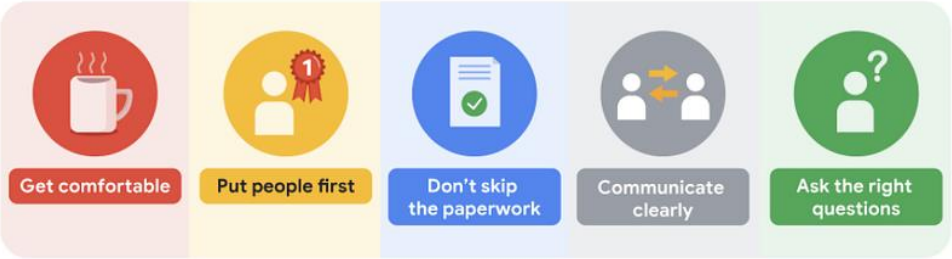
The best practices for effective communication in UX Research is to: be equitable, be inclusive, be honest, be neutral and be a team player.

Conduct usability studies

- Usability studies assess how easily participants can complete core tasks in a design. It involves participants navigating the design and providing feedback.
- Usability studies can be conducted at different stages of the design process: concept testing, interactive prototype testing, or testing a complete product.
- Moderated usability studies have a moderator guiding participants in real-time, allowing for specific questions and follow-ups.
- Unmoderated usability studies do not have a designated moderator, and participants test the prototypes independently.
- The choice between moderated and unmoderated usability studies depends on the study's scope, goals, and participant characteristics.



Moderated vs unmoderated usability studies



Effective techniques for conducting usability studies

- Usability studies benefit from diverse participants with varying abilities and backgrounds.
- *"Get comfortable"* involves establishing a friendly rapport with participants, asking ice-breaker questions, expressing gratitude for their participation, and ensuring a physically comfortable study environment. Emphasize the potential impact of their feedback and assure them that constructive criticism is welcome.
- *"Put people first"* means using participants' preferred pronouns, addressing them directly even when an interpreter is present, using people-first language, and actively including marginalized communities in research.
- *"Don't skip the paperwork"* includes having participants sign a non-disclosure agreement and obtaining consent for recording sessions, especially for minors.
- *"Communicate clearly"* involves explaining the study's focus, providing a preview of the session, introducing the think-aloud method, emphasizing honesty and non-testing, summarizing participants' feedback, and confirming understanding.
- *"Ask the right questions"* includes using consistent questions, asking open-ended and "why" questions, encouraging elaboration and multiple angles, avoiding mentioning other participants, and avoiding leading questions.

Five common types of bias in UX research

1. *Confirmation bias:* Focus on information that matches pre-existing beliefs.
2. *Leading questions:* Framed to guide participants to respond in a certain way.
3. *Friendliness bias:* Participants agree to maintain a non-confrontational conversation.
4. *Social desirability bias:* Answer in a way viewed favourably by others.

5. *Hawthorne effect:* Act differently when aware of being watched.

- Identifying and becoming aware of biases is essential to minimize their effects.
- Biases that moderators might have include implicit bias, serial position effect, friendliness bias, and social desirability bias.
- Participants can also experience biases such as the serial position effect and friendliness bias.

Tips to overcome biases:

- Recruit an appropriate sample size to reduce confirmation bias.
- Avoid leading questions, and encourage participants to think aloud.
- Be honest and engaged in overcoming friendliness bias.
- Conduct 1:1 interviews, and ensure confidentiality to fight social desirability bias.
- Create a non-threatening environment, and establish rapport to avoid the Hawthorne effect.
- Defining research criteria beforehand.
- Be mindful of body language.

Note-taking methods during usability studies

- Note-taking during a usability study is essential to capture thoughts, observations, and participant experiences.
- Participants' body language, tone of voice, and word choice can provide valuable insights.
- Taking notes helps summarise participants' experiences, identify issues, and capture compelling quotes.
- Notes should be organized using a spreadsheet, with categories for tasks, click path, observations, quotes, and task completion.
- Participants' behaviours, feelings, pain points, and direct quotes should be recorded.
- Assess the ease or difficulty of participants in completing each task.
- Additional observations can be added in extra rows of the spreadsheet template.

Week 3: Analyzing and synthesizing research results

From observations to insights

- Synthesizing feedback and data involves combining ideas to draw conclusions and grouping data into themes.
- Insights are observations about users that help understand their needs and guide design improvements.

Steps to turn research observations into actionable insights:

1. Gather all data from the usability study.
2. Organize the data using methods like affinity diagramming or spreadsheet note-taking.
3. Identify common themes in the data.
4. Develop insights for each theme to guide design improvements.

Gather and organize data

- Affinity diagramming is a method to organize data into groups with common themes or relationships.
- Affinity diagramming involves using sticky notes to represent observations.
- Cluster sticky notes together based on related ideas or themes.
- Adjust clusters as needed and set aside any unrelated sticky notes.

Patterns and themes in research data

- Look for groupings of three to five sticky notes in the diagram.
- Identify patterns in the groupings which represent themes.
- Connect the patterns to the user's experience to understand the product design implications.
- Expand on the patterns to develop themes that capture the user's perspective.

Qualities of strong insights

- Strong insights are based on actual data, not personal feelings, and are supported by multiple pieces of data.
- Insights that apply to multiple study participants are more potent, although outliers should also be considered.
- Tie your insights to the research questions to highlight their relevance.
- Use simple language that is easy to understand for stakeholders who may not have been involved in the study.
- Strong insights increase empathy for the user experience, fostering team engagement and commitment to improvement.
- Strong insights inspire direct action by identifying problems and suggesting solutions.

Week 4: Sharing research insights for better designs

Organize insights for sharing

- Two standard formats for sharing insights are presentations (high-level overview) and research reports (detailed information).

Tips for creating a solid presentation:

- Know your audience and tailor the presentation accordingly.
- Provide an overview and executive summary.
- Tell a story with examples of actual users.
- Use numerical data, graphs, and charts to illustrate important insights.
- Keep text minimal and to the point.
- Include recommendations for the next steps.
- Leave time for questions at the end of the presentation.

Template to create a presentation to share research insights

- Title of the presentation.
- Date of the presentation.
- Team members involved in the usability study.
- Study Details: research questions, number of participants and their characteristics, methodology, and procedure.
- Theme section: central theme and supporting evidence, including using quotes from participants.
- Summary of insights: Prioritize important issues and address inequitable or inaccessible aspects of the design. categorize insights into priority levels like P0, P1, and P2, to guide design changes effectively.

— Priority 0 (P0) insights: Fix issues that prevent main user flow completion, address deceptive patterns, and ensure equity and accessibility.
— Priority 1 (P1) insights: Enhance user experience without affecting main flow, consider for future prototypes.
— Priority 2 (P2) insights: Issues of lower importance and can be addressed farther in the future.

- Recommendations: Actions that the stakeholders should take based on the study. Try to include at least three.
- Thank you slide.
- Appendix: additional data slides (e.g., participant characteristics) for reference, not part of the presentation.
- Overall, the presentation aimed to showcase research findings and allow the audience to understand and act upon the insights gained.

Tips for delivering a successful presentation:

- Be concise and stick to the main points.
- Maintain a conversational tone.
- Use relatable stories and examples.
- Embrace natural pauses to display confidence.
- Make eye contact with the audience.

Modify low-fidelity designs based on insights

- Update designs based on insights to enhance user experience and address the pain points discovered in usability studies.
- Follow the established prioritization while modifying mockups.
- Update wireframes, not the low-fidelity prototype, analogous to editing the words in a book, not changing the binding.
- Reconnect wires to turn designs back into a low-fidelity prototype.

Conclusion

The '*Conduct UX Research and Test Early Concepts'* course provides a comprehensive understanding of the UX research process, from planning and executing a usability study to analyzing findings and translating them into actionable insights. It emphasizes effective communication of research insights and the importance of iterating on feedback-based designs. Integrating research-driven insights with creative design elements enables the creation of an engaging and user-centred app experience.

USER EXPERIECE **UX DESIGN** **DESIGN SPRINT** **UX FRAMEWORK**

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