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202302 Guided Research Grad I

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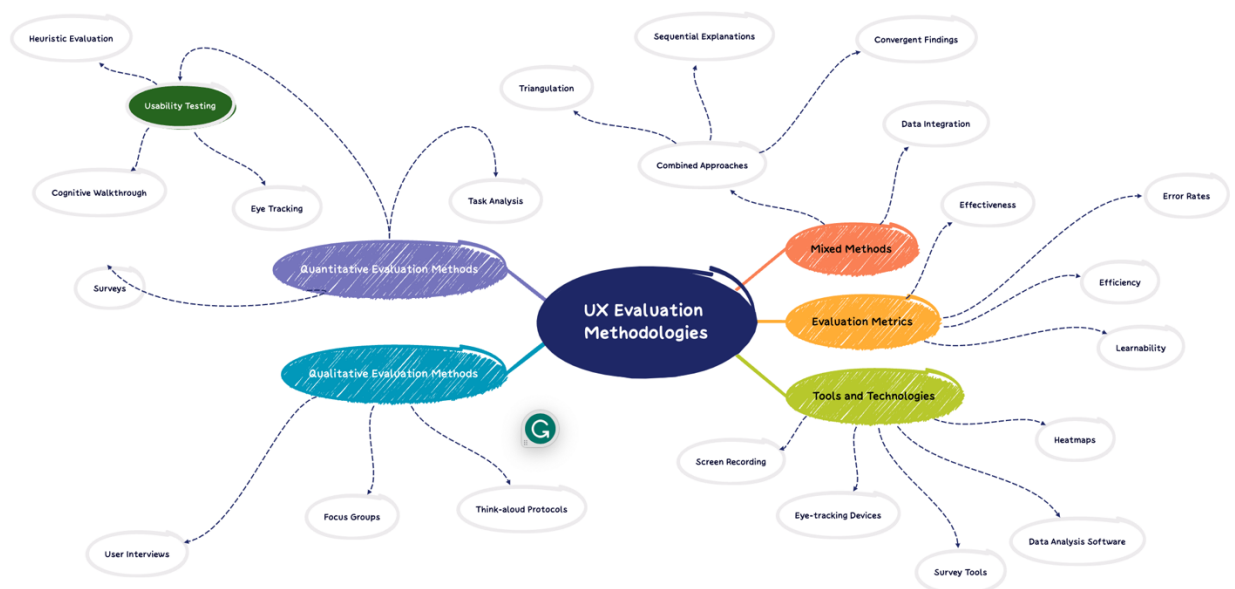
User Experience (UX) Evaluation Methods

1. It is beneficial to use both qualitative and quantitative methods for User Experience (UX) evaluation. This approach, known as ***mixed-methods research***, allows us to gather rich insights from qualitative data while also obtaining quantitative data for statistical analysis and broader generalizations.

Qualitative methods, such as interviews, focus groups, and usability testing, can help to understand users' experiences, perceptions, and attitudes in-depth. These methods provide rich qualitative data that allows for capturing nuances, identifying patterns, and exploring participants' subjective experiences.

Quantitative methods, on the other hand, involve collecting numerical data that can be analyzed statistically. This can include measures like Usability testing – heuristic evaluation, cognitive walkthrough, eye tracking, etc. Quantitative data can provide a more structured and measurable view of UX, enabling you to analyze trends, compare groups, and draw more generalizable conclusions.

By combining both qualitative and quantitative methods, we can gain a comprehensive understanding of the user experience. This approach allows us to triangulate findings, validate results across different methods, and obtain a more holistic perspective on UX evaluation. Here is a flow diagram with mixed methods.



2. Strategy for the Data Collection:

<u>Step</u>	<u>Description</u>
1.	Define Research Objectives: Clearly outline the research objectives and questions you aim to address through UX evaluation.
2.	Determine Data Collection Methods: Select appropriate data collection methods based on your research objectives. Common methods include: Surveys, Interviews, Focus Groups, Observations, Usability Testing, Biometric Measures, Log Analysis.
3.	Develop Research Instruments: Prepare the necessary research instruments, such as interview guides, survey questionnaires, observation protocols, or usability test scenarios.
4.	Recruit Participants: Determine the target user group and recruit participants who represent your intended user base. Consider criteria such as demographics, experience levels, or specific characteristics relevant to your research.
5.	Data Collection Process: Conduct data collection sessions using the selected methods. Ensure participants feel comfortable and that the environment supports natural and authentic user experiences.

<u>Step</u>	<u>Description</u>
6.	Data Analysis: Perform a detailed analysis of the collected data. Use qualitative methods (thematic analysis, content analysis) for qualitative data and statistical analysis techniques for quantitative data.
7.	Triangulation and Integration: Integrate findings from multiple data sources and methods to enhance the comprehensiveness and validity of your findings.
8.	Iterative Process: Use insights gained from data analysis to refine research questions or make necessary modifications to improve the user experience.

3. In the process of collecting and analyzing data for our User Experience (UX) evaluation, we encountered several challenges that required data cleansing and resolution. Some of the problems we faced include:
 - ⇒ Missing Data: During data collection, we observed instances where participants did not respond to certain survey questions, resulting in missing values within the dataset. To ensure data completeness, we implemented strategies to address and handle these missing values appropriately.
 - ⇒ Outliers: While analyzing the collected data, we identified extreme values that deviated significantly from the majority of the data points. Recognizing the potential impact of outliers on the analysis and interpretation of our UX evaluation findings, we applied appropriate techniques to manage and address these outliers.
 - ⇒ Inconsistent Responses: Participants provided responses that were occasionally inconsistent or contradictory, posing challenges in drawing meaningful conclusions from the data. To overcome this, we carefully reviewed and resolved any inconsistencies, ensuring data quality and coherence.
 - ⇒ Data Entry Errors: During the data entry phase, we encountered errors such as typos or coding mistakes. Recognizing the significance of accurate data entry, we thoroughly validated the data, corrected any errors, and ensured data integrity.

- ⇒ Skewed or Biased Data: While examining the collected data, we discovered that the sample of participants might not have been fully representative of the target population. Understanding the potential biases that could arise, we carefully considered the limitations and biases when interpreting the results of our UX evaluation.
- ⇒ Data Formatting Issues: The data we gathered exhibited inconsistencies in formats or naming conventions, making it challenging to perform consistent analysis. To address this, we standardized the data formats and harmonized naming conventions to facilitate a more coherent and reliable analysis.

By acknowledging and addressing these challenges, we have taken essential steps to ensure the reliability, validity, and integrity of the data used for our UX evaluation. Our efforts in data cleansing and resolution contribute to the robustness of our findings and the overall quality of our project.