Unit 4

UX Evaluation methods

UX Evaluation methods

- Data Collection techniques –
- UX evaluation methods;

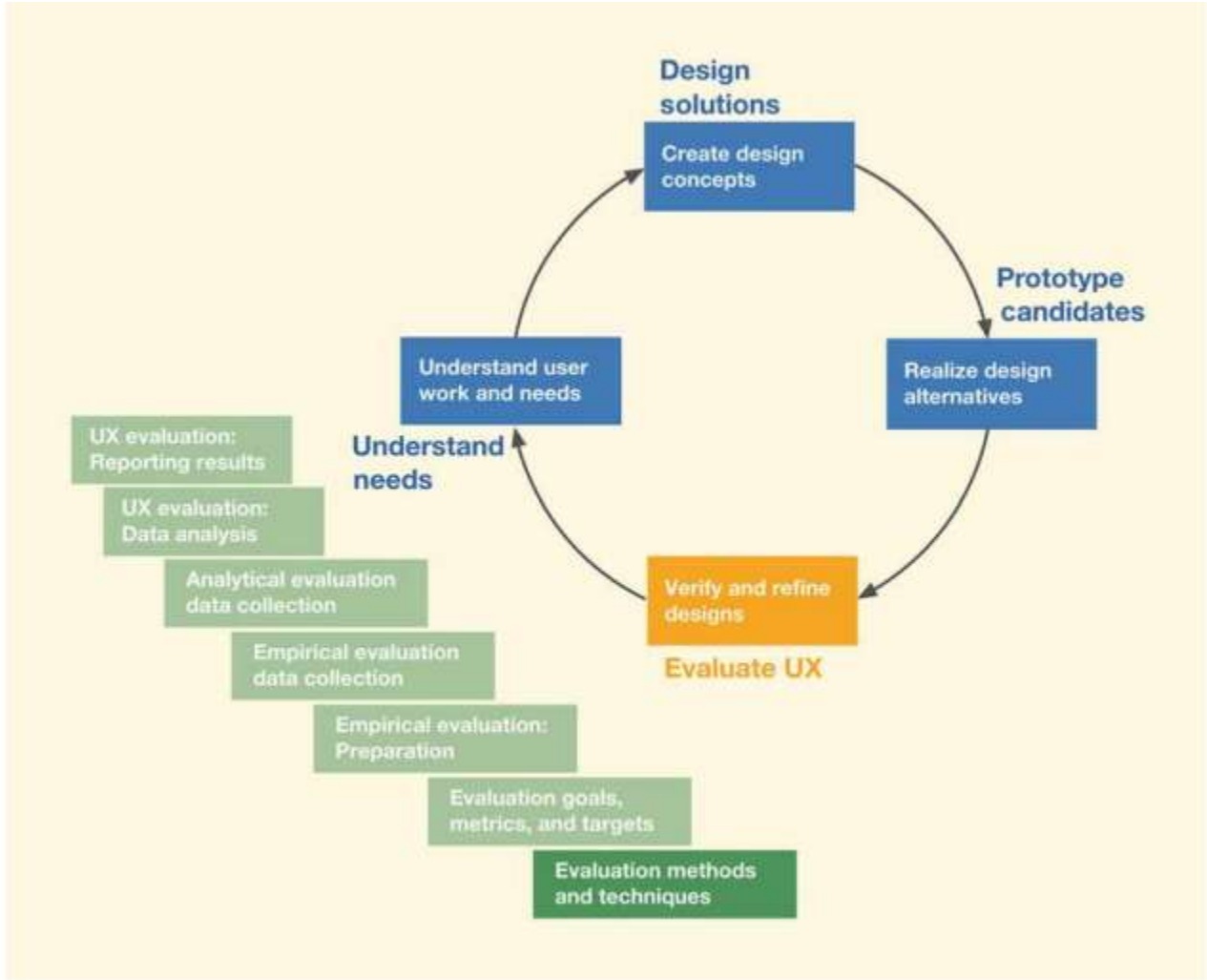


Fig.

You are here in the upfront chapter on UX evaluation methods and techniques for evaluation within the Evaluate UX lifecycle activity in the context of the overall Wheel lifecycle template.

Wheel lifecycle template.

UX Evaluation methods

- 1. Methods versus Techniques.
  - An evaluation method is a high-level overall way of doing UX evaluation and a technique is usually a lower-level way of doing specific steps within a method.
  - For example, lab-based empirical testing with users is an evaluation method.

UX Evaluation methods

- 2. User Testing? No!
  - Users are participants who help us test or evaluate UX designs for usability or user experience, but we are not testing the user.
  - Invite volunteers to join our team and help us evaluate designs.

UX Evaluation methods

- 3. Types of UX Evaluation Data
  - UX evaluation data can be objective or subjective and it can be quantitative or qualitative.
  - Practically, the two dimensions are orthogonal, so both objective and subjective data can be either qualitative or quantitative.
  - For example, questionnaire results are usually both subjective and quantitative.
  - Quantitative data are numeric data, usually from measurements, used to assess a level of achievement.
  - Qualitative data are nonnumeric descriptive data used to find and fix UX problems.

UX Evaluation methods

- 3. Types of UX Evaluation Data
  - Quantitative data
    - Quantitative data are the basis of the informal summative evaluation component and help the team assess UX achievements and monitor convergence toward UX targets, usually in comparison with the specified levels set in the UX targets.
  - Qualitative data
    - Qualitative data are nonnumeric descriptive data used to find and fix UX problems.
    - Qualitative data, the key to identifying UX problems and their causes, are usually collected via critical incident identification, the think-aloud technique, and UX inspections methods.

UX Evaluation methods

- Objective UX data
  - Objective UX data are data observed directly.
  - Objective data arise from observations by either the UX evaluator or the participant.
  - Objective data are always associated with empirical methods.
- Subjective UX data
  - Subjective UX data represent opinions, judgments, and other feedback.
  - Subjective data originate from opinions of either UX evaluator or participant, concerning the user experience and satisfaction with the design.

UX Evaluation methods

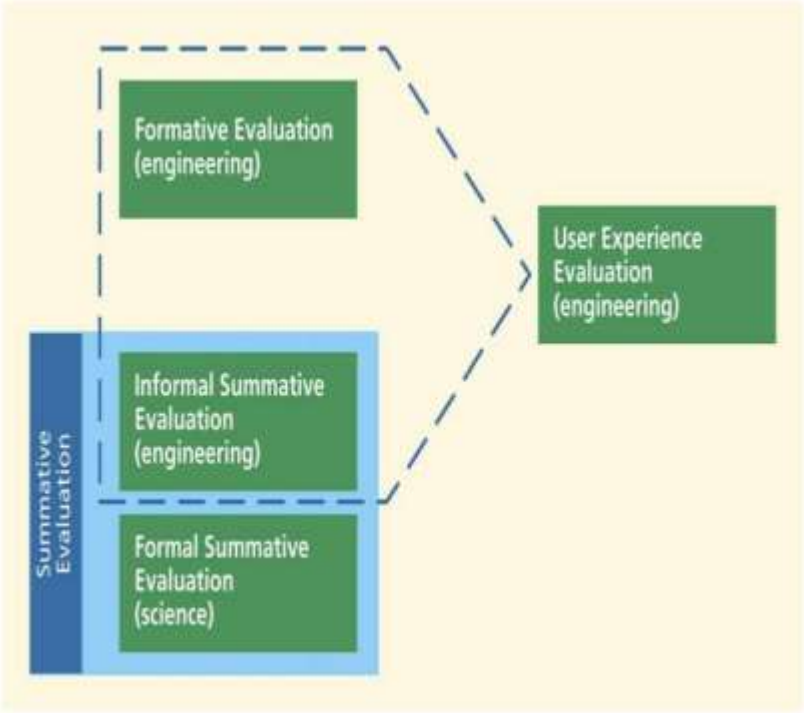
- Formative UX evaluation is diagnostic UX evaluation using qualitative data collection with the objective to form a design, that is, for finding and fixing UX problems and thereby refining the design.
- Summative UX evaluation is defined to be UX evaluation with the objective to sum up or assess the success of a UX design.
- Summative UX evaluation includes both formal and informal methods.
- A formal summative (quantitative) UX evaluation method is an empirical method that produces statistically significant results.
- An informal summative UX evaluation method is a quantitative summative UX evaluation method that is not statistically rigorous and does not produce statistically significant results.

UX Evaluation methods

- Formal summative evaluation is based on an experimental design for controlled comparative hypothesis testing using an m by n factorial design with y independent variables, the results of which are subjected to statistical tests for significance.
- Formal summative evaluation is an important HCI research skill, but in our view it is not part of UX practice.
- As an example of a design change that is probably not (by itself) measurably better in terms of usability but is arguably better, consider a particular button label.
- If the whole team agrees that the old button label was vague and confusing and the new button label is clear and easily understood, then the team probably should make that design change.

UX Evaluation methods

Formal Summative UX Evaluation	Informal Summative UX Evaluation
Science	Engineering
Randomly chosen subjects/participants	Deliberately nonrandom participant selection to get most formative information
Concerned with having large enough sample size (number of subjects)	Deliberately uses relatively small number of participants
Uses rigorous and powerful statistical techniques	Deliberately simple, low-power statistical techniques (e.g., simple mean and, sometimes, standard deviation)
Results can be used to make claims about "truth" in a scientific sense	Results cannot be used to make claims, but are used to make engineering judgments
Relatively expensive and time consuming to perform	Relatively inexpensive and rapid to perform
Rigorous constraints on methods and procedures	Methods and procedures open to innovation and adaptation
Tends to yield "truth" about very specific scientific questions (A vs. B)	Can yield insight about broader range of questions regarding levels of UX achieved and the need for further improvement
Not used within a UX design process	Intended to be used within a UX design process in support of formative methods



Data Collection Techniques

- Quantitative Data Collection techniques
- Objective data :
  - Performance measures taken during UX testing with user participants. E.g. time to complete a task.
- Subjective data
  - Questionnaires or user survey to gather subjective data about how users view the design.
  - Questionnaires are simple to use, for both analyst and participants, and can be used with or without a lab.