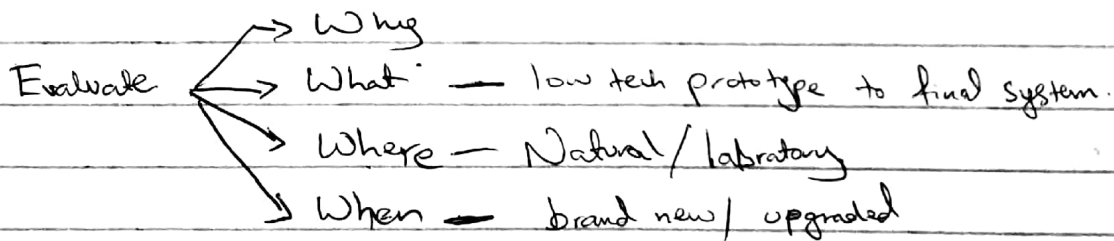


Lec 31-33

- Evaluation focuses on
 - usability (how easy to use & learn)
 - user experience (satisfying, enjoyable)
- Evaluation involves
 - observing participants
 - measuring their interactive performance
 - modelling of user behaviour.
- Nielson Norman Group → User exp. meets the exact need of the customer
 - Then focus on simplicity and elegance.



FORMATIVE EVALUATION: Evaluation during design

SUMMATIVE EVALUATION: Evaluation when design complete

Analytical Evaluation — heuristic evaluation, walkthroughs, modeling, analytics

Controlled Exp. — controlled timing / environment

Crowd-sourcing — web based evaluation by millions of people.

Expert review / crit — review looking for problem

Field study — Evaluation in natural setting

Heuristic evaluation — Knowledge of typical users is applied

In the wild study — product / prototypes observed in everyday context.

Usability testing — measuring user's performance on various tasks

Validity — Whether evaluation method measure what it is intended to measure.

Types of Evaluation

- ↳ Controlled Setting
- ↳ Natural Setting
- ↳ Settings not involving users.

Testing Questions

- ↳ Setting used in the experiment?
- ↳ How much control did the evaluator exert?
- ↳ Which methods were recorded and when?

Evaluation Methods

Method	Controlled Setting	Natural Setting	Without user
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Observing

Asking users

Asking experts

Testing

Modeling

Lec 34-36

- Controlled Setting
 - ↳ Usability testing & experiments
- Natural Setting
 - ↳ Field studies
- Setting not involving users
 - ↳ Inspection, heuristics, walkthrough, models, analytics.

User Studies = Looking at how people behave in natural environment / Laboratory / old tech / new tech

Evaluation paradigm = set of belief under-pinned by theory

4 EVALUATION PARADIGM

- ① Quick & Dirty — informally get feedback — quick — 15 users — 100%
5 users — 85%.
- ② Usability testing — measure user's performance on typical task for what it was designed for.
 - ↳ no. of errors
 - ↳ user performance — controlled
 - ↳ questionnaires / interviews
 - ↳ strongly controlled by evaluator.

③ Field Studies — Natural setting.

What users do naturally and how technology impacts them.

④ Predictive evaluation — Heuristic evaluation, walkthroughs

↳ GOMS, Fitts law
↳ Predict time, errors

User not need to be present.

DECIDE FRAMEWORK

D — Determine the goals

E — Explore the specific questions.

C — Choose evaluation paradigm

I — Identify Practical issues

D — Decide to deal with ethical issues

E — Evaluate, interpret, present data

USABILITY TESTING

↳ Real direct input on how real users use your

Product, website, software.

- Step 1 - Preparation (notebook, computer etc)
- Step 2 - Invitation (5-6 relevant participants)
- Step 3 - Know your role
- Step 4 - Conduct the test

— Xerox corporation conducted series of tests to determine what would the optimal number of buttons on mouse be.

— Typically 5-10 participants enough. Some experts say until no new insights gained, continue testing.

— Glanceable Display — UbiFit Garden

Lec 37-40

- Heuristic evaluation is a review guided by set of usability principles known as heuristics.
- Walkthroughs involve stepping through a pre-planned scenario noting potential problems.
- Developed by Jacob Nielsen (Heuristics)

Severity Ratings

- 0 = don't agree if this is a usability problem
- 1 = cosmetic problem (agar time hua to dekhin ge)
- 2 = Minor usability problem
- 3 = Major usability problem
- 4 = Usability catastrophe

10 Usability HUERISTICS

- 1) Visibility of system status
- 2) Match b/w system and real world
- 3) User control and Freedom
- 4) Consistency and Standards
- 5) Error Prevention
- 6) Recognition rather than recall
- 7) Flexibility and efficiency of use
- 8) Aesthetic and minimalist design
- 9) Helps user recognize/diagnose/recover from errors
- 10) Help and documentation

3 Stages of Hueristic Evaluation

- 1) Briefing session to tell experts what to do.
- 2) Evaluation period of 1-2 hours → Pass 1 - Take the feel
→ Pass 2 - Focus on specific features
- 3) Debriefing session.

COGNITIVE WALKTHROUGH

- ↳ Predicting user's problems without user testing
- ↳ Note down the problematic features
- ↳ How easy is the system to learn?

WALKTHROUGH REQUIREMENTS

- 1) A specification or prototype of the system
- 2) Description of task to perform on system
- 3) A complete written list of actions needed to complete task.
- 4) Indication of who the users are and their knowledge level.

QUESTIONS TO BE ANSWERED AT EACH STEP.

- 1) Is the effect of the action same as user's goal at that point?
- 2) Will users see the action is available?
- 3) Once the user have found the correct action, will they know it is the one they need?
- 4) After the action taken, will the users understand the feedback they get.

(Saving a document example)