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.

- Neielsen Norman Group → User exp. meets the exact need of the customer
  → Then focus on simplicity and elegance.

Evaluate
- Why
- What — low tech prototype to final system.
- Where — Natural / labratory
- When — brand new / upgraded

FORMATIVE EVALUATION : Evaluation during design

SUMMATIVE EVALUATION : Evaluation when design complete

Analytical Evaluation — Hueristic 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

Hueristic 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 evaluators exhert?
- Which methods were recorded and when?

Evaluation Methods

Method	Controlled Setting	Natural Setting	Without user
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 tasks 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.
- Develope by Jocob Neilsen (Heuristics)

Severity Rating

0 = don't agree if this is a usability problem
1 = cosmetic problem (agar time hua to dekhein 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 minimilist design
9) Helps user recognize/diagnose/recover from errors
10) Help and documentation

3 Stages of Hueristic Evaluation

1) Breifing 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) Debreifing 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)