

# HCI 3/10

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## Usability Testing

### Designing Usability Tests

- Scripts
  - Explicit, step-by-step instructions that we should follow during each participant test
  - Goal is to keep consistency between sessions (it's a control)
  - They need to involve careful writing and *practice*
    - \* You want to smooth out variations between moderators, participants, and sessions
    - \* Projects professionalism to your participants
  - You want to cover as many details and contingencies as possible, esp. frustration
    - \* Will we intervene if the user gets frustrated? Will we interject to help them along in the task?
    - \* Greeting - introductions of who you are and what you're doing, set the stage of the experiment, *obtain consent*
    - \* Interview - questions to warm up and learn about relevant experience
    - \* Instruction - explain set up and provide directions for tasks, clarify as needed
    - \* Monitoring - elicit responses, record observations, ask for impressions
    - \* Debriefing - thank the person and allow for a brief interview with follow up questions (both ways)

### Running Usability Tests

- Pilot Tests (dry runs)
  - You want to make sure everything is doable and that you're able to stick to the script *before* real tests
  - You want to use objective participants if possible, otherwise team members will suffice
  - Like debugging
- Test Materials
  - Write check lists for equipment and individual responsibilities (make sure you know what you need and who is doing what)
  - Make backup plans for equipment, software, recording media, extra forms
  - Create folders for consent/info/text/questionnaire forms for each participant
- Style
  - Be professional
  - Make sure you're not unintentionally modifying the test from participant to participant
    - \* Don't fix issues between participants
- Phases
  - Slightly different than the design phases
  - Before: greet, have them sign a consent form, fill out a pre-test questionnaire
  - During: maintain a check list for each task, note task problems and ideas
    - \* But **don't implement** them until you're entirely done with the whole phase of usability testing
  - After: debrief with interview/questionnaire, thank/compensate, collect data
  - Between: reset your test environment to the **exact same thing it was before** for the next participant

## Usability

- Learnability: ease of learning. The speed of new user training for basic tasks
- Efficiency: speed of performance. The speed of tasks for experienced users
- Memorability: retention over time. The effort needed to retrain use between sessions
- Error Rate: error frequency and severity. The number of times an error occurs and how much effort it takes to recover from the error
- Subjective satisfaction: user attitude. Regard of the user for the thing
- Which of these things are essential to our project?

## Usability Principles

- Visibility: show the right objects, properties, and processes
- Predictability: have functions that do the expected/obvious
- Memorability: keep things the same during and between uses (appearance, location, context, etc)