Understanding users’ work in context:
Practical observation skills

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Objectives for this tutorial

In this workshop, you will:

- Learn about Structured Observation
- Learn how to do:
  - Naturalistic Observation
  - Contextual Inquiry
  - Artifact Walkthrough
  - Naturalistic Usability evaluation
- Practice doing a Naturalistic Observation and Contextual Inquiry
- Learn how to apply these tools to design
Techniques vary in terms of:

- Behavior vs self report
- Real time vs retrospective
- Active interaction with participant vs passive observation
Limits of self report

- Psychological limits to introspection and recall
- Tendency to give “reasonable” answers
- Overestimation of own motivation to change behavior
- User perspective overly bound by current ways of doing things with current technology
Behavior versus self report

- Strive for observing behavior, but realize you may need self-report to understand what you observe.
- When you rely on self-report, try to make sure it is SITUATED, in context.
- Look for behavioral data that supports (or doesn’t) user statements.
- Remember that user statements can have a ‘life of their own’ for the team.
In reality…

- Most studies combine these techniques
  - Naturalistic Observation and Contextual Inquiry most commonly combined
  - May also add Artifact Walkthroughs or Naturalistic Usability evaluations – often opportunistically
- Distinctions between them can be blurry
Focus: A key element

- “A starting perspective, lens, or viewpoint”
- Directs perception and questioning
- Provides structure for all observation
- Is present whether articulated or not
- Can be shared by team
- Creates shared understanding
Setting focus is critical

- Start by reviewing existing information
- Pay attention to team buy-in
- Understand the team’s design questions but remember that these are NOT the same as the focus
Setting focus is critical (2)

- Keep focus broad enough to scope the area, but narrow enough to be useful in design

- Focus on “higher order” questions
  - e.g., “Process for setting up an account, rather than “Do they use different passwords for different accounts?”
Set focus as a team

- Brainstorm questions, assumptions, ideas
- Record ideas generated on Post-Its™
  - Defer any items that cannot be answered yet
  - Separate out "pet questions"
- Construct "affinity diagram" by grouping related items
- Develop generalized focus statements
Examples of Focus

- For a medical device:
  - Implantation process for a drug pump
- For a printer:
  - How a family uses a computer
- For a Human Resources software application:
  - Selection process for hiring new managers
Naturalistic Usability Evaluations

- Usability evaluations done in the user’s ‘real world’
- Can be pre-planned or opportunistic
- Can be integrated in different ways, e.g.:
  - At different phases of longitudinal study
  - As part of wrap-up (e.g., ‘could you go to www.drty.com and show us how you might use it to find info on HCI?’)
Benefits of Naturalistic Usability

- Scenario is not (necessarily) controlled, but can yield info hard to get in a lab about:
  - More experienced users
  - Real goals
  - Real tasks
  - Using real equipment in real context

- In addition to being useful *a priori*, can strengthen future (lab) evaluations by providing more realistic scenarios
Critical practical issues

- Finding users and recruiting
- Handling logistics
- Managing a team
- Note taking
- Debriefing
Managing a team

- Identify ‘key players’ and invite them to participate
- Cross-functional teams are often most effective, but can be more difficult to handle
- Limit number of members for any given visit (typically) to 4 at most
- Proactively manage team issues
One team or many teams?

- Need consistency across visits to make interpretation possible ("one set of eyes")
- However, ‘new blood’ is also useful
  - New insights
  - New energy
- Ideally, have both by having one person go on all visits, and rotating teams go on individual or sets of visits
Common team issues to manage

- Asking leading or narrow questions
- Taking a techno-centric focus
- Using directive probing
- Being disruptive with questions
- Being overly focused on ‘pet’ questions
- Remembering (only) users’ words rather than behavior or things that match prior expectations
- Trying to teach, answer or justify
Preparing a team for observation

- Enlist their active participation in developing the focus
- Make sure they are all trained in observational techniques
- Assign roles and practice in advance
- Stress that even high-ranking team members have to respect the process
- Tell them you WILL intervene if they don’t ‘behave’ (that’s your job!)
Final topics

- Ethics of observation
- Observing across cultures
- “Rules of the road” for observers
- Misuses of structured observation