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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.dray.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