



T What is Tec-Ed, Inc. • 30 years of user advocacy: - 1/3 UI evaluation and usability research - 1/3 UI design and recommendations - 1/3 user support (help systems, tutorials, documentation) • 15 employees: - human factors/usability specialists - writers, editors, instructional designers - graphic designers 3 offices: • - Ann Arbor, MI - Palo Alto, CA - Rochester, NY

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E Current Model Looks Like This:

- Design and prototype product A
- Laboratory-test product A prototype
- Revise the prototype
- Laboratory-test product A prototype 2
- Develop the alpha version
- Laboratory-test product A alpha
- Develop the beta version
- Laboratory-test product A beta
- Revise and release product A
- Design and prototype product B (and so forth)

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- Includes field studies throughout the design process, alternating with "lab" usability tests
- Can include highly qualitative and group methods such as focus groups
- Continues after product release to inform future releases



E Concerns About Contextual Inquiries

- Risk of selecting atypical users to observe
- Hard to gather statistically meaningful data from different user situations
- Time and budget constraints often limit site visits
- Usually no videotaping so can't "show" colleagues what happened
- Highly dependent on skills of inquirer

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Why Include Site-Based Ethnographic Interviews

- Observe work environment (physical and cultural)
- Learn user characteristics related to the target job and audiences
- Yield descriptive information about how tasks are performed and task priorities
- Can be probed to desired level of detail
- Can clarify specific interviewer misunderstandings, confusions
- Series of interviews can provide longitudinal data

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- MDs and hospital staff during alpha test of clinical information system
- Weekly interviews during six-week alpha test period
- Interviews ended with coaching in system use
- Medical environment demanding, requires patience





- Little quantitative data produced, so data can be difficult to analyze
- Differences between groups can pose analysis problems
- Groups can be hard to assemble
- Quality of results depend heavily on moderator's skills

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- Heuristic evaluation of early, static prototype
- Usability test of revised, interactive, minimal-data prototype
- Usability walkthrough of alpha product (static screens)
- Log analysis of beta product with online survey
- Usability test of released product where users defined their own searches

(Kantner and Rusinsky, 1998)

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E Clinical Information System Usability Program during Alpha Test

- Informal heuristic evaluation
- Initial "out-of-box" usability testing
- Weekly ethnographic interviews
- Review of audiotaped diaries
- Review of automated system usage logs
- Second usability test of complex tasks and less-used features

(Rosenbaum, Hinderer, and Scarborough, 1999)

E Teleconferencing System Usability Informed Document Design

- Usability test of new VUI and GUI identified many problems
- Writer participated in usability testing
- Quick-Start booklet and online Quick Tour addressed problems development couldn't fix immediately
- Continued-use interviews identified longer-term issues, collected data from different audiences

(Kantner, Rosenbaum, and Leas, 1997)

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Discussion Topics

- How does your group decide where in the development cycle to invest in usability studies?
- What problems have you encountered trying to establish an iterative usability program?
- What iterative usability activities have been successful, and why?
- What benefits—and what challenges—have you experienced in field usability studies?

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