



## Observation Techniques

(based on notes from Marilyn Tremaine and Paul Licker)

### Agenda:

- The What
- The Why
- And hopefully, the How...

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Slide 4T.1

Through observation we may:

- Gather data to assist the Task Analysis.
- Describe and analyze current practice
- Note expectations and concerns of current users
- Solicit suggestions from users
- Collect quantitative data
  - How many? How often? How long?

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## Observation Procedures must be:

- Systematic
- Replicable
- Unbiased

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## What can we observe?

- Behavior of users with technology
  - Task process study: Detailed steps in tasks performed by users recorded
  - Time geography study: Individual records times and changes in location of each individual throughout workday
- Behavior of the technology itself
  - Tools study
    - Types of tools used by individual recorded
    - Task application, time and duration of tool usage also recorded
- Decision-making by people
- Results of use of technology (documents, reports)

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## Pros and Cons...

- In situ, more realistic
  - Observer effects, (Hawthorne effect)
- Pertinent where task is more physical or already understood
  - Hard to use for mental tasks
- High-quality data of small number of cases
  - Recording needs to be a highly-trained function, otherwise LOTS of errors

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## Kinds of Observations: Direct Observation

- Events of interest are determined
- Observation Framework is created
- Events are observed, coded and recorded

### ■ Example:

"Use of paper in a supposedly "paperless office" was observed directly through a video camera set up to record printing of documents and movement of them between stations. Clever use of videotaping allowed researchers to follow paper from printer to desk to file cabinet or waste bin. It was discovered that a significant amount of paper was being passed around."

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### Kinds of Observations: Diaries

- Understand set of events to be logged
- Design diary form (keep it simple, minimize user's writing)
- Train participants
- Distribute diaries... collect them later
- Code, record and analyze
- Example  
"Twenty-four managers were given diaries to record their use of decision-support tools (computerized and not). The diaries were to be filled out each time the manager felt s/he was making a decision and recorded date, time, decision type, subject matter, tool, conclusion, and satisfaction. Events were recorded in time order. Later the diaries were collected and analyzed. Also, the managers were interviewed later to determine how well their diarizing went."

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### Kinds of Observations: Participant Observation

- Select users to observe themselves
- Framework must fit observer skills
- Train observers
- Observers observe themselves
- Debrief users
- Example  
"An professor spent a year working as a systems analyst in a New York City bank. The other members of the staff did not know he was a professor. He trained himself to observe his own behavior and use of tools and procedures. He worked on projects and observed his behavior and wrote up his observations in the evening."

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### Kinds of Observations: Participant Infiltration of Target Group.

- Issues:
  - Training validity
  - Training time
  - Participant-Observer relationship may be influence results

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### Your Turn

# Questions?

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Slide 4T.10