

Lab Studies

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Exercise

Discuss on tables

- What are the **key differences** between doing field studies and lab studies?
- Why would you do lab studies?
- What **sorts of questions** would you ask in a lab study?
- When would you do lab studies during the **design-development cycle**?



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Where and What?

Observations

Interviews

Group-techniques

Digital ethnography

Experience Sampling

Diaries

Probes

Auto-ethnography

Sensor-based studies

Surveys

	LAB	FIELD	VIRTUAL
QUANTITATIVE			
QUALITATIVE			
MIXED			



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	LAB	FIELD	VIRTUAL
CONTEXTUAL INQUIRY			
DESIGN			
EVALUATION			



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Types of research

Lazar et al, Research
Methods in Human
Computer Interaction, Ch2
(p22).

	FOCUS	CLAIM	METHODS
DESCRIPTIVE	Describes situation or events	X is happening	Observations, Field study, Focus group, Interview
RELATIONAL	Identify relation between multiple variables	X is related to Y	Observations, Field Studies, Surveys
EXPERIMENTAL	Identify causes of situation or events	X is responsible for Y	Controlled experiments



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Lab studies typically are

- **qualitative, quantitative, or mixed**
- involve either **experts** or **users**
- more **evaluation** than user understanding
- either **formative** or **summative**
- more limited **focus** & simplified scenario
- able to **control** the setting
- evaluating or **comparing** existing technologies
- **testing** early prototypes
- **quick-and-dirty**, or
- more **formal** experimental studies

Types of Lab Studies

- Cognitive walkthrough (expert)
- Heuristic/discount usability (expert)
- Guidelines walkthrough (expert)
- Task-based scenarios (user test)
- Think aloud (user test)
- Observation (field, user test)
- Post-task walkthrough (field, user test)
- Interviews (field, user test)
- Eye tracking (user test)
- Usability testing (user test)

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Paper Prototyping

How to Create Prototypes and Test with Paper

NN/g Nielsen Norman Group

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http://www.nngroup.com/reports/prototyping/video_stills.html

Chapter 7: Testing hardware & kiosks

Usability Testing



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Usability Testing

Recording typical users' **performance** on typical **tasks** in a controlled **setting**, can be in the lab or in the field

Data

Video, log of key presses, time to complete tasks etc
Also think-aloud, interview, questionnaires etc

Usability Testing

Advantages

- Uninterrupted
- Can assess performance, identify errors and help explain why users did what they did
- Satisfaction questionnaires to elicit user opinions

Disadvantages

- Lack of context
- Skill to determine typical users and typical tasks
- Time to set up tests, recruit participants, and run tests
- Need access to resources/equipment

Exercise

Get into the PR groups and **plan a lab study** within your context of study:

- What is the **framing** of your study?
- What are the key **questions**/issues to explore?
- Who are your **participants**?
- What are the **tasks**?
- What could you **measure**?
- Which **data** is to be collected?
- How can you **analyse** that data?



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