CS 554m

field studies – I

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field studies – learning objectives

explain what field work is

identify and explain different field study variants

identify the principles of field work and how they differ from laboratory work

explain the different methods used in field work

explain different sampling methods

know how to prepare and run a field session

identify a good interview question from a bad one

know what to do once you've captured the data

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what is a field study?

field study is a general term that denotes a study that takes place ***in context***

value of context? what people say and what they do can vary significantly

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compare & contrast

studying a smartphone application in the lab compared to in the field

identify the pros and cons of each approach

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principles of field work

natural settings –

holistic –

descriptive –

members' point of view –

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field study "variants"

ethnography
observational study
(in-depth) interview study
contextual inquiry
diary study
~~field experiment (upcoming lecture)~~

focus on specific methods

- these are not mutually exclusive
- can differ on the methods used and the "depth" of the field work conducted

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what is ethnography?

roots in **anthropology** – exploration of the everyday realities of people living in small scale, non-western societies

ethnographers "figuring out" what is going on through participation in social life (by observing, participating, and talking with people)

today, ethnographic approach is much broader: being applied to large industrialized societies (e.g., workplaces, senior centres, schools; and activities like teaching, financial investing)

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a note on terminology

variation in language:

some refer to all field work as ethnography, which isn't correct

it is common to equate **field study** with ***ethnographically-informed study*** or a study that takes an ***ethnographic approach***

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getting started: research objectives

formulate **research objectives**:

- states what one wants to achieve
- use objectives to set initial **scope**

- e.g., to understand how doctors manage patient records and the implications this activity has for the design of electronic medical records

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identify focal points

2-5 questions that are expected to drive the study (think focus & scope):

- driven by research objectives or development goals
- centered on general issues
- answers not anticipated or assumed

- e.g., what are the triggers that result in a doctor updating (or referencing) a patient record?
- others?
- ~~more on focal points in Field I tutorial~~

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participants

devise a sampling strategy

- what types of participants?
- how many participants?
- non-probability based sampling method

gaining access to field site and participants

- time consuming
- ethics considerations

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sampling methods

finding participants:

- quota: specify groups of interest and how many /group
- purposive: similar but # /group not specified
- convenience: sample as you go (e.g., in shopping mall)
- snowball: sample as you go, participants refer other participants

need a screener that identifies important parameters in your target population

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recruiting participants

can be more involved than for lab studies:

- higher threshold, participants allowing you into their "space"
- often involves more time than a lab study
- consider appropriate incentive (lab study norms not necessarily appropriate: e.g., $10/hr)

usually far fewer participants than in a lab study, 3-12 is common

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data collection methods

select methods that will address focal points and that will be appropriate for chosen site

observation
interviews
self-report techniques
remote techniques

nearly all field work involves observation & interviews

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observation

goal to capture tacit knowledge and ward against participants trying to please observer

duration can vary dramatically (small # of days to a year or more!)

degree of involvement: observer-participant to participant-observer

- can you identify the pros & cons?

can be person/event/place/or object focused

- can you think of an example for each?

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specifics on observation

look for what people do, not what they say

direct observations

- researcher on site, in context
- participate as little as possible
- take notes, audio tape conversational components, collect artifacts, take pictures of artifacts that cannot be taken, sometimes videotape as a backup

video observations

- researcher not present, video camera capturing instead
- can be less intrusive for participant

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interviews

continuum: unstructured, semi-structured, structured

early stages of research use unstructured – why?

later stage more structured – why?

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interviewing is an art: guidelines

interview in everyday, familiar settings – take cues from context

look for specific examples & artifacts

do not pre-suppose answer

- How often do you use your mobile phone to call family members? VERSUS What are the ways in which you communicate with your loved ones?

be open-ended - avoid yes/no questions

be flexible to adapt line of questioning

establish and maintain good rapport

casual conversation is not bad

assume respondent is expert

do not interrupt unnecessarily

plan questions that allow triangulation – ask the same question in different ways

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interview question example

Imagine you are trying to understand how home inhabitants communicate with one another using post-it notes. Which interview question is most appropriate?

1. Can you show me where you leave information for someone else?
2. Can you show me where others leave information for you?
3. Where do you leave information for someone else?
4. Where do people leave information for other people?

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self-report techniques

diaries

- participant's written record of specific events, or can be what is happening at prompted moments
- free form or structured recordings
- e.g., study on exploratory learning "Eureka" moments (Rieman & Lewis, 1996)

visual stories

- pictorial diaries, use a camera in addition to text
- e.g., study using video to document file retrieval (Blomberg, Suchman, and Trigg, 1996)

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remote data collection

remote video and audio via the Internet

remote interactions collected through logging

- e.g. MSWord Personal study (McGrenere, Baecker, & Booth, 2002) – ~~*a reading in this course*~~
- Google does studies ALL THE TIME

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contextual inquiry

structured method for gathering information in field work

goal: to bring it to the design process

between observation and interview: idea is to intensely interview people while they work

principles:

1. context
2. partnership: share control, participant is expert
3. focus: keep sight on research objectives, do not try and understand full culture

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preparing for field work

how will data be recorded?

- handwritten notes (free form, coding sheet)
- audio tape
- video capture
- still photos

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what do you need to bring?

consent forms

screening forms (if participant selection not done in advance)

audio/video equipment

- extra tapes, microphone?, extra batteries, tripod

note taking equipment

instruments: interview scripts, questionnaire?

-> just because it is a qualitative method does not mean that detailed preparation is not required!

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primary and secondary interviewing roles

there is too much for one person to do!

primary
- usually the person who has contacted the participant
- guides the discussion

secondary
- responsible for most data capture (all recording devices, primary notes, artifact collection)

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pilot testing

is just as important as it is in lab studies!

check for
- duration
- clarity of interview questions, non-repetitive, ability to deliver the script fluidly
- utility of observation sheet
- robustness and ability to operate recording equipment
- bottom line: do you get meaningful data?

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post session

- debrief immediately with partner/team
- type notes right away – expand as appropriate (make sure to note clearly what are expansions b/c they are subject to recall)
- check your recordings and label media
- make a log of all the items from the session (artifacts, audio/video tapes, still images, notes…)
- write up reflection on session (things that were not clear, surprising, …)
- plan for transcripts of dialog, as appropriate

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data analysis

circulate notes and transcriptions among team

hold video analysis sessions

identify patterns: in behaviour, events, artifacts, within and across individuals

common technique: affinity diagrams

triangulate data where possible

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data analysis

grounded theory approach
(Lazar, Feng and Hochheiser reading)

- open coding
- development of concepts
- grouping concepts into categories
- formation of a theory

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representations – communicating results

storyboards
scenarios
profiles/personas
~~experience models~~
~~opportunity maps~~

most common

- details on each of these in the Blomberg paper

finally, team brainstorms implications for design

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ethics

as with all studies, need ethics approval
describe

- how person will participate
- duration of participation
- how the data will be used
- if images, video or audio taping will be used

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when to use field methods

most often for pre-design
cost-benefit tradeoff easiest to make
but can be used at any stage

note: interviews & observations are often used throughout the design/evaluation cycle – but there is a difference between using these methods **in** and **out** of context

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pros & cons of fieldwork

pros ???

cons ???

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now you can…

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