Introduction to Qual Methods

162 W
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(many thanks to Beki Grinter for some
of this content)

How do qualitative methods differ from quantitative?

Huh? Can we get an example please?

Height

What that means in practice…

Situated use

- In-vivo: studying something in its use context
- Interpretive: reality is constructed by humans in the course of their actions

Qual and Quant methods can work together

Quantitative methods
- Allow investigator to collect data from large sample
- Data highly generalizable and comparable

Qualitative methods
- Allow investigator to collect data from small sample
- Data deep and insightful cases

Where
do they fit into the HCI/Informatics life cycle?

- To identify opportunities and revise current plans

Gathering Requirements

Evaluation

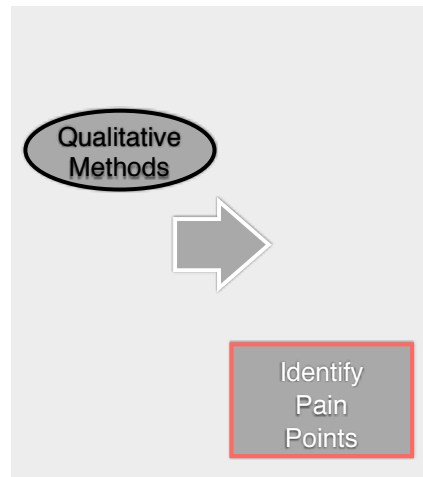# What outcomes do qualitative methods produce?

Illustrated with a real example!

Studying Software Development

- Commercial software development is a "wicked problem"
- Consider the coordination required to produce a telephone switch
  - 50 million lines of code
  - 500 or more sub-division of the code
  - Expressed in 5 architectures
  - Worked on by 5000 developers
- Beki Grinter's dissertation work, and four years of industry spent studying software production using qualitative methods

Identify pain points

- Coordination among team
  - Best efforts at "good modular decomposition"
  - Still had dependencies
- Observation and Interviews
  - Shows the dependencies among modules created work dependencies among developers
- Opportunity to help developers know WHO depended on their module using technology
  - Visualize dependency structure

Qualitative Methods

Identify Pain Points

Identify Best Practice

- Geographically Distributed Development
  - Developers in 3 continents
  - Corp wanted faster cycle times
- Observation on-site
  - Saw that projects did better when they had cross-site liaison, who spent long periods at other site
  - Increased levels of trust among sites (often poor in GDD)
- Best practice
  - Recommend to management

Qualitative Methods

Identify Best Practice

A Note on Identifying Pain Points and Best Practices

- Not mutually exclusive in a single study

but...

- Studies sometimes designed to emphasize one

Challenge: Translation from Qualitative Methods to Systems

The results of Qualitative Methods

do **not** equal systems requirements/re-design

****Translation ("The Gap")*****

Your fieldwork this quarter

A chance to try this out on a small
scale

Getting Started

- Research Question
  – What do you want to know?
  – Are qualitative methods the appropriate way to answer it? And in particular, are *observations* the appropriate way to answer it?

- Study Design
  – What else do I need to think about before getting started

"What are my research questions?"

Only you know!

Five things to consider in a good question

- Does it interest me (you'll be more motivated if it does)
- Is is a problem that's amenable to scientific inquiry?
- Do I have the right resources (time, money—good scoping mechanisms)
- Can I answer this question ethically?
- Is the topic of practical or theoretical interest?

Some of my past research questions

- What coordination problems do caregivers of children with autism have?
- What are the everyday routines of elderly people with cognitive impairments living independently?
- How do people get and process information during cancer diagnosis, treatment, and end of life planning?
- How are mega-churches in the deep South using technology to reach their parishioners?

How do you know if your research questions are qualitative?

- Naturalistic Inquiry
  - Studying real-world situations as they unfold naturally
  - Not manipulating or controlling the environment
  - Being open to whatever emerges
- This approach lends itself to questions where
  - Peoples' own experiences are the primary focus

Design Flexibility

- Openness to adapting inquiry when
  - Your understanding deepens
  - Situations change
- Qualitative questions leverage this flexibility
  - To focus over time on specific lines of inquiry

Design Flexibility and Focus

- Design flexibility does not mean study should have no focus
- Researcher should be able to show how the study evolved
- Like many things in HCI, studies using qualitative methods iterate

Example: Design Flexibility in Action

- Initial interest: Everyday life of elderly people with cognitive impairments living independently?
- During observation & interviews, elders stressed:
  – importance of alone time
  – flexibility of physical space
  – difficulty with time
  – regularity of *morning* routines
- Not because I asked, but observed this, which is advantage of fieldwork

Challenges of Qualitative Research

Is this SCIENCE??????

Getting Started

Study Design

Study Design

- Study design
  - Beginning to think about how you're going to answer your question
- Basics include
  - Literature review: what has already been answered
  - Context of the site: your "wallowing"

What else besides observations?

- Interviews
- Questionnaires and surveys
- Logs and diaries
- Artifact collection

Most of this won't happen for you until next quarter

Sampling

- Why sample?
  - To improve generalizability of results to population
  - To ensure that all appropriate instances are covered
- Types of "appropriate instance" coverage
  - Purposive or judgement sampling
  - Snowball sampling

Starting with Self

A few reminders about you as the instrument:

- You are *the* instrument in data collection

- You are also *the* instrument in data **analysis**

Going "Native"

- When you've become one of the people you study
- You take their perspective, but can no longer see it as theirs, it's yours

Trade Off: Bias and Knowledge

- Bias leads you to an answer, and makes it hard to hear other answers
- Knowledge helps you understand what the answer is

- Another example: Concerns about recording technologies

Techniques for managing that balance

- Triangulation: gathering data from multiple sources
- Leaving the field: taking time away from the setting
- Maintaining personal diaries: a way of expressing your biases

Upcoming

- Wednesday: Lofland Chapter 4 & 5
- We will talk about validity and reliability, types of observations, how to conduct observations, and your "gear" when doing observations

- You should be:
    1. Finding your field site and getting access.
    2. Starting to go there and take as many notes as you can on broad ideas.

    Some opening questions: What systems are being used? Where are they located? Who has access? What seemed easy or hard?