KTH Information and Communication Technology

Introduction to Qualitative method

II2202, 2011

Anne Håkansson

KTH Royal Institute of Technology

School of Information and Communication Technology

Qualitative method

Traditionally in social sciences, philosophy, sociology, and history for centuries

In-depth understanding of human behavior and the reasons that govern such behavior:

grey scale

Investigates the *why* and *how* of a decision making, not just *what*, *where*, *when*

Qualitative method

- pays much greater attention to individual cases and human understanding
- more precise reflection of a situation than the numerical perception
- findings are not arrived at by statistical or other quantitative procedures
- to find out a given phenomenon, it is necessary to **ask** people and to **observe** what they do

A possible study example

Imagine that you are working at a company that wants to study their current computer systems to get something new that minimizes working-load and improve the efficiency.

Current situation:

- There are five different computer systems that are used in parallel
- More than 80% users use these systems on daily bases

-> Your task is to find a computer system that replaces these systems

A possible study example

What would you answer:

Information about situation:

- Yes, you can change
- Nope, it doesn't work to change
- Yes, because users dislike the system

- Yes, because the users thought that the systems have the drawbacks, XX, and therefore the company needs a system that provide YY (functionality) and ZZ (interface)

Qualitative study

- Ingredients:

  - Identify the problem
  - Literature study
  - Design the study
  - Perform data collection
    - Data collection method
  - Analyze the result
  - Study and draw conclusions

Identify the problem to study

- Find a problem - ask or investigate
- Decide the problem background
- State a clear and concise problem
- Consider possible problems with the study: ethical, religious, intruding on personal life/working situation
- The problem steers the investigation

Literature study

- Study the problem area

- Books, articles, documents, web sites
  - Get knowledgeable
  - Understand the problem
  - Study the right thing

  Ask questions at right level
  - Not background data

Design the study

- Plan *how* and *what* must happen to reach conclusions
- Sample section
  - Representative respondents
    - Commonly a rather small number of respondents
    - Absolute not well-known respondents
- Choose the right data collection method that gives the best result
- Find the environment for collection
- Perform the data collection

Data collection methods

- Field study and Participation Observation
- Interviews
  - Individual / Focus groups
- Language based methods
  - Discourse / Conversation
- Text and documents
  - Interpret the meaning

Data collection methods

For computer systems:

- Study texts and problem area for requirements
- Study daily work for functionality
- Usability for interfaces

Collect and transcribe data

- Use means to store data, recorder
- Take notes during data collections
- Transcribe the collected data
- Write everything that can be of significance

Data analysis

Review the collected data:

- Systematic review to find similarities - develop concepts and ideas
- Code data in text rows to find patterns - gain information and knowledge
- Review problem solving – get working procedures
- Study stories (string of events) – get content and context
- Use both numeric data and soft data - correlations

Data Analysis - Maps

- Use maps to show relationships between concepts

Semantic maps

- Show categories of concepts

Hierarchies

- Show problem solving procedure

Charts

Generate and study conclusions

- Interpret the answers
- Use correlations
- Provide results
- Study results to reach theory
- -> Did you get results? If not – redo the process

Conclusions

- Choose the best method that best suits the investigation
- Record everything
- Use an appropriate analysis method
- Iterate or repeat until the theory is verified
- Be true to the result!

Questions