Qualitative Methods

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1 slide Summary

• Data Collection Methods:
  - Participant Observation  (Meeting/conversation observation/recording, logging keystrokes/mouse)
  - Interviews  (Structured / Unstructured / Semi-structured)
  - Focus Group  (not covered in this paper)

• Data Analysis Methods:
  Generation of Theory  aka. Grounded Theory Method
    - Constant Comparison Method  (Open Coding, Axial Coding, Selective Coding)
    - Cross-Case Analysis  (Looking at data in many different ways/comparing multiple cases in many divergent ways)

Confirmation of Theory:
  - Negative Case Analysis  (Search for evidence that might logically contradict a generated proposition then refine)
  - Triangulation  (Gathering different types of evidence to support a proposition)
  - Member Checking  (Getting feedback on the findings from the subjects who provided the data)

• Data Modeling and Visualization:
  - Matrices
  - Maps

• Quantification of Qualitative Data:
  - Coding  (Extracting quantifiable pieces of information from the text)
  - Content Analysis  (Method based on counting frequency of occurrence of some meaningful lexical phenomenon in data)
• Is qualitative method useful in other subfields of CS (other than SE, HCI)?
• Are people comfortable with researchers logging their keystrokes and mouse movements and recording conversations? Any ethical issues? Can this produce biased data?
• Qualitative data analysis begins as soon as some significant amount of data has been collected. How much is “significant amount”? Is there some sort of termination criteria?
• Theory vs. Proposition? In the paper, it says “qualitative methods are aimed at generating theory”, but throughout the paper, all it talks about is generating “proposition”.
• Qualitative data analysis involves refining generated proposition if there are contradictory data. Can this over-fit data? How useful is the end result of the proposition?
• How do we measure the strength/confidence of a generated proposition?
• What are the best practices for using quantification of qualitative data?