Considering Qualitative Evaluation

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Overview

Talk 1: Setting the stage: qualitative
Talk 2: Observation as a skill
Activity 1: Practicing observation
Activity 2: Interviewing 1
Activity 3: Interviewing 2
Talk 3: Interviewing as a skill
Activity 4: Interviewing 3
Panel: open discussion
Talk 4: In summary – next step analysis
Choosing an evaluative approach

start with a question

relate the question to existing research
  in contrast
  in agreement
  as extension or variation

choose a methodology
Goals of Empirical Research

Goals of Empirical Research

- **REALISM**
- **GENERALIZABILITY**
- **PRECISION**

Results can apply to other people or situations

Goals of Empirical Research

REALISM

PRECISION
control of factors that were not studied

GENERALIZABILITY

Goals of Empirical Research

REALISM
context of study is like the context of use

PRECISION

GENERALIZABILITY

today

focus is on **realism**

and

**qualitative** data gathering methods
Albert Einstein

‘Everything that can be counted does not necessarily count; everything that counts cannot necessarily be counted’
Qualitative Research

• study aspects that can not necessarily be counted
• rich in-depth understanding
• considers the interplay among factors
• helps investigate open-ended questions
• can provide insights beyond the expected
• can generate design criteria and more specific hypotheses

Qualitative Data

• primary methods for gathering data:
  – observations
  – interviews

• types of data records:
  – field notes
  – journal entries
  – artefacts (e.g. sketches, diagrams, annotations)
  – audio & video tapes
  – screen captures
  – computer logs
  – …

Data Collection as a Skill

• qualitative data collection requires skill and sensitivity
• observation and interviewing skills can develop with practice and can be learnt
• follows rigorous methods

Qualitative Methodologies

- *primarily qualitative* methodologies (focus of this tutorial)
- *mixed methodologies*: qualitative methods in conjunction with quantitative methods
- *heuristic* inspection methodologies (not discussed here)
Qualitative Methods as Primary

- develop a rich in-depth understanding
- used at any time in the development life cycle
  - finished visualization or prototype assessed e.g. via field studies
  - during the design process
  - formative studies to inform the initial design
- variety of methods to choose from
  - in-situ observations
  - immersive observations
  - laboratory observational studies
  - contextual interviews
  - ...
Mixed Methods

- Qualitative methods can be used *in conjunction* with quantitative methods to:
  - provide context for quantitative results
  - gather participants opinions and preferences
  - raise new questions
  - aid the interpretation of quantitative results

- Common mixed methods approaches:
  - experimenter observations
  - think aloud protocol
  - collecting opinions (e.g. through interviews or Likert scales)

Characteristics of Qualitative Methods

• involved and rigorous process that requires practice
  – gathering data and rich note taking
  – transcription
  – in-depth analysis

Characteristics of Qualitative Methods

- *sample sizes* can differ from quantitative experiments
  - not concerned with making statistically significant statements
  - focussed on ‘saturation’
  - can be determined during the study


Characteristics of Qualitative Methods

• *subjective* perspective as an asset
  – awareness and explicit discussion of one’s own ‘lens’

Qualitative Methods in Visualization

Qualitative methods can help to enhance our understanding of:

– Experiences beyond usability
– Environments and work practices
– Visual data analysis and reasoning
– Communication through visualization
– Collaborative visual analysis

Summary

• carefully choose method to fit the research goal
• consider trade-offs between realism, generalizability and precision
• borrow and adapt methods from other fields
• conduct research with rigor specific to the chosen method
• publish sufficient details
• make claims appropriate to the chosen method