

Mixed Methods Research

Combining methods for different research purposes

Multidisciplinary Research Methods for Engineers



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Mixed Methods

- Mixed methods combine different methods typically in a specific sequence
- The sequence is related to the type of research questions
- Raise validity by combining strengths and weaknesses of different methods

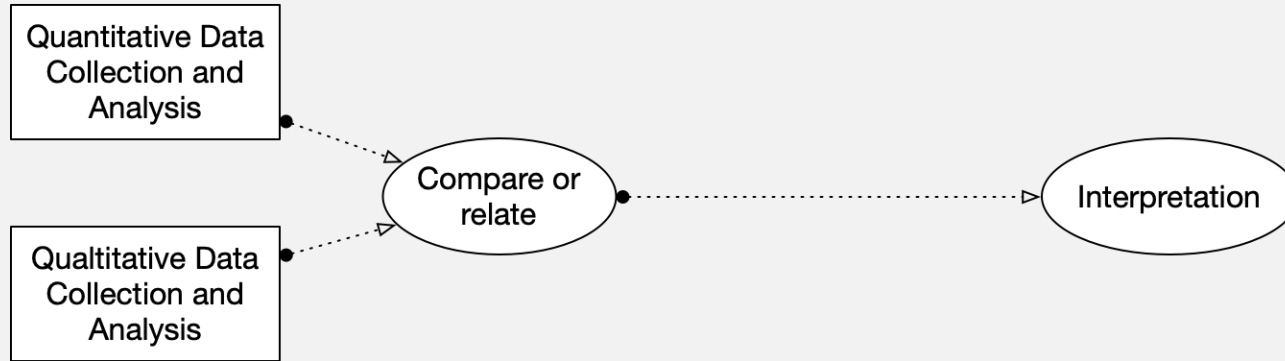
Benefits of mixed method approaches

- Triangulation of different data sources
- Completeness of picture
- Explaining findings from data
- Illustration of quantitative data
- Refining research questions with qual.
- Instrument development

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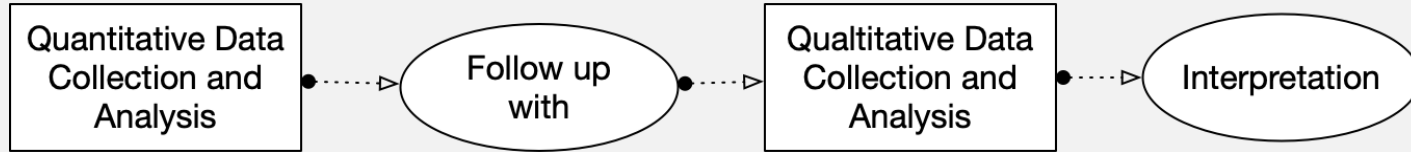
Types of mixed-method designs

Convergent Parallel Design



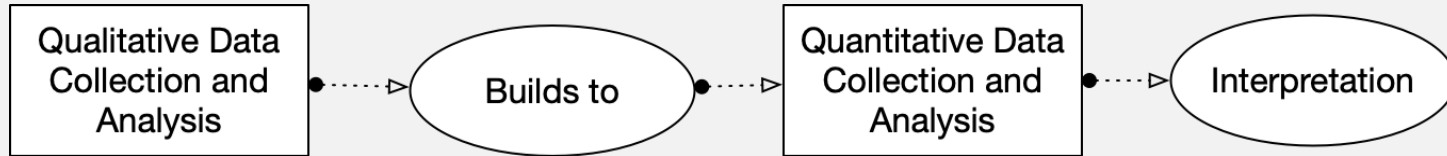
- Combining advantages of different data types, complementing each other
- Example: using a questionnaire combining with interview

Explanatory Sequential Design



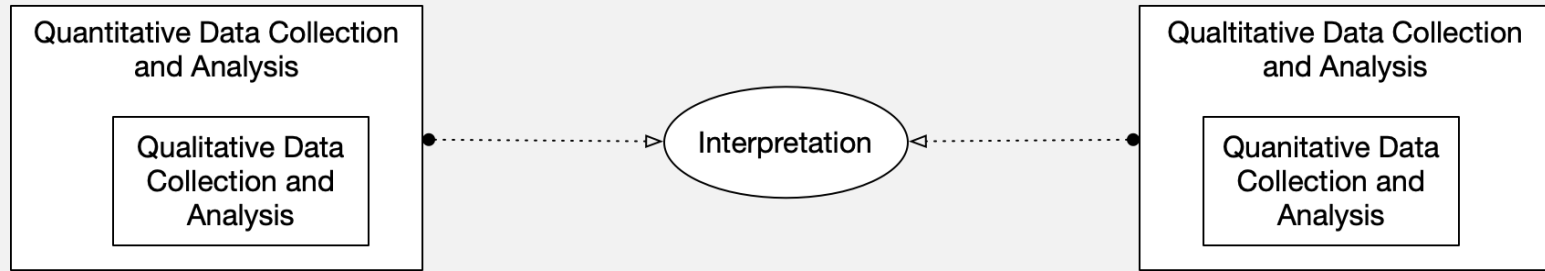
- Explain and interpret quantitative results
- Example: why is one treatment better than the other ?

Exploratory Sequential Design



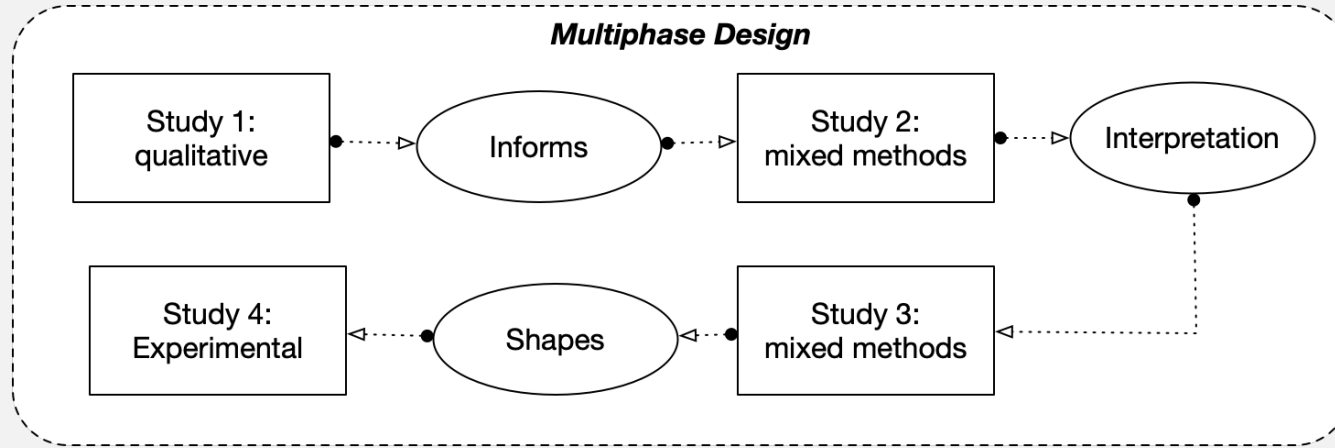
- Explore a phenomenon and build an instrument for measuring
- Example: build a measurement instrument and validate it

Embedded Design



- One type of data augments the other one, there is a primary data type
- Example: longitudinal studies with also collecting journals

Multi-phase Design



- Phases combine different sequences and mixed method in phases
- Example: Presentation Trainer Development

Types of mixed method approaches

- the convergent parallel design
- the explanatory sequential design
- the exploratory sequential design
- the embedded design
- the transformative design
- the multiphase design

Summary

- Combine and embed different methods dependent on your research questions and main focus
- Explorative and explanatory sequencing of methods
- Strengthen and complement different data types, triangulate
- Build multi-phase study strategies for complex problems