

# **Mixed Methods**

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# Outline of presentation

- Overview of Research Designs
- ‘Define’ mixed methods
- Paradigms and advantages
- Approaches of mixed methods

# **Research approaches / theory building approaches**

Quantitative

Qualitative

Mixed

# Quantitative research approach: Deductive

- Proposition of hypothesis or theory first
- Data collection and analysis
- Prove or disprove the hypothesis
- Very structured research process
- Big size of sample critical

# Qualitative Research Approach: Inductive

- Data collection first
- Data analysis
- New theory or hypothesis proposed
- Not very structured
- Sample size can be relatively small

# Mixed Methods Research Approach: Abductive

- Combines deductive and inductive approaches
- Parallel
- Sequential
- Nested
- Multi-level/Integrated?????

# Research approaches/Theory building processes

1. Deduction: start with a theory and test it
2. Induction: start with observations and build theory from the findings
3. Abduction: start with either theory or observations or both
  - Analyse and interpret data iteratively between induction and deduction.
  - The data inform the development of theories, which can be tested / shaped / expanded in the next round of analysis

# Some possible reasons for using mixed methods research design

- Triangulate - converge
- Enrich - diverge
- Complement
- Clarify
- Theorise
- Expand/Explore
- Enhance Interpretation
- Enhance Validity
- Interrogate /Explain



# **Mixed Methods Research Designs**

Parallel/Concurrent

Sequential exploratory

Sequential explanatory

Nested Strategy Mixed Methods

# Parallel/Concurrent Mixed Methods Design

- Data collection separate but concurrent
- Mixing occurs during interpretation / discussion
  - Convergence / confirmation (validation)
  - Divergent - enrichment
- Explain / theorise

# Sequential Exploratory Mixed Methods Design

- Qualitative component first
- Quantitative phase is informed by the Qualitative findings
- If the Qualitative study is flawed, the entire research will be flawed / based on faulty premises
- Quantitative results: numerical meaning (external validity)

# Sequential Explanatory Mixed Methods Design

- Quantitative component first
- Qualitative phase second
  - To explain the Quantitative findings  
and/or
  - To contextualise the Quantitative findings

# Nested Strategy Mixed Methods Design

- A sub-sample of the main sample is selected for deeper investigation
  - E.g., in a quant study, a group of respondents may be selected for qualitative research
  - E.g. In a qual study, some of the emergent themes can be quantitatively examined

# **Reliability and Validity**

# **What is external validity?**

Whole study

# **Types of Validity**

**Quantitative Instruments**



# Types of Reliability: Quantitative

- **Test-retest reliability:** self-reported measures
- **Internal consistency reliability:** 'inter-relatedness' of items in a tool (e.g. comprehension of x)
- **Intra-rater reliability:** rater consistency
- **Inter-rater reliability:** 2 or more raters

# Reliability and Validity: Quanti

- Reliability is a necessary but not sufficient pre-condition for validity
- But validity is not a necessary pre-condition for reliability
- You need reliable instruments in order to have high validity of outcome measures

# Qualitative

- Transferability: context /settings description
- Credibility: Triangulation; details
- Dependability: Nature of questions in tools; way of collecting data
- Confirmability: records (audio, video, written,)

# Reliability and Validity: Mixed Methods

- Each component has to be dealt with separately
- For quantitative component, reliability and validity can be expressed as figures
- For qualitative component, different terminology and expression are used

Thank you