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# Mixed methods research: definitions, rationales, designs and reporting



# Methods

- Quantitative methods  
(how many)
  - Randomised controlled trials
  - Quasi experimental studies
  - Surveys
- Qualitative methods  
(how, why)
  - Focus groups
  - Semi-structured interviews
  - Observation



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# 1. There are different definitions



“mixed methods investigations  
involve integrating quantitative  
and qualitative data collection and  
analysis in a single study or  
program of inquiry”

Creswell, Fetters & Ivankova 2004, p7



“Mixed methods research is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration.”

Johnson et al (2007) p123



# Know what your definition is

Mine is:

- Quantitative method (data collection and analysis)
- +  
Qualitative method (data collection and analysis)
- Single study
- Primary research



# Examples

- Survey followed by interviews
- Focus groups followed by a survey
- A randomised controlled trial alongside an ethnographic study



# Are these mixed methods research?

- Case studies of six schools using observation and interview
- Randomised controlled trial of child mortality prevention intervention and ethnographic study of how intervention is delivered (outcome and process evaluation)
- Survey of effects of social conflict and case studies of three types of effect identified from the survey
- Survey of employment with closed and open questions





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# There is a lack of consistency of language



# Mixed up language and meaning

- Multi-methods
- Multiple methods
- Mixed method
- **Mixed methods research\***
- Combining methods
- Integrating methods
- Triangulation

\*Tashakkori & Teddlie  
2010, p19



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# Mixed methods research differs by research community



# My mixed methods research

- Varies by research community
  - Language, designs, challenges, interests, practice
- My research community
  - Health Services Research in the UK
  - Quantitative dominant
  - Randomised controlled trial
  - Pragmatic
  - Little interest in the paradigm debate
  - Mixed methods research is common



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## 2. Rationales for using mixed methods research



- My question demands it?
- Comprehensiveness
  - address more questions, complexity....deficit , stakeholders ask different questions
  - Macro and micro levels (Bryman 1988)
- Facilitation
  - one method benefits from undertaking first method
- Emancipation: give voice/ Transformative: social justice (Donna Mertens)
- Confidence: increase validity
- Increased 'yield'
  - 'whole is greater than the sum of the parts' (Barbour 1999)
  - 'reach the parts other studies cannot reach'
  - more insights
- Strategic



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# 3. Designs

Think mixed methods designs not individual methods



# There is a methodology

- Creswell, J. W., & Plano-Clark, V. (2011 second edition). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage Publications.
- Tashakkori, A., & Teddlie, C. (Eds.). *Handbook of mixed methods in social and behavioural research*. London: Sage Publications. 2003 and 2010
- Bergman MM (Ed). *Advances in Mixed Methods Research: Theories and Applications*. 2008
- *Journal of Mixed Methods Research* (Sage 2007-)





- Creswell J. A concise introduction to mixed methods research. Sage 2014
- <http://johnwcreswell.com/>
- Youtube
  - John Creswell
  - Donna Mertens



- Thaler KM. Mixed Methods Research in the Study of Political and Social Violence and Conflict. Journal of Mixed Methods Research, forthcoming
  - Quan: cross national or cross case variation
  - Qual: individual motivations



# Typologies of designs

- Nastasi et al, Tashakkori & Teddlie 2010, p305-338
- Creswell et al, Tashakkori & Teddlie 2003, p209-240
- Creswell & Plano Clark 2007 – see Handout



# Creswell's typology 2003

- Sequential explanatory (quan→qual)
- Sequential exploratory (qual→quan)
- Sequential transformative
- Concurrent triangulation (qual+quan)
- Concurrent nested
- Concurrent transformative



# Creswell & Plano Clark typology 2007

- **Triangulation design**
  - Complementary data on same topic, Same time, Equal weight, Integrate results
- **Embedded design**
  - One methods plays a supplementary role
- **Explanatory design**
  - Sequential, qual used after quan to explain findings, integration built into the design



# Designing a mixed methods study

- Justify why this is appropriate
- Describe the design
  - Purpose of combining methods
  - Dominance/priority/embeddedness of methods
  - Timing/sequence of methods
  - Integration



# A. Justification

- Comprehensiveness
  - For example, three aspects to your research question; one is best addressed by a quantitative method because... and two are best addressed by qualitative methods because....



## B. Purposes of combining

- Confirmation
- Complementarity= address related questions, elaborate, expand, explain
- Development or facilitation
  - Hypothesis generation
  - Questionnaire design/Instrument development
  - Sample identification
- Triangulation





# Triangulation

- ‘Crystallisation’ or different perspectives
  - convergence
  - divergence
  - discrepancy
- Corroboration
- Validation



## C. Timing of the methods

- Sequential:
  - Quan  $\rightarrow$  QUAL
  - Qual  $\rightarrow$  QUAN  $\rightarrow$  Qual
- Concurrent:
  - QUAN + QUAL
- (QUAN+QUAL+QUANT) $\rightarrow$ QUAL+ QUAN



## D. Status??

- Priority, status, dominance, embeddedness
  - Equal status
  - Quantitative is dominant
  - Qualitative is dominant
  - E.g. Qual +QUAN, QUAL → quan, QUAL → QUAN
  - Affects decisions about resources, writing and publications and quality assessment



# E. Integration

- Linking, integration, synthesis, conversation
  - What to integrate
  - Where to integrate



## 4. Reporting

- Not much written about it (Sandelowski 2003, Johnstone 2004, O’Cathain 2009, Creswell 2007)
- Challenges
  - A lack of templates
    - Word count
    - Need for innovation



- Style, language, voice
  - Paradigm
  - Research community
  - Change voices - inform people of your strategy
- Audience
  - Qual or quan 'literate'
  - Depicting one as inferior
- Ordering of presentation
  - QUAL then QUAN?
  - Segregated versus integrated



Table 8.1 Different approaches to writing reports for funding bodies in mixed methods studies funded by the Department of Health in England, 1994-2004

<b>Dissemination</b>	<b>Report (N=48)</b>	
Segregated model	65%	(31)
Integrated model	31%	(15)
Not enough information	4%	( 2)



Segregated models	Integrated model
<b>A</b> Chapter 1 Background Chapter 2 Quantitative methods and results Chapter 3 Qualitative methods and findings Chapter 4 Long discussion	Chapter 1 Background  Chapter 2 Methods ( <i>including mixed methods design, quantitative method, qualitative method, and description of integration</i> )  Chapter 3 Findings: Theme 1 ( <i>based on any or all components</i> )
<b>B</b> Chapter 1 Background Chapter 2 <i>Methods (quantitative and qualitative)</i> Chapter 3 Quantitative results Chapter 4 Qualitative findings Chapter 5 Discussion	Chapter 4 Findings: Theme 2 ( <i>based on any or all components</i> )  Chapter 5 Findings: Theme 3 ( <i>based on any or all components</i> )  Chapter 6 Discussion