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Mixed methods research: quality

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What does quality mean?

- Depends on
  - Paradigm
  - Who is asking the question and for what purpose

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What paradigms are suitable for mixed methods research?

- Within a 'traditional' paradigm
- 'New' paradigm
  - Pragmatism - if it works do it
  - Hammersley's 'subtle realism' (Hammersley 1992)
  - Bhaskar's critical realism
  - Mertens transformative - social justice (Transformative Mixed Methods Research. Qualitative Inquiry 2010;16:6 469-474)

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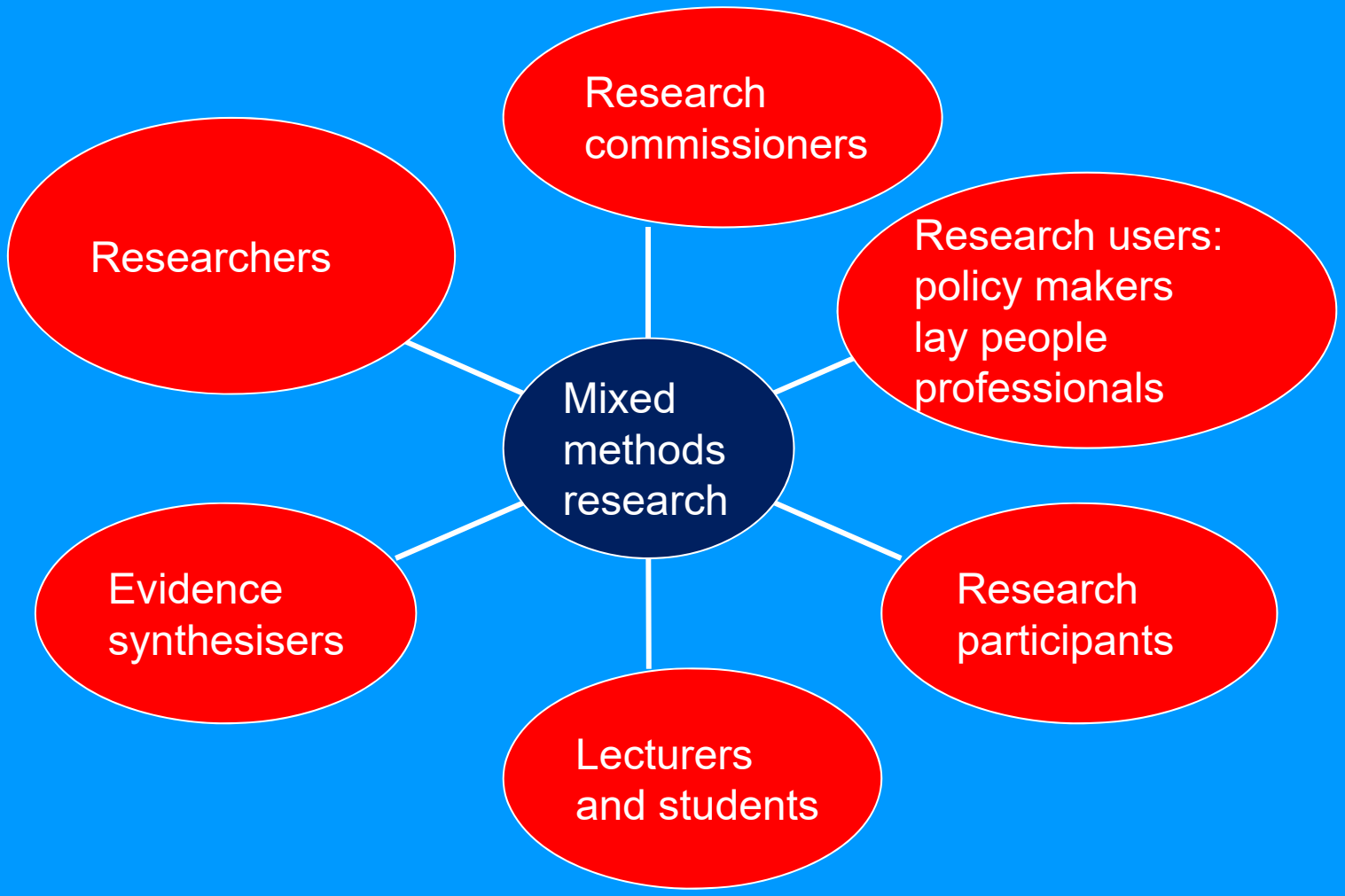
Who



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What

- Proposals
- Reports
- Journal articles
- Summaries/ press reports
- Studies

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O'Cathain A. Assessing the quality of mixed methods research: toward a comprehensive framework. In Tashakkori & Teddlie (eds). Handbook of Mixed Methods Research, Second Edition, 2010, pp531-555.

Fabregues S, Molina-Azorin J. Addressing quality in mixed methods research: a review and recommendations for a future agenda. Quality and Quantity 2016

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1. **G**ood **R**eporting of **A** **M**ixed **M**ethods **S**tudy (GRAMMS)

1. Justification for using mixed methods
2. Design: purpose, sequence, priority
3. Each method: sample, collection, analysis
4. Integration: where, how and who
5. Limitations: one method limits another
6. Insights from mixing

(O'Cathain A et al. Journal of Health Services Research and Policy, 2008;13:92-98)

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2. Fabregues Molina review for mixed methods studies

- **Planning**
  - A rationale for mixed methods
  - Philosophical assumptions clear
  - Study purpose clear
  - Literature review to situate the study
  - Literature cited on mixed methods

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- **Undertaking**
  - Quantitative and qualitative undertaken to good quality
  - Integration of quan and qual occurs
  - Design described
  - Sampling, data collection and analysis of quan and qual linked to aim
  - Sampling, data collection and analysis of quan and qual described in detail
  - Design is linked to aim
  - Design matchers rationale for mixed methods

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Interpreting

- Inferences consistent with study findings
- Inconsistences between qual and quan findings stated
- Inferences consistent with study aims
- Balanced meta-inferences

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Disseminating

- Research process reported clearly
- Added value from mixed methods described
- Value for policy and practice described

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3. US funding body

National Institutes of Health (NIH): Best Practices for Mixed Methods Research in the Health Sciences, please visit: http://obssr.od.nih.gov/scientific_areas/methodology/mixed_methods_research/index.aspx

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3. Mixed systematic reviews

MMAT: Welcome to the public wiki 'Mixed Methods Appraisal Tool'

- Pluye, P., Robert, E., Cargo, M., Bartlett, G., O'Cathain, A., Griffiths, F., Boardman, F., Gagnon, M.P., & Rousseau, M.C. (2011). *Proposal: A mixed methods appraisal tool for systematic mixed studies reviews.* Retrieved on [date] from http://mixedmethodsappraisaltoolpublic.pbworks.com.

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4. Systematic review: MMAT

1. Qualitative (4 items)
2. Quantitative RCt (4 items)
3. Quantitative non-randomised (4 items)
4. Quantitative descriptive (4 items)
5. Mixed methods (3 items)
    - Relevance of design to question?
    - Relevance of integration of research question
    - Consideration of limitations of integration?

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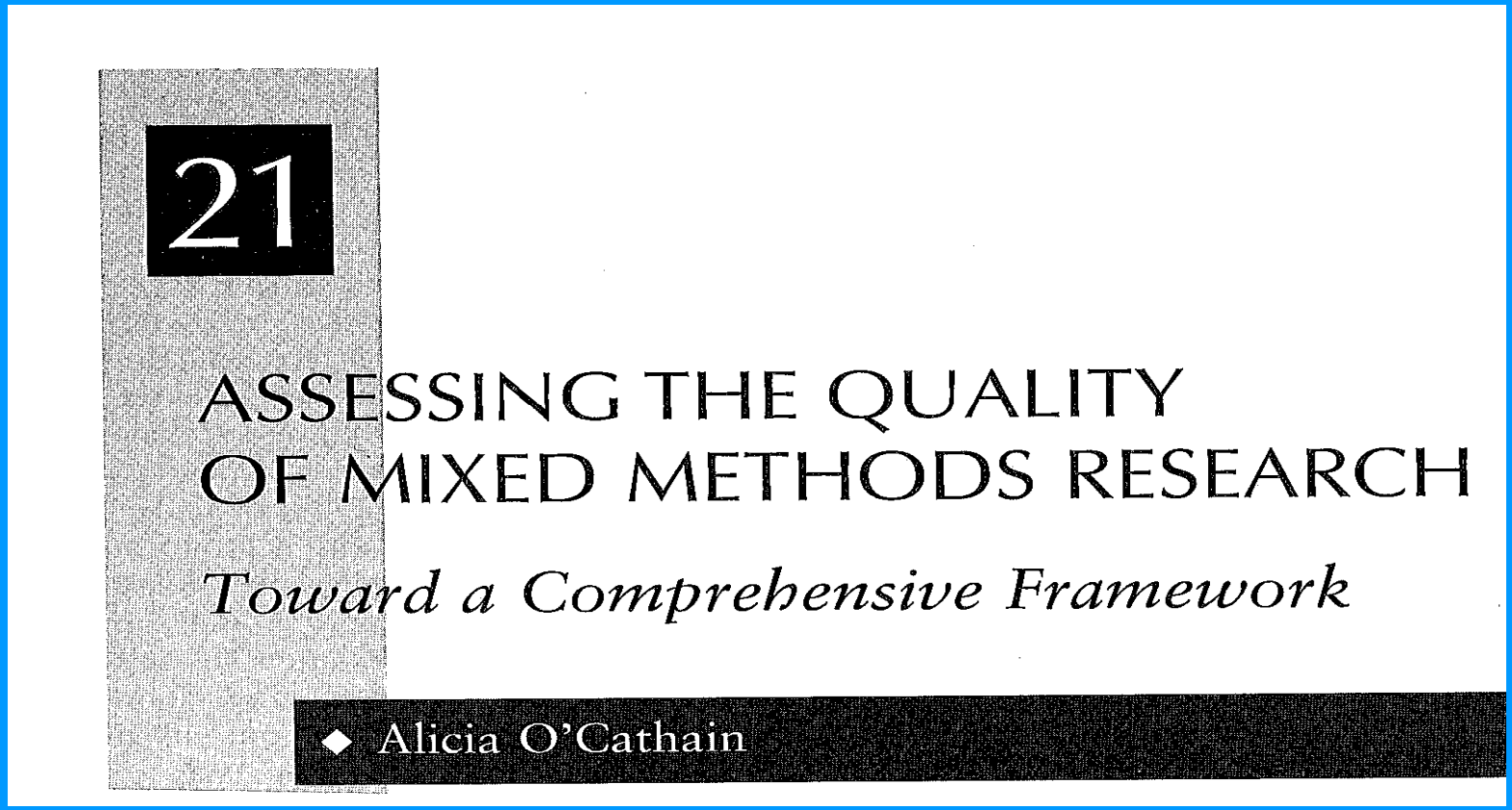
5. Comprehensive Framework



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Framework: domains of quality

1. Planning quality
2. Design quality
3. Data quality
4. Interpretive rigour
5. Inference transferability
6. Reporting quality
7. Synthesisability
8. Utility

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2. Design quality

a) Design transparency : describe design

b) Design suitability: is it appropriateness for research question?

c) Design strength: optimise breadth, depth, weakness, strength (weakness minimisation legitimation)

d) Design rigour: implemented so that stays true to design

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3. Data quality

a) Data transparency: methods described in detail

b) Data rigour: Methods implemented well

c) Analytic adequacy: analysis undertaken properly, necessary sophistication

d) Analytic integration rigour: any integration at analysis stage is good, conversion quality

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4. Interpretive rigour

Are the conclusions based on the findings of the study? (Teddlie& Tashakkorri, foundations of mixed methods research, 2009)

a) Interpretive transparency: which findings relate to which methods
b) Interpretive consistency: inferences consistent with findings
c) Theoretical consistency: inferences consistent with current knowledge or theory

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a) Interpretive agreement: others likely to reach same conclusions
b) Interpretive distinctiveness: conclusions more credible that others
c) Interpretive efficacy: **meta-inference** is balance of inferences)
d) Interpretive bias reduction: non-convergent findings explained
e) Interpretive correspondence: relate to research question

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5.Inference transferability

Where conclusions can be applied to

a) Ecological

b) Population

c) Temporal

d) Theoretical

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Group work

- Apply Fabregues & Molina-Azorin (2016) to
  - Gallaher CM, Kerr JM, Njenga M, Karanja NK, WinklerPrins AMGA. Urban agriculture, social capital, and food security in the Kibera slums of Nairobi, Kenya. Agric Hum Values (2013) 30:389–404