



Mixed methods – mixed or mashed

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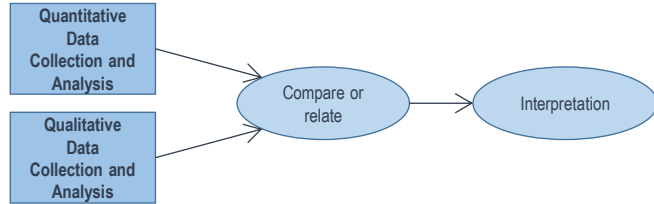


From a world expert

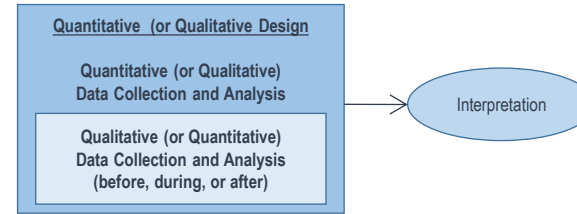
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Mixed Methods Prototypes

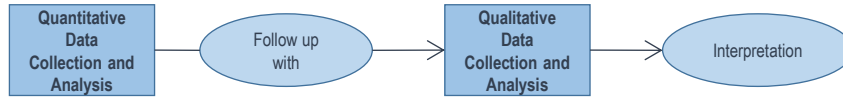
(a) Concurrent - Convergent parallel design ~ triangulation models



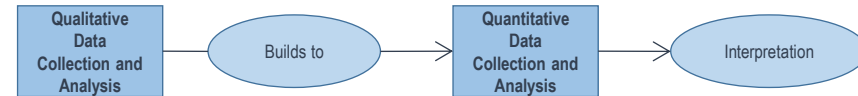
(b) Concurrent - Embedded design w/ differential emphasis on data types



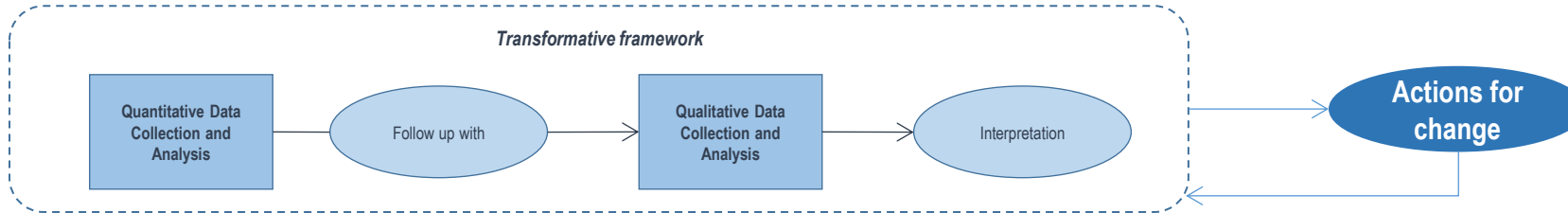
(c) Sequential - Explanatory design - emphasis on reflective learning & contextualised understanding



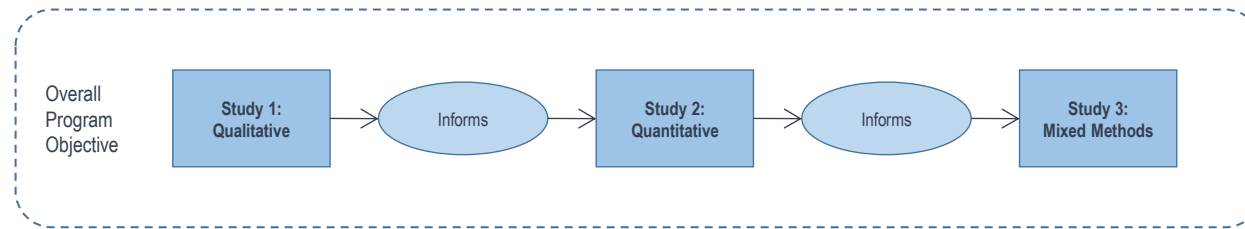
(d) Sequential - Exploratory design ~ emphasis on early learning providing feedforward



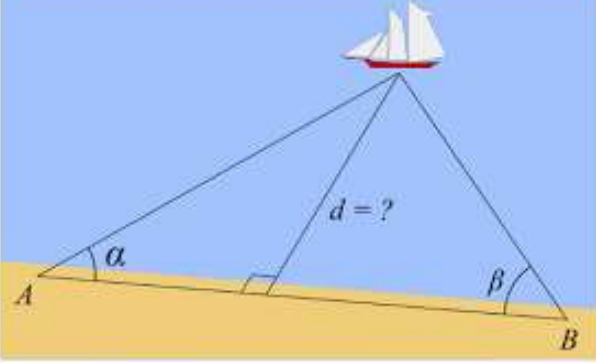
(e) Sequential - Transformative design ~ guided by an over-arching framework for achieving change/improvement; may have implied or explicit feedback loops or learning cycles, as in action research



(f) Sequential - Multiphase design ~ discrete, self-contained yet linked studies



[Adapted from: Creswell, J.W. & Plano Clark, V.L., (2011). *Designing and conducting mixed methods research* (2nd Ed.). Thousand Oaks, CA: Sage Publications, pp. 69-70.]



Triangulation

Traditionally, triangulation is the use of several different research techniques in the same study to confirm and verify data gathered in different ways.

Now we speak of theoretical triangulation and other forms of triangulation (next ppt)

Triangulation should add rigour, richness and depth to the design and to the analysis.

Types of Triangulation

Source triangulation	Incorporates different sources of data
Investigator triangulation	Incorporates different researchers
Theory triangulation	Incorporates different perspectives to interpret the data
Methodological triangulation	Incorporates different data-gathering techniques
Recruitment triangulation	Incorporates different ways to select research participants
Data collection and analysis triangulation	Incorporates different ways to collect and analyse the data
Research team triangulation	Incorporates different interviewers, observers and/or analysts
Interdisciplinary triangulation	Incorporates different techniques from other disciplines to inform and broaden understanding

Massey's (1999) warnings about triangulation

A	Using a second method to “prove” the truth of a first method, rather than simply define it as true
B	Claiming that agreement between the results of two methods “proves” the validity of the second method as well as the first method (the principle of mutual confirmation, also known as “arguing in a circle”)
C	Taking answers that look the same to mean the same thing
D	Assuming the researcher can accurately convert a qualitative statement by a respondent in such a way to plot it on the same place in a scale as a respondent would if asked (a development from error type C)
E	Assuming that propositions and answers derived from different methods can converge or diverge (ie agree or disagree)
F	Believing that the strength of one method can offset the weaknesses of another, leading for some researchers to the illusion of a problem of how to prioritise the findings resulting from different data sources (also known as “the weighting problem”)
G	Comparing the results of two samples as though they belong to the same population when there is no methodological or statistical demonstration that they do

Massey, Alexander. "Methodological triangulation, or how to get lost without being found out." *Explorations in methodology, Studies in educational ethnography* 2 (1999): 183-197.

Arguments for mixed methods (Grafton, Lillis and Mahama, 2011)

- Answer broader questions – what and why
- Extend findings beyond what can be found by a single method by combining insights from qual and quant
- Identify empirical contradictions that might be missed
- Observe convergence
- More cites than single methods studies

Cresswell and Plano Clark (2009: 29)

Elements of qualitative research tend toward	Process of research	Elements of quantitative research tend toward
Understand meaning individuals give to a phenomenon inductively	Intent of the research	Test theory deductively to support or refute it
Minor role Justifies problem	How the literature is used	Major role Justifies problem Identifies questions and hypothesis
Ask open-ended questions Understand the complexity of a single idea (or phenomenon)	How intent is focussed	Ask closed-ended questions Tests specific variables that form hypothesis or questions
Words and images From a few participants from a few sites Studying participants at their location	How data are collected	Numbers From many participants at many research sites Sending or administering instruments to participants
Text or image analysis Themes Larger patterns or generalizations	How data are analysed	Numerical statistical analysis Rejecting hypothesis or determining effect sizes
Identifies personal stance	Role of the researcher	Remains in background

Why?????

- Multi-method research requires more time in planning and analysing the data
- It requires more effort in planning and analysing the data
- It requires more sensitivity because researchers have to synthesise the techniques to achieve synergy among them

Problems – Uwe Flick Qualitative Inquiry 2016

1. The claim that it is new
2. Which methods for which purpose
3. Issues or Methods?
4. Textbook ideas that the method follows the question vv. universalistic approach
5. Many paradigms – not qual and quant

Combining qual and quant

- Which is dominant? Core component and supplementary (Janice Morse, 2010, “Simultaneous and sequential qualitative mixed methods design” *Qualitative Inquiry* 16, 483-491.)
- What sort of qualitative do we use? This is a key issue!!
- Paradigm incommensurability

Mixing and methodology - Paradigm

- Ontology – the nature of reality – positivism vv interpretivism
- Epistemology – the relationship between researcher and knowledge “Epistemological purity doesn’t get research done” (Miles and Huberman, 1984, p.21)
- Methodological – find out knowledge

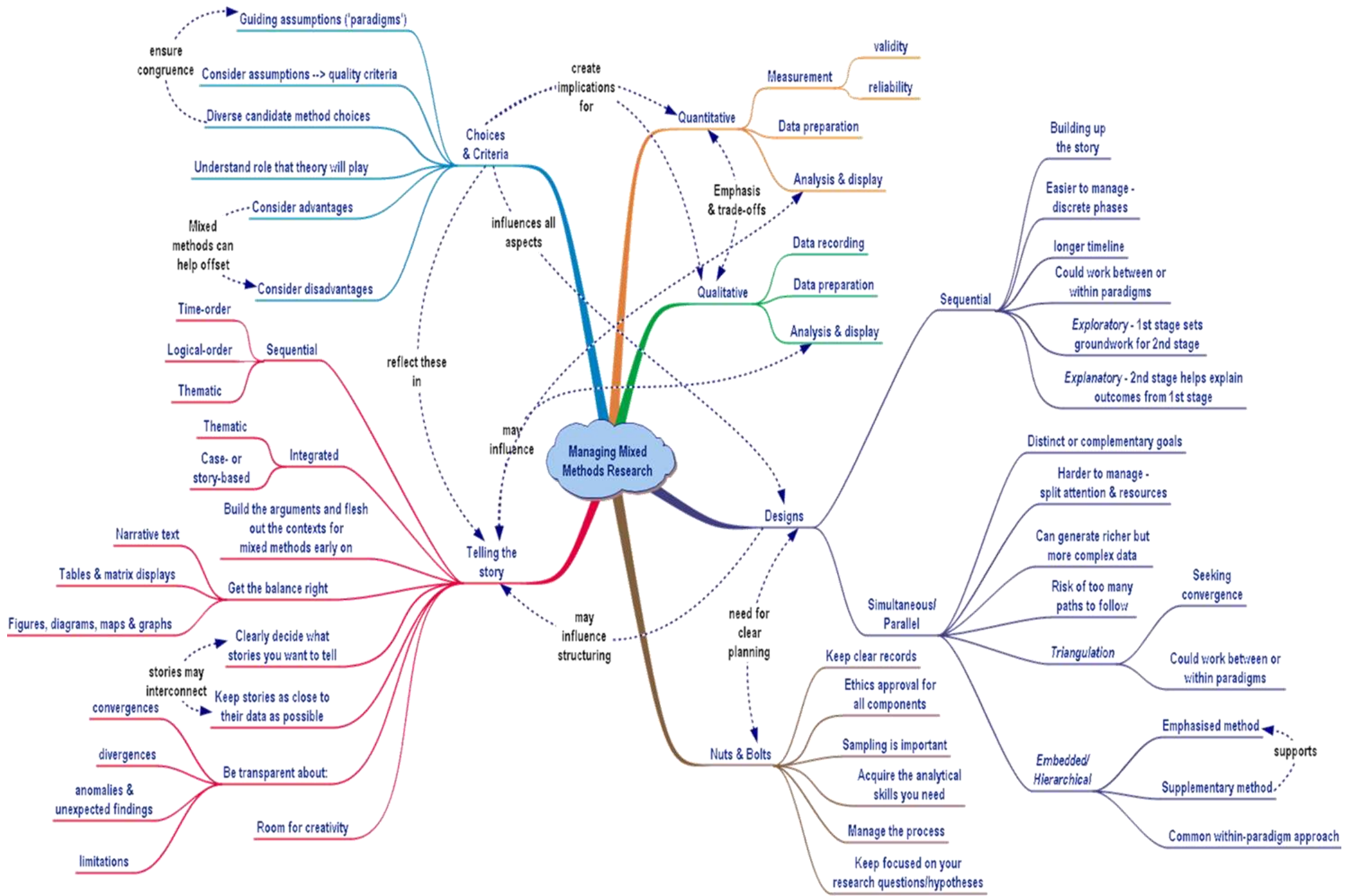
Questions to consider when mixing the data Prof. Anneke Fitzgerald

- To converge qual and quant data, what other options exist beyond a comparison in the discussion and matrices?
- How can qual data be embedded into a correlation design?
- How can quant data be embedded into an ethnography, grounded theory or other qual design?
- Are some data transformation procedures more credible than others?
- Are there good examples of transformation of quant data into qual data?
- What new innovative designs might be used that have not already been discussed in the literature

Threats to Validity and Reliability – Ihantol and Kihn (Quram, 2011)

1. Internal validity – Variations in the dependent variable arise from changes in the dependent variable (not confounding factors). Contextual validity of qualitative work.
2. External validity – a constant issue in quant work – population, time and environment. Qual – theoretical generalizability, lack of connection with prior theory
3. Procedural reliability – Quant – consistent with what it is supposed to measure. Qual – Consistency – examining same data come up with the same conclusions
4. New terms in mixed methods – Tashakkori and Teddlie – Inference quality (p.45)

Legitimation type ^a	Examples of threats
<p><i>Sample integration</i> The extent to which the relationship between the quantitative and qualitative sampling designs yields quality meta-inferences</p>	Mismatch between quantitative and qualitative samples
<p><i>Inside-outside</i> The extent to which the researcher faithfully presents and appropriately utilizes the insider's view and the observer's views for purposes such as description and explanation</p>	The imbalance between insider's and outsider's views (e.g. the researcher has failed to maintain a well-informed and balanced perspective when collecting, analyzing, and interpreting what the whole set of qualitative and quantitative data mean)
<p><i>Weakness minimization</i> The extent to which the weakness from one approach is compensated by the strengths from the other approach</p>	Careless assessment of threats to and weaknesses of quantitative and qualitative parts of research Deficiencies in compensating the weaknesses by the strengths
<p><i>Sequential</i> The extent to which one has minimized the potential problem wherein the meta-inferences could be affected by reversing the sequence of the quantitative and qualitative phases</p>	The sequencing itself is a threat if the results and interpretations are different if the order of the quantitative and qualitative phases are reversed
<p><i>Conversion</i> The extent to which quantizing or qualitzing yields quality meta-inferences</p>	Counting pitfalls associated to verbal counting, misleading, a contextual and overcounting Over-generalizations and representations of people that are unrealistic
<p><i>Paradigmatic mixing</i> The extent to which the researcher's epistemological, ontological, axiological, methodological and rhetorical beliefs that underlie the quantitative and qualitative approaches are successfully (a) combined or (b) blended into a usable package</p>	Competing dualisms of paradigmatic assumptions: the researcher does not make her/his paradigmatic assumptions explicit and does not conduct the research according to the stated assumptions
<p><i>Commensurability</i> The extent to which the meta-inferences made reflect a mixed worldview based on the cognitive process of Gestalt switching and integration</p>	Lack of cognitive and empathy training of researchers and their inability to make Gestalt switches
<p><i>Multiple validities</i> The extent to which addressing legitimation of the quantitative and qualitative components of the study result from the use of quantitative, qualitative, and mixed validity types, yielding high-quality meta-inferences</p>	Threats to the quality of quantitative and qualitative parts of the study
<p><i>Political</i> The extent to which the consumers of mixed methods research value the meta-inferences stemming from both the quantitative and qualitative components of a study</p>	Value or ideologically-based conflicts when different quantitative and qualitative researchers collaborate in a mixed methods study The contradictions and paradoxes when qualitative and quantitative data are compared and contrasted The difficulty in persuading consumers of mixed methods research to value the meta-inferences stemming from both the qualitative and quantitative findings



Useful MMR resources

- Bergmann, M.M. (ed.) (2008). *Advances in mixed methods research: Theories and applications*. London: Sage Publications.
- Brocklesby, J. (1997). Becoming multimethodology literate: An assessment of the cognitive difficulties of working across paradigm. In J. Mingers & A. Gill (Eds.), *Multimethodology: The theory and practice of combining management science methodologies*. Chichester, UK: John Wiley & Sons, 189-216.
- Cooksey, RW & McDonald, G. (2011). *Surviving and thriving in postgraduate research*. Prahran, VIC: Tilde University Press.
- Creswell, J.W. (2003). *Research design: Qualitative, quantitative and mixed methods approaches*, (2nd Ed.). Thousand Oaks, CA: Sage Publications.
- Creswell, J.W. & Plano Clark, V.L. (2011) *Designing and conducting mixed methods research* (2nd Ed.). Thousand Oaks, CA: Sage Publications.
- *International Journal of Mixed Methods in Applied Business & Policy Research*, online journal, Sage
- *International Journal of Multiple Research Approaches*, e-Content Management.
- *Journal of Mixed Methods Research*, Sage.
- Morse, J.M. & Niehaus, L. (2009). *Mixed method design: Principles and procedures*. Walnut Creek, CA: Left Coast Press.
- Plano Clark, V.L. & Creswell, J.W. (2008). *The mixed methods reader*. Thousand Oaks, CA: Sage Publications.
- Teddlie, C. & Tashakkori, A. (2009). *Foundations of mixed methods research: integrating quantitative and qualitative approaches in the social and behavioral sciences*. Thousand Oaks, CA: Sage Publications.