IIQM/MMIRA Webinar
Building an Integrated Mixed Methods Research Design

Presented by: Dr. Elizabeth G. Creamer
(creamere@vt.edu)
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2018-2019 MMIRA President

Mixed Methods International Research Association (MMIRA)
Mission: To promote an international forum for interdisciplinary mixed methods research, including through regional and international conferences and through web-based materials (webinars and anticipated in 2020 on-line modules).
2019-2020 Conferences: Trinidad (March 2019); Japan (September 2019); New Zealand (December 2019); Baltimore (June 2020)
Discounted membership rates available for students and individuals from developing nations.
• http://mmira.wildapricot.org/admin/website/?pageIndex=1514647
A Bit About Elizabeth

- President of the Mixed Method International Research Association (MMIRA) 2018-2019
- Proud author of a 2018 SAGE textbook *An Introduction to Fully Integrated Mixed Methods Research.*
- In progress textbook with Routledge, *Advancing Theory Development with Mixed Methods*
What is meant by the word, “DESIGN”? 

A way of conceiving a research study or project as a logically coherent, systematic whole that begins with a clearly defined research purpose and is subject to ongoing refinement and revision.

What it’s not:

1. A Method or Set of Procedures
Content

1. Conceiving a Problem in a Multi-Dimensional Way
2. Constructing an Integrated Conceptual Framework from the Literature
3. Engaging Diverse Perspectives in the Design of a Study
4. Interfacing with Conventional Designs
5. Constraining Integration
6. Facilitating Integration
7. Some References
Integrated Approaches to MMR

**Integrated mixed methods approaches** are intentional about using strategies that build interdependence between sources of data, methods, or approaches (Bazeley, 2018).

In a fully integrated approach, qualitative and quantitative data are integrated in meaningful ways throughout the phases of the research process, from the framing of the research questions, to data collection, sampling, analysis, and the process of drawing conclusions (Creamer, 2018)

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E.G.Creamer (creamere@vt.edu), AERA 2019, Toronto, Canada
Linking Integrated MMR to Complexity (see Poth, 2018)

- Rapidly changing, often unpredictable environments (as in schools, hospitals, organizations, on-line environments).
- Constructs are multi-dimensional.
- Interdisciplinary expertise is advantageous.
- Information collected is multi-level (from different constituents).
- There is substantial variability among groups.
- Some findings are paradoxical.
- A fixed set of procedures and pre-determined design is not likely to be viable.

E.G.Creamer (creamere@vt.edu), April 2019, IIQM/MMIRA Webinar
Visualizing Your Problem Theoretically and in a Multi-Dimensional Way

Uni-dimensional framing - A One-Way Relationship

Variable 1 ➔ Produces or is Linked to Variable 2

E.G.Creamer (creamere@vt.edu), AERA 2019, Toronto, Canada
Conceiving of the Core Phenomenon in a Uni-Dimensional and Multi-Dimensional Way

**UNIDIMENSIONAL**

X Variable Is Related to Y Variable

**MULTI-DIMENSIONAL**

- Cultural Dimensions
- Group Dimensions
- Interactional Dimensions
- Individual Dimensions

E.G.Creamer (creamere@vt.edu), AERA 2019, Toronto, Canada
Expanding the Framing of a Research Problem from Uni-Dimensional to Multi-Dimensional: A Necessity to Think Theoretically

E.G. Creamer (creamere@vt.edu), AERA 2019, Toronto, Canada
Conceiving Care Giving in a Life Course Perspective (from Evans et al. 2011)
Multi-Dimensional Research Questions From the Life Course Perspective that Invite Integration (from Evans et al., 2011)

<table>
<thead>
<tr>
<th></th>
<th>Mixing</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUANT Scale</td>
<td>What LEVELS OF STRAIN are expressed by caregivers?</td>
</tr>
<tr>
<td>QUAL from Participant Drawn Timeline</td>
<td>Mixing during analysis</td>
</tr>
<tr>
<td>QUAL-Interviews</td>
<td>Mixing during analysis</td>
</tr>
</tbody>
</table>

Figure: The process of integration.
Challenges to Design Taxonomies
Design Features that *Constrain Integration* - Separate QUAL and QUANT Strands & Leave Mixing to the End (from Kawamura et al. 2009)

**Figure 1: Procedures for the Concurrent Triangulation Mixed Methods Design**

- Quantitative (QUAN)
  - Survey Data Collected
  - Path Analyses (SEM)
  - A SEM for the Mechanisms of PSI in Physical Activity
  - Integration Models Resulting from Two Procedures Compared
  - A Composite Model of the Role of PSI in Physical Activity

- Qualitative (QUAL)
  - In-depth Interview Data Collected
  - Grounded Theory Analytic Approach
  - A Grounded Theory for the Process of PSI in Physical Activity

Note: PSI = parasocial interaction

E.G.Creamer (creamere@vt.edu), AERA 2019, Toronto, Canada
Adapting to Basic Designs: Complex Designs Often Use a Combination of Basic Designs (from Jang et al. 2008)

Figure 9.2. Figure Illustrating Steps in the Process of Mixing from Jang, McDougall, Pollon, Herbert, and Rusell (p. 230, 2008)
Building Dissonance/Complexity Into Your Research Design

E.G.Creamer (creamere@vt.edu), April 2019, IIQM/MMIRA Webinar
Inviting Complexity in the Design of Study
(Partially from Johnson & Schoonenboom, 2015)

1. Explore differences among participant groups.
2. Sample for diversity, even in qualitative studies.
3. Search for unanticipated outcomes.
4. Consider “extreme” and “outlier” cases.
5. Identify the characteristics of groups unlikely to benefit from an intervention.
6. Consider alternative explanations.
7. Compare the explanation generated by multiple theoretical perspectives.
8. Consult related literature in diverse fields.
9. Conduct further analysis to explain contradictory findings.
Highlighting Mixing During Reporting from Mendlinger & Cwikel (2008)

Figure 2
Double Helix Model of Mixed Methods Research Processes: Seven Examples From a Women’s Health Study

Types of mixed methods:
- Introjects of research bridging between methods
- Examples:
  1. Integrated: Developing the Research Design
     Combining Inductive and Deductive Methods of Inquiry
  2. Integrated: Data Collection
     Qualitative interviews & focus groups including questions derived from quantitative surveys
  3. Sequential: Designing the quantitative survey
     Based on the qualitative interviews
  4. Embedded: Data Analysis
     Quantitative analysis of qualitative health assessments (QHA)
  5. Sequential: Data Analysis
     A qualitative-quantitative analysis of sources of knowledge about menstruation
  6. Sequential: Data Analysis
     Incorporated focus group findings & conducted factor analysis of the reason for not breast-feeding—“not enough milk”
  7. Integrated: Data Analysis
     Based on the quantitative telephone survey — returning now to validate the coping styles in the qualitative interviews

Qualitative Methods

Quantitative Methods

Purpose of Introjects between methods based on Greene, Caracelli, & Graham (1999)

1. Initiation & Expansion
2. Triangulation
3. Development
4. Complementarity
5. Development
6. Complementarity
7. Triangulation
A Summative Joint Display: Mixing During Analysis (from Castro et al. 2010)

Table 7.4.

Contrasting Group Analysis of Qualitative Themes (Reproduced with Permission from Castro et al., 2010, p. 355)

<table>
<thead>
<tr>
<th>Case Number</th>
<th>Life Satisfaction Score</th>
<th>Quoted Statement About Machismo Self-Identification</th>
<th>Story Lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest on Life Satisfaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10133</td>
<td>2.17</td>
<td>&quot;I care about my family&quot;; &quot;For me it's acting like a gentleman&quot;</td>
<td>Story Line 1: Men who value and engage in family caretaking exhibit high levels of caballeroismo (positive machismo) in their male gender role identity, are giving and responsible, and they also experience high levels of life satisfaction</td>
</tr>
<tr>
<td>10147</td>
<td>1.37</td>
<td>&quot;I'm respectful of women&quot;; &quot;I never bring shame to the family&quot;</td>
<td></td>
</tr>
<tr>
<td>10164</td>
<td>1.50</td>
<td>&quot;I do my best to take care of my family&quot;</td>
<td></td>
</tr>
<tr>
<td>10343</td>
<td>1.48</td>
<td>&quot;I treat women with respect and don't beat them&quot;</td>
<td></td>
</tr>
<tr>
<td>10371</td>
<td>1.42</td>
<td>&quot;I bring home money and don't worry there is food on the table&quot;</td>
<td></td>
</tr>
<tr>
<td>Lowest on Life Satisfaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10160</td>
<td>-1.15</td>
<td>&quot;I have my faults, I'm selfish&quot;; &quot;I hold a grudge forever&quot;; &quot;I'm not afraid to cry in front of others even strangers&quot;</td>
<td>Story Line 2: Men who do not value or engage in family caretaking exhibit low levels of caballeroismo (positive machismo) in their male gender role identity, are selfish and irresponsible, and they also</td>
</tr>
<tr>
<td>10162</td>
<td>-1.21</td>
<td>&quot;I don't identify with working&quot;</td>
<td></td>
</tr>
</tbody>
</table>
A Type of Joint Display: A Theoretical Model with QUAL and QUANT Variables and Paths from Kawamura et al. (2009)
Design Features that Inhibit Meaningful Integration

<table>
<thead>
<tr>
<th>RESEARCH PHASE</th>
<th>PROCEDURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Questions</td>
<td>Research questions that address separate constructs; no mixing research question.</td>
</tr>
<tr>
<td>Sampling &amp; Data Collection</td>
<td>QUAL and QUANT sample are entirely discrete.</td>
</tr>
<tr>
<td>Analysis</td>
<td>Very secondary or insignificant second strand; do not pursue alternative explanations or paradoxical findings.</td>
</tr>
<tr>
<td>Reporting</td>
<td>No tables or figures that link qualitative and quantitative data or results.</td>
</tr>
</tbody>
</table>
# Design Features that Facilitate Integration

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>A problem statement that reflects a paradox from the literature; core construct conceived as multi-dimensional; research questions that offer a way to link variables (versus separate QUAL and QUANT variables) start with an integrative conceptual model derived from multiple fields</td>
</tr>
<tr>
<td>Sampling</td>
<td>Embedded or nested sample; diverse sample</td>
</tr>
<tr>
<td>Data Collection</td>
<td>Simultaneous collection of qualitative and quantitative data with opportunity for participants’ reflections</td>
</tr>
<tr>
<td>Analysis</td>
<td>Case (vs variable)-based analysis; pursue dissonance; an interactive approach to analysis that allows for a good bit of interaction between the strands.</td>
</tr>
<tr>
<td>Drawing Conclusions</td>
<td>Give comparable weight to findings from different sources of data.</td>
</tr>
</tbody>
</table>
Creamer’s YouTube Channel

Elizabeth G. Creamer
5 subscribers

Second Design feature that’s a Product
Consolidated important: Priorities
- Comparing things about three
  1. insider area
  2. Middle place
  3. Farthest from our viewpoint

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REFERENCES


