Lecture Overview

Lecture → Group Discussion → Comments

• Research Design Process and Choices

• Qualitative, quantitative, then integrated or ‘mixed’ methods research paradigms and designs.
Definition: Research Design

Process of choosing a way to answer your research question, which requires knowing both what your options are and how to evaluate their relative strengths and weaknesses.

Research Design: Getting Started

• Choosing an appropriate research design involves matching goals that motivate your research with methods for meeting those goals.
Design Issues to Consider

• Your discussion of methodology should clearly justify the selection of a particular research design.

• Ensure data collection and analysis is consistent with accepted practice in field of study and discipline
  – Deviations from methodological norms should be justified, ideally with methodological literature.

• Research method must be appropriate to study’s objectives

• Reflexivity: the explication of methods should include discussion of the constraints and limitations of the research.
  – In qualitative research this includes discussing the role of your own subjectivity as a factor in the research process.

Research Design = Choices

• Research design all about making choices.

• To make a good choice, you need to know (1) what your options are and (2) how to evaluate those options.
Research Design: Getting Started

- Sometimes, your best choice will be a single research method
- Other times, an integrated combination of methods will best serve your purposes.
- It is helpful to think of methods as tools that offer a set of strengths that can be used to accomplish range of goals.

<table>
<thead>
<tr>
<th>Qualitative Research</th>
<th>Quantitative Research</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Induction</strong></td>
<td><strong>Deduction</strong></td>
</tr>
<tr>
<td>Purposes</td>
<td>Purposes</td>
</tr>
<tr>
<td>• Generates theory from observations</td>
<td>• Tests theory through observations</td>
</tr>
<tr>
<td>• Oriented to discovery, exploration</td>
<td>• Oriented to cause and effect</td>
</tr>
<tr>
<td>Procedures</td>
<td>Procedures</td>
</tr>
<tr>
<td>• Emergent design</td>
<td>• Predetermined design</td>
</tr>
<tr>
<td>• Merges data collection and analysis</td>
<td>• Separates data collection and analysis</td>
</tr>
<tr>
<td><strong>Subjectivity</strong></td>
<td><strong>Objectivity</strong></td>
</tr>
<tr>
<td>Purposes</td>
<td>Purposes</td>
</tr>
<tr>
<td>• Emphasizes meanings, interpretation</td>
<td>• Emphasizes things that can be measured</td>
</tr>
<tr>
<td>• Tries to understand others’ perspectives</td>
<td>• Results do not depend of beliefs</td>
</tr>
<tr>
<td>Procedures</td>
<td>Procedures</td>
</tr>
<tr>
<td>• Researcher is involved, close to the data</td>
<td>• Researcher is detached, distant from data</td>
</tr>
<tr>
<td>• Researcher is the ‘research instrument’</td>
<td>• Relies on standardized protocols</td>
</tr>
<tr>
<td><strong>Context</strong></td>
<td><strong>Generality</strong></td>
</tr>
<tr>
<td>Purposes</td>
<td>Purposes</td>
</tr>
<tr>
<td>• Emphasizes specific depth and detail</td>
<td>• Emphasizes generalization and replication</td>
</tr>
<tr>
<td>• Analyzes holistic systems</td>
<td>• Analyzes variables</td>
</tr>
<tr>
<td>Procedures</td>
<td>Procedures</td>
</tr>
<tr>
<td>• Naturalistic approach</td>
<td>• Experimental and statistical controls</td>
</tr>
<tr>
<td>• Concentrates on relatively few cases</td>
<td>• Works across a larger number of cases</td>
</tr>
</tbody>
</table>
Qualitative Research Design

• Qualitative Research typically starts with observations – i.e. it is INDUCTIVE.

• These observations are then used to create theory or generate hypotheses.

• This process leads to research goals such as discovery and exploration.

Qualitative Research Design

• Inductive research purposes aimed at theory-generation and discovery support an “emergent” approach to research design.

• Can lead to shifts in data collection and analysis strategies.

• This approach often calls for a flexible merger of data collection and analysis.
Interpretivism

- The social world cannot be described without investigating how people use language and symbols to construct social practices and understand their experiences.
- No social explanation is complete unless it can adequately describe the role of meanings in human actions.
- Human actions not governed by discrete, objective patterns of cause/effect (as in positivism), but by social actors situated interpretations and meanings.

Quantitative Design: Defining Terms

- **Quantitative Methods**
  Used to answer any counting related question: How many? What proportion?
- **Primary (Data) Analysis**
  Analysis conducted by the investigator(s) or institution that collected the data.
- **Secondary (Data) Analysis**
  Any further analysis of an existing dataset that produces results or conclusions other than those produced as a result of the first report on the inquiry.
  – Often carried out by different people than those that collected the data.
From Theory to Hypotheses

- **Theory** involves wide-ranging statements about the world. These are located at a high level of abstraction and generalization.

- Quantitative analysis is usually involved in **empirically testing** particular hypotheses that are derived from theory.

- **Hypotheses** are general statements at a lower level of abstraction. They involve particular relationships (and directionality) between two (or more) concepts.

- Sometimes different theories will give rise to **competing hypotheses**. These can be empirically arbitrated.
Deductive Approach: Underlying assumptions

• Fundamental premise for mainline quantitative social science: there are truths that exist (independently of human opinions about them) to be discovered through observation / measurement

• Research approaches in this paradigm require evidence gathered through observation and standardised, transparent measurement systems that could be replicated by others.

• Emphasis on objectivity (although researchers’ interests, opinions and theoretical commitments may influence interpretations of results!)

Mixed Methods Research Design

• Methodological Eclecticism

• Motivations for Combining Research Methods

• Pragmatic Epistemology vs. Epistemological Fidelity
Methodological Eclecticism

- More methods = not necessarily better
- Alternative to mere eclecticism is having clear purposes for using multiple methods
- Requires understanding reasons why researchers choose to integrate methods.

Motivations for Combining Methods

<table>
<thead>
<tr>
<th>Convergent Findings</th>
<th>Broadest Purpose</th>
<th>Additional Coverage</th>
<th>Complementary Assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses different strengths using each method to investigate the same phenomenon and comparing the results.</td>
<td>To combine the different strengths of different methods.</td>
<td>Uses different strengths by assigning each method a distinct set of purposes within the study as a whole.</td>
<td>Uses different strengths by connecting methods so that one contributes to the performance of another.</td>
</tr>
<tr>
<td>Qual = Quant</td>
<td></td>
<td>Qual + Quant</td>
<td>Qual → Quant</td>
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<td>QUAL + quant</td>
<td>qual → QUANT</td>
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<td>quant → QUAL</td>
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<td>QUANT → qual</td>
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<td>QUAL → quant</td>
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</table>
Motivations for Combining Methods

• *Convergent Findings*, which uses qualitative and quantitative methods to address the same research question.

• Most likely to rely on a Convergent Findings motivation when greater certainty needed.

• Certainty comes from showing methods with different strengths yield similar results.

• This motivation also known as triangulation or cross validation

Motivations for Combining Methods

• *Additional Coverage* motivation assigns different strengths of multiple methods to different goals within overall project.

• This approach relies on division of labour, matching each method’s strengths to separate goal within overall research project.
Motivations for Combining Methods

• *Connected Contributions* motivation links methods together so one method enhances effectiveness of another. (Morgan also calls this ‘Complementary Assistance’)

• Aim of linking is to use what you learn from one method to inform how you will use another method. (e.g. pilot focus groups used to design large-scale survey)

Combining Research Methods

• Decision to combine methods must start with consideration of how you can combine qualitative and quantitative methods to serve your research purposes.

• Epistemology is one of first potential issues
Epistemology: Consistency Optional?

- Mixed methods research typically follows overarching epistemological approach or ‘paradigm’ based on Pragmatism.
- Pragmatic paradigm seeks to minimize questions about nature of reality by concentrating on social action as basis for knowing.
- Seeks to replace questions about what is true with questions about what is useful.
- With regard to Research Design, Pragmatism concentrates on extent to which your research procedures serve your research purposes.

Pragmatic epistemology

- Pragmatism leads to what Patton (2002: 257) has called a “paradigm of choices” where you justify choices about research procedures based on their ability to meet overall project goals.
- Essentially, this approach to research design:
  “accepts that quantitative, qualitative, and mixed research are all superior under different circumstances and it is the researcher’s task to make the decision about which research approach […] should be used in a specific study” (Johnson and Onwuegbuzie 2004: 22-23).
### Sequential Approach (Morgan)

<table>
<thead>
<tr>
<th>Supplement is: Preliminary</th>
<th>Core Is: Quantitative</th>
<th>Priority</th>
<th>Core Is: Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary Qualitative Input</td>
<td>qual $\rightarrow$ QUANT</td>
<td>Preliminary Quantitative Input</td>
<td>quant $\rightarrow$ QUAL</td>
</tr>
<tr>
<td>Follow-up Qualitative Extension</td>
<td>QUANT $\rightarrow$ qual</td>
<td>Follow-up Quantitative Extension</td>
<td>QUAL $\rightarrow$ quant</td>
</tr>
</tbody>
</table>

### Likely Reviewer / Reader Queries

- **Purpose and Rationale for the Research**
- **Type of Research**
  - (e.g. case study or action research)
- **Time Horizon for the Research**
  - (e.g. longitudinal versus cross-sectional)
- **Unit of Analysis, Population of Interest, Sampling**
  - (provide details!)
- **Level and Form of Researcher Involvement during Data Collection Process**
  - (e.g. required details include duration of in-depth qualitative interviews or specific procedure for collecting survey forms)
- **Context of Data Collection**
  - (e.g. on a university campus versus where people normally congregate)
Group Discussion (3-4 people)

- What are your initial ideas in terms of research design for your own project?
- Why would you use this approach? (i.e. justification?)
- Are you considering combining research methods?