



Understanding Research Methodology and Philosophy

Welcome to week 4. This presentation explores the foundations of research design, philosophical approaches, and methodological choices that shape academic inquiry. We'll examine how different research paradigms influence the questions we ask and the methods we employ to find answers.

Research Philosophies



Positivism

Focuses on observable phenomena and measurable facts. Emphasizes objectivity, causality, and value-free research. Typically associated with scientific method and quantitative approaches.



Pragmatism

Focuses on practical outcomes and "what works." Combines multiple viewpoints to address research problems. Supports mixed methods approaches and values both objective and subjective knowledge.



Interpretivism

Emphasizes understanding human experiences and social contexts. Recognizes multiple realities constructed through social interactions. Often employs qualitative methods to explore subjective meanings.



Research Approaches

Deductive Approach

- Moves from theory to data (top-down)
- Tests existing theories or hypotheses
- Typically associated with positivism
- Often uses quantitative methods
- Structured methodology

Inductive Approach

- Moves from data to theory (bottom-up)
- Generates new theories from observations
- Often linked with interpretivism
- Typically uses qualitative methods
- Flexible research structure

Research Methods Overview

- Quantitative Methods**
Focuses on numerical data and statistical analysis
- Surveys with closed questions
 - Experiments
 - Statistical analysis



Qualitative Methods

Explores non-numerical data and interpretations

- In-depth interviews
- Focus groups
- Observation

Mixed Methods

Combines both approaches for comprehensive insights

- Sequential designs
- Concurrent designs
- Transformative designs

Data Collection Methods

1 Surveys

Best for: Collecting standardized data from large samples

- When you need statistical representation
- For testing hypotheses across populations
- When anonymity is important

2 Interviews

Best for: Exploring complex phenomena in depth

- When seeking rich, detailed responses
- For understanding personal experiences
- When flexibility in questioning is needed

3 Secondary Data

Best for: Historical analysis or when primary data collection is impractical

- When analyzing existing datasets
- For longitudinal studies
- When resources are limited

Research Insights Solutions



Case Examples of Research Designs

Research Topic	Philosophy	Approach	Method
Impact of exercise on depression	Positivism	Deductive	Quantitative (controlled experiment)
Consumer experiences with new technology	Interpretivism	Inductive	Qualitative (in-depth interviews)
Effectiveness of teaching methods	Pragmatism	Mixed	Mixed methods (surveys + classroom observation)

Matching Topics to Methodologies

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Research Question

Consider what you're trying to discover. Is it about measuring relationships, understanding experiences, or solving practical problems?

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Philosophical Alignment

Determine which worldview best fits your research goals: positivist, interpretivist, or pragmatic perspectives.

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Methodological Choice

Select methods that align with your philosophy and can effectively answer your research question.



Key Takeaways

1 Research Philosophy Matters

Your philosophical stance shapes every aspect of your research design and influences the knowledge you create.

2 Align Methods with Questions

Choose research approaches and methods that best address your specific research questions, not just what's familiar.

3 Consider Mixed Methods

Complex research problems often benefit from combining qualitative and quantitative approaches for comprehensive insights.

4 Practice Methodological Reflection

Regularly question and justify your methodological choices throughout the research process.

