Week 2

Start to finish…What do we do? The researcher's role in research.

1

Quick Write

2

Quick Write (Discussion #1)

- Think of a major research problem/area of research in your field. Summarize the issue in a few sentences.

- What types of methods have primarily been used?

- What research designs have you been exposed to?

- What research are you most drawn to?
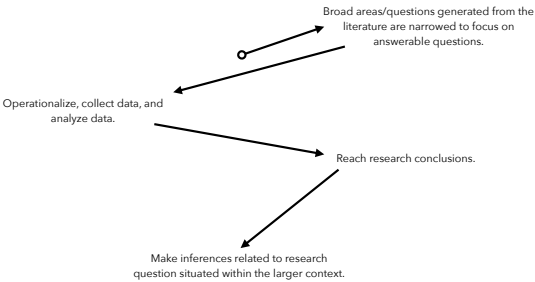
- How might your research paradigm influence this?

3

Today.

- The research process.
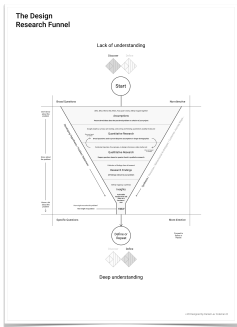
- Paradigms

- Theory

- Finding a problem.

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Research as Process

Broad areas/questions generated from the literature are narrowed to focus on answerable questions.

Operationalize, collect data, and analyze data.

Reach research conclusions.

Make inferences related to research question situated within the larger context.

The Design Research Funnel

Lack of understanding

Start

Deep understanding

The Research Process

Research Problem

Literature Review

Research Questions

Quantitative Research   and/or   Qualitative Research

Research Design

Example Quan Designs	Example MM Designs	Example Qual Designs
Experimental	Exploratory	Grounded Theory
Correlational	Explanatory	Ethnography
Survey	Convergent	Phenomenology

Sampling   Instruments   Protocol   Data Analysis   Interpretation
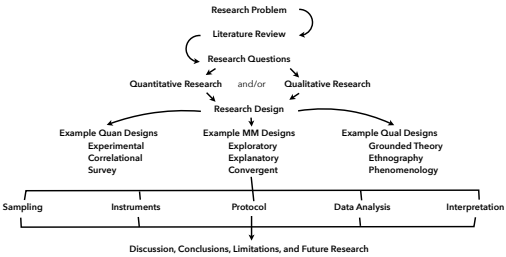
Discussion, Conclusions, Limitations, and Future Research

Paradigms

… can be thought of as a school of thought that provides the framework for research activities—the goals of the research and the types of questions posed, the methods employed, and the types of interpretations made.

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Differences in "Meaning"

In one community of scholars, the first step always begins with the assumption that the goal is to relate variations in student achievement to variations in behavior of teachers. Additional aspects may be added: use of individual student data versus classroom averages; student or teacher characteristics as potential mediating factors. But in the end the fundamental character of the questions remain unchanged. (QUANT)

In another community of scholars, there may focus on classroom discourse, the sense students make of instruction, the social organization of the classroom (e.g., types of activities). Again, in the end the fundamental character of the questions remain the same. (QUAL)

In another community of scholars, there may be the belief that classrooms are complex and that to understand the teaching and learning processes, an intertwined/multifacted approach must be used (MM)

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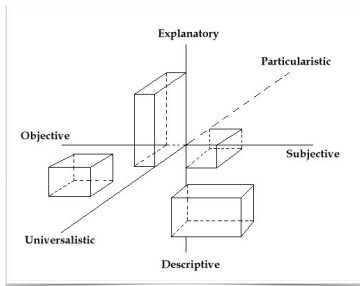
What paradigm is not…

- Paradigm ≠ methods

- Paradigm ≠ design

- Paradigm ≠ statistics

- Paradigm **is** a philosophical frame for making decisions about these areas.

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A *limited* visual representation.

What does a paradigm do?

- Paradigm and question(s) initiate decision-making process about:
  - Research design
  - Data collection methods
  - Methods for data analysis and synthesis
  - Interpretation of findings
- No "set" answer to any of these decisions
- Different combinations of answers = different studies

Research paradigms.

Guba & Lincoln 1994	Positivism	Post-positivism	Constructivism	Critical Theory et al	
Lincoln & Guba 2003	Positivism	Post-positivism	Constructivism	Critical Theory et al	Participatory
Denzin & Lincoln	Positivism/Post-positivism		Constructivism	Critical Theory	Feminist/ Poststructural
Merriam			Interpretive	Critical	Postmodern/ Poststructural

	Positivism	Post-positivism	Pragmatism	Constructivism Interpretive	Critical	Post-modern/ Post-structural/ Participatory/ Feminist
Ontology [the nature of being or existence]	Naive realism "Real" reality apprehendable Verified hypotheses: Laws & Facts	Critical realism "Real" reality imperfectly apprehendable Non-falsified Hypotheses: Probable laws, facts	Truth and truth Current truth tentative Fallibilism Rejects dualisms Importance of both physical and psychological world (i.e., "objective" and subjective worlds)	Relativism Local constructed realities Consensus around individual reconstructions	Historical realism Virtual reality shaped by society, politics, culture, race economics, gender, etc Crystallized over time Structural insights	Participative reality Subjective-objective reality co-created by mind and given cosmos Materialist-realist No means to represent external reality
Epistemology [the nature or grounds of knowledge]	Dualist Objectivist Findings true	Modified dualist/ objectivist Critical tradition Findings probably true	Knowledge is both constructed and based on reality of world (both objectivity and subjectivity recognized) Organism-environment transaction	Transactional/ Subjectivist Constructed findings	Transactional/ Subjectivist Value-mediated findings	Subjectivist Emancipatory
Methodology [the body/ analysis of methods of inquiry]	Experiment Verification of hypotheses Quantitative	Modified experimental Falsification of hypotheses Some Qual	Pluralism; Methods selected based on questions Human inquiry analogous to scientific inquiry Pragmatic choices regarding	Hermeneutical Dialectical Naturalistic	Dialogic Dialectical Naturalistic	Naturalistic Deconstruction Interpretion : anti-objectivist, introspective

	Positivism	Post-positivism	Pragmatism	Constructivism Interpretive	Critical	Post-modern/Post-structural/Participatory/Feminist
Inquiry Aim	Explanation Prediction & Control		Empirical study of what works	Understanding Reconstruction	Critique Transformation Restitution Emancipation	Critique Transformation Emancipation Giving voice Questioning boundaries Advocacy/Activism
Form of Theory	Logical-Deductive Grounded		Both Deductive and Inductive Practical	Inductive/Retroductive Substantive-Formal	Inductive/Retroductive Critical Historical Standpoint	
Quality Criteria	Internal & External Validity Reliability Objectivity		Warranted assertability	Trustworthiness Authenticity Transferability Confirmability	Historical situatedness Erosion of ignorance Action stimulus	Reflexivity Accountability Caring/Emotion Emancipatory Crystalline
Values & Ethics	Excluded – no influence Extrinsic - deception		Value oriented Cultural and shared values (democracy, inequality, freedom)	Included – formative Intrinsic – revelation (process or moral)		

Table 1.4 Qualitative, Quantitative, and Mixed Methods Approaches

Tend to or Typically . . .	Qualitative Approaches	Quantitative Approaches	Mixed Methods Approaches
• Use these philosophical assumptions • Employ these strategies of inquiry	• Constructivist/transformative knowledge claims • Phenomenology, grounded theory, ethnography, case study, and narrative	• Postpositivist knowledge claims • Surveys and experiments	• Pragmatic knowledge claims • Sequential, convergent, and transformative
• Employ these methods	• Open-ended questions, emerging approaches, text or image data	• Closed-ended questions, predetermined approaches, numeric data (may include some open-ended questions)	• Both open- and closed-ended questions, both emerging and predetermined approaches, and both quantitative and qualitative data and analysis
• Use these practices of research as the researcher	• Positions him- or herself • Collects participant meanings • Focuses on a single concept or phenomenon • Brings personal values into the study • Studies the context or setting of participants • Validates the accuracy of findings • Makes interpretations of the data • Creates an agenda for change or reform • Collaborates with the participants • Employs text analysis procedures	• Tests or verifies theories or explanations • Identifies variables to study • Relates variables in questions or hypotheses • Uses standards of validity and reliability • Observes and measures information numerically • Uses unbiased approaches • Employs statistical procedures	• Collects both quantitative and qualitative data • Develops a rationale for mixing • Integrates the data at different stages of inquiry • Presents visual pictures of the procedures in the study • Employs the practices of both qualitative and quantitative research

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What about theory?

What is it?

- Theory is a system of interconnected abstractions or ideas that condense and organize knowledge about the social world.

- Theories should be parsimonious, internally consistent, and have clear criteria for their refutation.

What is it? cont.

- "…theories are attempts to retrospectively explain and to prospectively predict" (Thyer, 2001, p. 16).

- It is not:
  - Models, perspectives, systems approach, philosophical assumptions, statistical assumptions

Concepts in theory.

- Concepts are ideas expressed as symbols or in words having two parts:
  - A word or term.
  - A definition of that word or term.

- Concepts very from concrete to abstract.

- Concepts cluster together, forming a web of meaning for a theory (e.g. socio-ecological theory)

Theory …

- … specify how concepts are related to one another and why these relationships exist.

- …, sometimes, specify a causal relationship, telling us why and how one thing causes another
  - i.e., increased in the size of social welfare organizations leads to increased in centralization.
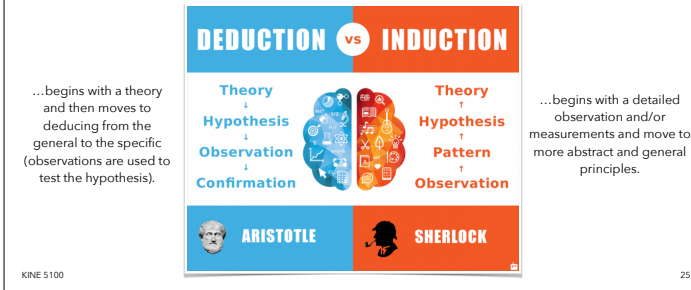
Definitions

- **Theory**: an interrelated set of concepts and propositions, organized into a deductive system to explain relationships about certain aspects of the world.

- **Perspective**: an emphasis or point of view; concepts at an earlier level of development (e.g., a strengths perspective) or a broader and higher level of abstraction (e.g., a humanistic perspective or a developmental perspective).

- **Paradigm**: a mode of thought; a general way of seeing the world.

- **Practice Model**: a guide for practitioners interaction that operationalized theory; includes concrete actions and techniques.

- **Dimension**: a feature that can be focused on individually or separately, but can only be understood in relation to other features.
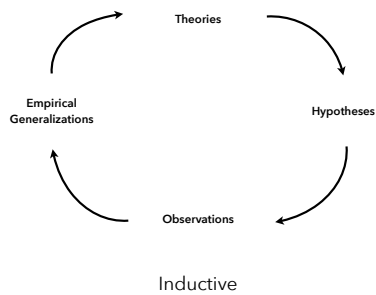
Deductive/Inductive cycle of theory construction.

…begins with a theory and then moves to deducing from the general to the specific (observations are used to test the hypothesis).

DEDUCTION vs **INDUCTION**

Theory
↓
Hypothesis
↓
Observation
↓
Confirmation

ARISTOTLE

Theory
↑
Hypothesis
↑
Pattern
↑
Observation

SHERLOCK

…begins with a detailed observation and/or measurements and move to more abstract and general principles.

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Deductive

Theories

Hypotheses

Observations

Empirical Generalizations

Inductive

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The Role of Theory

- … can be an organizing principle for a program.

- … can suggest a standard approach derived from some well-articulated and comprehensive social or behavioral science theory.

- … can serve as a guide in conceptualizing the causes of problems and in proposed mechanisms of action for interventions.

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The Role of Theory, cont.

- Theoretical models are important to understanding how a program *should* work and where one should look for indications that a program is **successful**.

- Rarely is a program unsuccessful due to theory.

- Likely, other reasons:
  - Was the intervention implemented correctly?
  - Was the staff all trained in the same way?
  - Was there characteristics about the clients that resulted in different outcomes?

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Although…

- Theory is great and important…

  - Many (perhaps most) human services programs are not based on any explicit theory of human behavior or any social or behavioral social science theory.

  - Such "atheoretical" programs may be based on:
    - Common sense,
    - Authority, or
    - Tradition.

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So, what?

- Theory frames how we look and think about a topic.

- Theory provides background assumptions.

- Theory is open to revision by new data.

- Theory suggests ways to connect a single study to a broad class of explanations.

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BIG GAP

Theory   **Practice**

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Finding a "research-worthy" problem.

- A research problem is an issue or concern that an investigator presents and justifies in a research study.
  - What is the issue?
  - What controversy leads to the need for a study?
  - What concern is being addressed "behind" the question?

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Examples.

- Basic science questions/adding to the knowledge base—theories of teaching and learning, classroom processes, training methods, etc. **Theory-generated.**

- **Practice-relevance/urgency** — what is the best way to teach X; program models for promoting Y; how to access Z.

- **Policy-relevance/urgency**—effects of policy Y or regulation X on Z

- Programmatic, progressive, systematic vs one-time focus
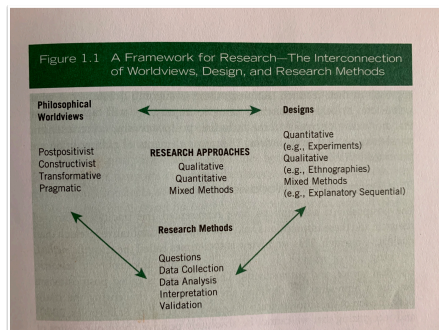

NOT Research-Worthy

- e.g.) Done for achieving self-enlightenment
  - Finding out information to reduce one's own gap in knowledge provides satisfaction for oneself but DOES not lead to NEW knowledge

- e.g.) Done of the Sole Purpose of Comparing Data Sets
  - "This research will compare the increase in the number of women employed over 100 years with the employment of men over the same time span."

- e.g.) Questions that Result in a "Yes" or "No" Answer
  - "Is homework beneficial to students?"

Finding a legitimate problem.

- Read the academic/scholarly literature.

- Attend and participate in professional meetings and conferences; lecture series; webinars; etc.

- Seek the advice of experts.

Figure 1.1 A Framework for Research—The Interconnection of Worldviews, Design, and Research Methods

Research Design Primer
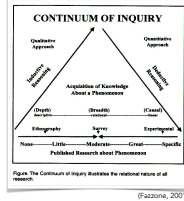
- **Quantitative:**
  - Experimental designs (e.g., RCT)
  - Non-experimental designs (e.g., survey)
  - Longitudinal designs
- **Qualitative:**
  - Narrative research
  - Phenomenology
  - Grounded Theory
  - Ethnography
  - Case study

- **Mixed Methods:**
  - Convergent
  - Explanatory sequential
  - Exploratory sequential
  - Complex designs with embedded core designs.

CONTINUUM OF INQUIRY

Figure. The Continuum of Inquiry illustrates the relational nature of all research.

(Fazzone, 2001)

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Five Elements of a "Problem Statement"

Flow of Ideas

Topic	Subject Area
Issue	A concern, problem, something that needs a solution.
Evidence for the Issue	Evidence from the literature, evidence from practical experiences.
Deficiencies in the Evidence	In this body of literature, what is missing? What do we need to know more about?
What remedying the deficiencies with do for select audiences.	How will addressing what we need to know help: researchers, educators, policy makers, or individuals such as those in the study?

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Crafting a Problem Statement

1. **Lead-in**
   - *Gatekeepers act as agents of acculturation when they disseminate information within their ethnolinguistic communities.*

2. **Declaration of originality (e.g., mentioning a knowledge void—supported by the literature)**.
   - *Yet, no study has probed the information-seeking behavior and information dissemination practices of those gatekeepers in the complex, digital environment of today.*

3. **Indication of the central focus of the study,** and

4. **Explanation of study significance of the benefit to be derived from an investigation of the problem.**
   - *Insight gained from such as study would be useful for public libraries to service the residents of ethnolinguistic communities.*
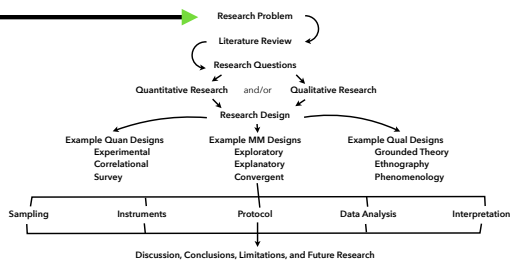
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In short,

- The research problem statement is a succinct, comprehensive statement that includes:

  - A problem definition (stated clearly, completely).

  - Justification for research.

  - Details on Who, What, How.

  - Foreshadowing/Implications of Findings.

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Activity (Discussion #2)

- **On own**: jot down topic, known research, known issues or gaps, potential designs. Create your "lead-in", "declaration", "central focus", and "explanation".

- **With others:** Discuss problem, consider strengths and weaknesses, alternative approaches.

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The Research Process

Research Problem

Literature Review

Research Questions

Quantitative Research   and/or   Qualitative Research

Research Design

Example Quan Designs	Example MM Designs	Example Qual Designs
Experimental	Exploratory	Grounded Theory
Correlational	Explanatory	Ethnography
Survey	Convergent	Phenomenology

Sampling   Instruments   Protocol   Data Analysis   Interpretation

Discussion, Conclusions, Limitations, and Future Research

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Conclusion

- Research is a process.

- Research paradigm frames "thinking".

- Theory provides useful frameworks and is often connected to our paradigm.

- Understanding how our worldview shapes our design can lead to better understandings and implications.

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