RESEARCH PARADIGMS

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WORKSHOP ON RESEARCH METHODOLOGY
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LEARNING OUTCOME

• At the end of this session participant will be able
  • to know ‘what is a research paradigm?’ and the importance of research paradigms
  • to describe different research paradigms used in natural sciences & Social Sciences
  • to apply appropriate research paradigms for their own research
OUTLINE

- What is meant by a paradigm?
- What is a research paradigm?
- What are three basic questions on Ontology, epistemology & methodology?
- Paradigm debate/ different paradigms
- Which research paradigm your research belong to?
- Paradigms, theory and social research
- Activity
WHAT IS MEANT BY A PARADIGM?

- **Meaning of “paradigm” in the English Cambridge Dictionary**
  
  “Model of something, or a very clear and typical example of something”

- **Paradigm** indicate a pattern or model or typical example including cultural themes, worldviews, Ideologies and mindsets

- **ORIGIN:** late 15th century.: via late Latin from Greek *paradeigma*, from *paradeiknunai* ‘show side by side,’ from *para- ‘beside’ + deiknunai ‘to show.’

  “Paradigms are general framework or view points : literally ‘points from which to view’. They provide ways of looking at life and are grounded in sets of assumptions about the nature of reality” (Babbie, 1998)
WHAT IS A RESEARCH PARADIGM?

• A research paradigm is “the set of common beliefs and agreements shared between scientist about how problems should be understood and addressed” (Kuhn, 1970)

• “Research paradigms can be characterized by the way Scientists respond to three basic questions: ontological, epistemological and methodological questions” (Guba, 1990)

• “Social scientists can ground their inquires in any number of paradigms. None is write or wrong, merely more or less useful in particular situation. They each shape the kind of theory created for general understanding” (Babbie, 1998)
According to Kuhn (1970) paradigm contains "universally recognized scientific achievements that, for a time, provide model problems and solutions for a community of researchers", i.e.,

- what is to be observed and scrutinised
- the kind of questions that are supposed to be asked and probed for answers in relation to this subject
- how these questions are to be structured
- how the results of scientific investigations should be interpreted
- how is an experiment to be conducted, and what equipment is available to conduct the experiment.
**RESEARCH PHILOSOPHY, PARADIGMS AND LOGIC OF RESEARCH**

**Plato**
c. 348–347 BC

Logic/ Ethics

“Objects are inherently good, just”

“Things are beautiful, unified, equal”

**Socrates**
c. 469 / 470 BC

Contribution to Epistemology, Ethics, Logic:

“I know that I know nothing”

“Knowledge is always proportionate to the realm from which it is gained.”
WHAT IS A RESEARCH PARADIGM?
• Three basic questions (Guba, 1990):

Ontological questions
What is reality?

Epistemological questions
How do you know something?

Methodological questions
How do you go about finding it out?

Ontological: What is the nature of the “knowable”? Or, What is the nature of reality?

Epistemological: What is the nature of the relationship between the knower (inquirer) and known (or knowable)?

Methodological: How should the inquirer go about finding out knowledge?
ACCORDING TO CHALMERS (2002):

- **Ontology** is the study of beings or their being
  - What is reality?
- **Epistemology** is the study of knowledge
  - How we know?
- **Logic** is the study of valid reasoning
  - How we reason?
- **Ethics** is the study of right and wrong
  - How we should act?
- **Phenomenology** is the study of our experience
  - How we experience?
PARADIGM DEBATE/ DIFFERENT PARADIGMS

- Positivism
- Post-positivism
- Critical theory (ideology)
- Constructivism
- Pragmatists
SOME OTHER SOCIAL SCIENCE PARADIGMS

- Macrotheory and Microtheory
- Conflict Paradigm
- Role Theory
- Functionalism
- Naturalism
- Marxism
- Neo-Marxism
- Feminist Paradigm
- Ethnomethodology
- Structural
- Post foundationalism
- Post structuralism
- Post colonialism
- Existentialism
- Post modernism
- New ageism
WHICH RESEARCH PARADIGM YOUR RESEARCH BELONG TO?

**Positivists**
- There is a single reality
- Can be measured and known
- Quantitative methods

**Constructivists**
- There is no single reality or truth/
  There is multiple realities
- Reality needs to be interpreted
- Quantitative methods

**Pragmatists**
- Reality is constantly renegotiated, debated, interpreted
- Best method to use is the one that solves the problem
- Consider the practical effects of the objects of your conception
QUALITATIVE AND QUANTITATIVE RESEARCH PARADIGMS

Researchers Worldview about nature of knowledge - epistemology

- Assumptions of Approach
- Qualitative Research Paradigm
- Quantitative Research Paradigm

Ontological Perceptions of reality
- Multiple subjectively derived realities co-exist
- Single objective world

Epistemological Theory of knowledge
- Researchers interact with phenomenon (personal investment)
- Researchers are independent from the variables under study (detached)

Axiological Study of underlying values
- Researchers act in a value-laden and biased fashion
- Researchers act in a value-free and unbiased manner

Rhetorical Use of language
- Use personalized, informal and context-based language
- Use impersonal, formal and rule-based text

Methodological
- Researchers use induction, multi-process interventions, context-specific methods
- Researchers use deduction, cause-and-effect relationship and context-free methods

Worldviews influence basic beliefs of who informs, who forms and who benefit from the inquiry.

Also influences mode or strategy or research tradition.

Quantitative
- Arising mainly from positivism & post positivism

Qualitative
- Mainly coming from critical theory, constructivism & participatory paradigms

Mixed
- Methods From the pragmatic paradigm

Approaches and techniques
And way in which questions are formulated, data is collected and analyzed.
TRIANGULATION

- Easterby-Smith, Thorpe and Lowe (1991) as cited by Da Vinci (2009:14), define the following four types of triangulation:
  - Data Triangulation: Data is collected at different times and source and combined, or compared to increase confidence;
  - Investigator Triangulation: data is gathered by different investigators, independently and compared/combined to increase confidence;
  - Methodological Triangulation: Using both qualitative and quantitative methods to increase confidence, and
  - Theories Triangulation: using two different theories to explain the same problem.
ACTIVITY

Read the paper written by Scotland (2012) and discuss the following aspects of educational research paradigms:

1. What are the three educational paradigms had been explored in this paper?
2. “Every paradigm is based upon its own ontological and epistemological assumptions”. Do you agree with this statement? Give reasons for your answer.
3. What are the major differences that you have observed between positivism and post-positivism.
4. How would you describe ontological & epistemological positions of the Scientific paradigm and the Interpretive paradigm?
5. Describe methodological underpinning of the critical paradigm and how it differ from the scientific and the interpretive paradigms.
REQUIRED READING


Thank You