

Research Capacity Building Workshop

13. Carrying out empirical work Part 1: Paradigms



Online Forum



Go to the address: <http://dutmoodle.dut.ac.za/moodle/>

Click on the category *RPS Research Capacity Building*, and click on course *Research Matters*.

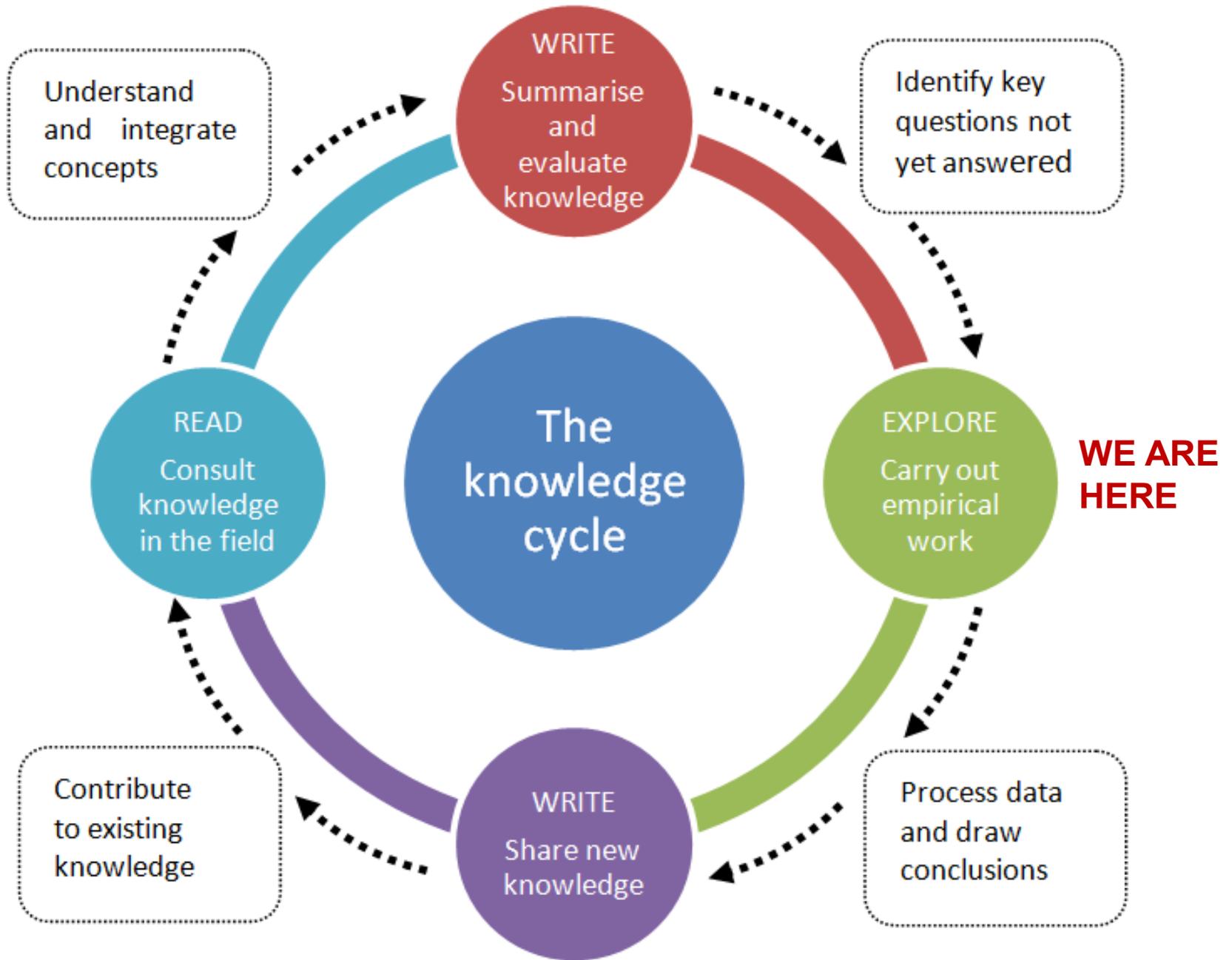
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Once on *Research Matters*, go to the “Social forum”, click on the message PARADIGMS: May 25 2012, and respond.



In preparation for the empirical work



Before researchers carry out their empirical work (i.e. data-gathering), they should be fully aware of their belief systems and values, as these will influence:

- what they consider to be evidence;
- how they will go about collecting it;
- how they will analyse it; and
- what kinds of conclusions they will reach.

In other words, researchers must identify their **research orientation** or “paradigm”. This should fit their naïve view of reality, or there will be a mismatch between the researchers’ genuine beliefs and their research findings.

Philosophical underpinnings of research



The issues underlying all research are:

- what we believe is “real”,
- what are valid ways of knowing, and
- how knowledge comes into being.

These are the philosophical underpinnings of our research.

It is generally agreed that knowledge is socially constructed, but there is little agreement as to *how* it is constructed.

N.B. To agree that knowledge is “socially constructed” does not make one a “constructivist”!

Today's Programme



An overview will be given of different research orientations, and the different demands/criteria for various orientations. In the process, these items will be covered:

- Some key terms and their meanings
- Habermas's paradigms
- How paradigms are identified
- Some common research orientations
- Typical research methodologies
- The relationship between methods and orientations

Some key terms



We need to distinguish between the terms philosophy, orientation/approach and paradigm:

- philosophy – a philosophy deals generally with questions about the nature of things and human existence. Various *philosophies* exist, and are usually attributed to great thinkers.
- research orientation or approach – these are general terms used to show how researchers approach their inquiry.
- paradigm – technically, this term refers specifically to the orientations identified by Jurgen Habermas, with perhaps the addition of constructivism.

Some even worse terms



Each philosophy, approach/orientation or paradigm will have its own:

- ontology (theory about reality)
- epistemology (version of what knowledge is)
- methodology (methods for creating knowledge)

Three meanings of the term “paradigm”



Thomas Kuhn used the term “paradigm” with three quite different meanings in his seminal work¹:

- Comprehensive world view, i.e. “the entire constellation of beliefs, values, techniques, and so on shared by the members of a given community” (Kuhn 1962:175). Examples: positivism, constructivism, critical theory.
- Disciplinary matrix, i.e. “the common possession of the practitioners of a particular discipline” (Kuhn 1969:182). Examples: seminal works in the field, typical concepts, such as “subject position”, “ontic dualism” .
- Exemplar, i.e. “shared examples” (Kuhn 1969: 187) typical of the field. Examples: shared rubrics, equations, formulae and problem solving techniques.

¹ Kuhn, T. (1962) *The structure of scientific revolutions*. Chicago: University of Chicago Press. [A “*Postscript*” recanting his earlier definition was published in 1969.]

Paradigm as research orientation



Kuhn's definition of paradigm as "research orientation" or "world view" is relevant to today's workshop.

N.B. Not all orientations are technically "paradigms": some are philosophies, approaches or methodologies.

Identify *your* “comprehensive world view”



Which viewpoint is “true” for you?

Reality is ...

- relative to whoever is describing it, and is a mental construct only; *Constructivist*
- “really there” but we can’t observe all of it and have to use intuitive leaps combined with logic to arrive at the truth; *Critical realist*
- able to be interpreted at an interpersonal level if people get together and share ideas; *Hermeneutic*
- “outside of us”, and is only what can be observed, measured and calculated; *Positivist*
- obscured by false consciousness - we need to be “enlightened” to see how we are manipulated. *Critical (i.e. in the Marxist sense)*

Habermas's comprehensive theory of knowledge

TYPE OF SCIENCE OR INQUIRY	Empirical/Analytical	Hermeneutic	Critical
INTEREST SERVED	Technical	Practical	Emancipatory
SOCIAL ORGANIZATION	Work	Interaction	Power
	MODE OF RATIONALITY		
	<p>Posits principles of control and certainty</p> <p>Operates in the interests of law-like propositions that are empirically testable</p> <p>Assumes knowledge to be value free</p> <p>Assumes knowledge to be objectified</p> <p>Values efficiency or parsimony</p> <p>Accepts unquestioningly, social reality as it is</p>	<p>Emphasizes understanding and communicative interaction</p> <p>Sees human beings as active creators of knowledge</p> <p>Looks for assumptions and meanings beneath texture of everyday life</p> <p>Views reality as intersubjectively constituted and shared within a historical, political, and social context</p> <p>Focuses sensitively to meaning through language use</p>	<p>Assumes the necessity of ideological critique and action</p> <p>Seeks to expose that which is oppressive and dominating</p> <p>Requires sensitivity to false consciousness</p> <p>Makes distorted conceptions and unjust values problematic</p> <p>Examines and explicates value system and concepts of justice upon which inquiry is based</p>

FIGURE 7-3. Habermas's Comprehensive Theory of Knowledge
[derived from Hultgren (1982) and based on Habermas (1971), Bernstein (1976), and Giroux (1980)]

Habermas's paradigms



Habermas's term "science" (=way of knowing) is now generally represented as "paradigm".

The term "Empirical-Analytical science" is usually accepted to mean "positivism".

However, "Hermeneutic" should not be taken as representative of the "Interpretive" approach in general, as many other approaches could be included under "Interpretive".

The paradigms represented in the model in the previous slide, with minor variations, are those identified by educational researchers and theorists as the paradigms governing the ways in which knowledge is constructed in western-European educational practice (Grundy 1987; Carr & Kemmis 1986; Popkewitz 1984; Schubert 1986).

Variations in terminology



The variations hinge around terminology rather than conceptual differences: Giroux refers to technical, hermeneutic and emancipatory **modes of rationality** (1980:335), Popkewitz, to empirical-analytic, symbolic and critical **paradigms** in educational **sciences** (1984:32), Carr & Kemmis, to technical, practical and strategic **views** in education, (1986:35-41) and theoretic, practical and emancipatory **approaches** in research (1986:152), and Grundy, to technical, practical and emancipatory **interests** (1987:10) in education.

How paradigms are identified



According to Guba (1990: 18) paradigms can be characterised by the way they define certain key elements:

- Ontology (the nature of reality)
- Epistemology (the way knowledge is constructed)
- Methodology (the specific methods used in discovery)

Guba, E. (ed.) 1990. *The paradigm dialog*. California: SAGE Publications.

Characteristics of constructivism



Ontology: Relativist - realities exist in the form of mental constructions, socially and experientially based, local and specific, dependent for their form and content on the persons who hold them.

Epistemology: Subjectivist - inquirer and inquired are fused into a single (monistic) entity. Findings are literally the creation of the process of interaction between the two

Methodology: Hermeneutic, dialectic - individual constructions are elicited and refined hermeneutically, and compared and contrasted dialectically, with the aim of generating one (or a few) constructions on which there is substantial consensus (Guba 1990: 27).

Some common research orientations

RESEARCH ORIENTATION	TYPE
Positivism	paradigm
Hermeneutics (Interpretive)	paradigm
Critical Theory (Marxism)	paradigm
Social constructivism	paradigm
Critical realism	philosophy
Postmodernism	approach
Phenomenology	approach
Grounded theory methodology	approach and method
Self study	approach and method
Auto-ethnograph\y	approach and method
Action research	method

Typical research methodologies



- Constructivists will try to establish consensus and arrive at a hypothesis or pattern theory.
- Critical realists will use modelling to try to establish causality.
- Critical theorists (i.e. Marxists) will try to expose and contest oppressive power relations.
- Phenomenologists will arrive at a picture of reality by looking at the phenomenon in its natural setting without (they claim) imposing theory upon it in advance.
- Interpretive (i.e. hermeneutic) researchers will interact in depth with participants so as to make better judgement calls in their social practices.

Research *methods* are not orientation-specific



Individual research *methods*¹ are not orientation-specific: most research methods can be (and are) used within most orientations.

It is the *methodologies*, i.e. the systems of methods and their typical procedural “rules”, which are orientation-specific.

For example, interpretive approaches often use a form of triangulation to suggest that qualitative results have validity.

¹ quantitative/qualitative, interviews, questionnaires, surveys.

In conclusion:



The issue is not *which* orientation you identify as that underpinning your research, but that there is congruency between:

- *your* beliefs and the principles of the orientation,
- the type of project and the orientation,
- the orientation and the methodology used, i.e.
- the ways in which methods are combined...

...so as to arrive at conclusions which are compatible with the value and belief system of the orientation adopted.